



# SAR TEST REPORT

No. 2010SAR00097

For

**ZTE CORPORATION**

**AC30 Global Mobile Hotspot**

**Model Name: AC30**

**FCC ID: Q78-ZTEAC30**

With

**Hardware Version: AC30\_100101**

**Software Version: BD\_VERIZON\_US\_AC30V1.0.0B07**

**Issued Date: 2010-09-13**



**No. DGA-PL-114/01-02**

**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:**

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## TABLE OF CONTENT

<b>1 TEST LABORATORY</b> .....	<b>3</b>
1.1 TESTING LOCATION .....	3
1.2 TESTING ENVIRONMENT.....	3
1.3 PROJECT DATA .....	3
1.4 SIGNATURE.....	3
<b>2 CLIENT INFORMATION</b> .....	<b>4</b>
2.1 APPLICANT INFORMATION .....	4
2.2 MANUFACTURER INFORMATION .....	4
<b>3 EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) .....</b>	<b>5</b>
3.1 ABOUT EUT .....	5
3.2 INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST .....	5
3.3 INTERNAL IDENTIFICATION OF AE USED DURING THE TEST.....	5
<b>4 CHARACTERISTICS OF THE TEST .....</b>	<b>6</b>
4.1 APPLICABLE LIMIT REGULATIONS .....	6
4.2 APPLICABLE MEASUREMENT STANDARDS.....	6
<b>5 OPERATIONAL CONDITIONS DURING TEST .....</b>	<b>7</b>
5.1 SCHEMATIC TEST CONFIGURATION.....	7
5.2 SAR MEASUREMENT SET-UP.....	10
5.3 DASY4 E-FIELD PROBE SYSTEM.....	11
5.4 E-FIELD PROBE CALIBRATION .....	12
5.5 OTHER TEST EQUIPMENT .....	13
5.6 EQUIVALENT TISSUES.....	13
5.7 SYSTEM SPECIFICATIONS.....	14
5.7.1 ROBOTIC SYSTEM SPECIFICATIONS .....	14
<b>6 TEST RESULTS .....</b>	<b>14</b>
6.1 DIELECTRIC PERFORMANCE .....	14
6.2 SYSTEM VALIDATION.....	14
6.3 SUMMARY OF MEASUREMENT RESULTS (BODY) .....	15
6.4 SUMMARY OF MEASUREMENT RESULTS (WiFi FUNCTION).....	17
6.5 CONCLUSION .....	18
<b>7 MEASUREMENT UNCERTAINTY .....</b>	<b>19</b>
<b>8 MAIN TEST INSTRUMENTS .....</b>	<b>20</b>
<b>ANNEX A MEASUREMENT PROCESS.....</b>	<b>21</b>
<b>ANNEX B TEST LAYOUT .....</b>	<b>22</b>
<b>ANNEX C GRAPH RESULTS.....</b>	<b>24</b>
<b>ANNEX D SYSTEM VALIDATION RESULTS .....</b>	<b>87</b>
<b>ANNEX E PROBE CALIBRATION CERTIFICATE.....</b>	<b>89</b>
<b>ANNEX F DIPOLE CALIBRATION CERTIFICATE .....</b>	<b>98</b>

## 1 Test Laboratory

### 1.1 Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT  
Address: No 52, Huayuan beilu, Haidian District, Beijing,P.R.China  
Postal Code: 100191  
Telephone: 00861062304633  
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### 1.2 Testing Environment

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.

### 1.3 Project Data

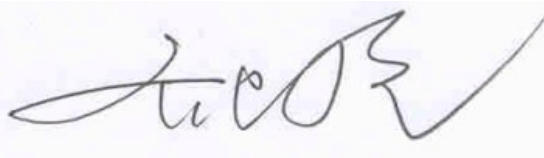
Project Leader: Qi Dianyuan  
Test Engineer: Lin Xiaojun  
Testing Start Date: September 11, 2010  
Testing End Date: September 12, 2010

### 1.4 Signature



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Lin Xiaojun  
(Prepared this test report)



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Qi Dianyuan  
(Reviewed this test report)



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Xiao Li  
Deputy Director of the laboratory  
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## 2 Client Information

### 2.1 Applicant Information

Company Name: ZTE CORPORATION  
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### 2.2 Manufacturer Information

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City: Shenzhen  
Postal Code: 518057  
Country: China  
Telephone: 0086 21 68895196  
Fax: 0086 21 61460600

### 3 Equipment Under Test (EUT) and Ancillary Equipment (AE)

#### 3.1 About EUT

Description:	AC30 Global Mobile Hotspot
Model Name:	AC30
Frequency Band:	GPRS&EGPRS 850/1900; WCDMA&HSPA 1900; EVDO 800/1900
GPRS Class:	10
EGPRS Class:	12



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	351591040003660	AC30_100101	BD_VERIZON_US_AC30V1.0.0B07

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

#### 3.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Adapter	STC-A22O50I700USBA-Z	/	RUIDE
AE2	Battery	Li3715T42P3h654251	/	ZTE CORPORATION

\*AE 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.

**IEC 62209-1-2005:** Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1: Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)

**KDB 941225 D01:** SAR Measurement Procedures for 3G devices v02

**KDB 941225 D02:** Guidance for Requesting a Permit-But-Ask for 3GPP R6-HSPA v01

**KDB648474 D01 SAR Handsets Multi Xmitter and Ant, v01r05:** SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas.

**KDB248227:** SAR measurement procedures for 802.112abg transmitters.

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

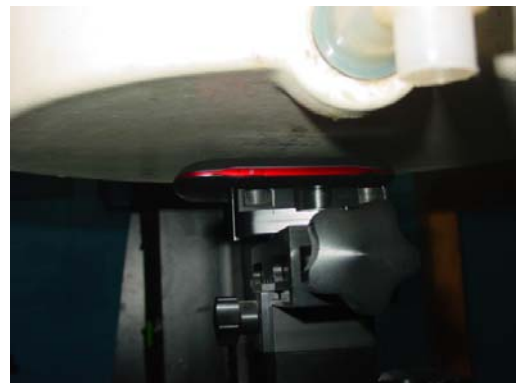
#### 5.1.1 Test positions

The EUT is tested at the following 5 test positions all with the distance 10mm between the EUT and the phantom bottom:

- Test Position 1: The separation distance is 10mm between the front side of the EUT and the bottom of the flat phantom. (Picture 2-1)
- Test Position 2: The separation distance is 10mm between the back side of the EUT and the bottom of the flat phantom. (Picture 2-2)
- Test Position 3: The separation distance is 10mm between the right side of the EUT and the bottom of the flat phantom. (Picture 2-3)
- Test Position 4: The separation distance is 10mm between the left side of the EUT and the bottom of the flat phantom. (Picture 2-4)
- Test Position 5: The separation distance is 10mm between the top side of the EUT and the bottom of the flat phantom. (Picture 2-5)



Picture 2-1: Test position 1



Picture 2-2: Test position 2



Picture 2-3: Test position 3



Picture 2-4: Test position 4



Picture 2-5: Test position 5

**Picture 2: Test positions of EUT**

### 5.1.2 Test Method

#### GSM'b of g

Because the EUT has data transfer function, the tests for GSM 900/1800 are performed in GPRS and EGPRS mode (since the GPRS class is 10, the EGPRS class is 12, the tests are performed for the case of the slots in uplink with the maximum averaged power). The tests are performed for GPRS and EGPRS at the highest output channel first for all the 5 test positions, and if the SAR measured at the highest output channel for each test configuration is less than 0.8W/kg, testing for the other channels is not required. So the test channels have been set first to the highest output channel and then to others if necessary.

The conducted power for GPRS/EGPRS 850/1900 is as following:

GSM 850 GPRS	Measured Power (dBm)			calculation	Averaged Power (dBm)		
	251	190	128		251	190	128
1 Txslot	32.55	32.55	32.50	-9.03dB	23.52	23.52	23.47
<b>2 Txslots</b>	30.50	30.50	30.50	<b>-6.02dB</b>	<b>24.48</b>	<b>24.48</b>	<b>24.48</b>
GSM 850 EGPRS	Measured Power (dBm)				Averaged Power (dBm)		
	251	190	128		251	190	128
1 Txslot	33.00	33.00	32.95	-9.03dB	23.97	23.97	23.92
2 Txslots	30.20	30.20	30.20	-6.02dB	24.18	24.18	<b>24.18</b>
3Txslots	28.41	28.43	28.40	-4.26dB	24.15	24.17	24.14
4 Txslots	27.20	27.20	27.16	-3.01dB	<b>24.19</b>	<b>24.19</b>	24.15
DCS1900 GPRS	Measured Power (dBm)				Averaged Power (dBm)		
	810	661	512		810	661	512
1 Txslot	29.50	29.30	29.30	-9.03dB	20.47	20.27	20.27
<b>2 Txslots</b>	27.50	27.50	27.30	<b>-6.02dB</b>	<b>21.48</b>	<b>21.48</b>	<b>21.28</b>
DCS1900 EGPRS	Measured Power (dBm)				Averaged Power (dBm)		
	810	661	512		810	661	512
1 Txslot	29.50	29.30	29.30	-9.03dB	20.47	20.27	20.27
2 Txslots	27.50	27.30	27.30	-6.02dB	21.48	21.28	21.28
3Txslots	25.65	25.50	25.50	-4.26dB	21.39	21.24	21.24
<b>4 Txslots</b>	24.50	24.30	24.30	<b>-3.01dB</b>	<b>21.49</b>	<b>21.29</b>	<b>21.29</b>



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

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 2 Txslots for GPRS and 2 or 4 Txslots for EGPRS.

**WCDMA o qf g**

For WCDMA 1900, the conducted power will be measured for WCDMA/HSDPA/HSUPA, and the results are as following:

Item	band	WCDMA 1900		
	ARFCN	9538	9400	9262
<b>WCDMA</b>	\	22.30	22.35	22.40
<b>HSDPA</b>	Sub-test 1	22.02	22.05	22.20
	Sub-test 2	21.95	22.00	22.10
	Sub-test 3	21.55	21.60	21.80
	Sub-test 4	21.50	21.50	21.78
<b>HSUPA</b>	Sub-test 1	21.20	21.50	21.40
	Sub-test 2	22.05	22.00	22.10
	Sub-test 3	21.20	21.40	21.40
	Sub-test 4	22.10	22.20	22.20
	Sub-test 5	20.70	20.20	20.00

Note: Power number in dBm

The tests are performed for WCDMA 1900 at the highest output channel first for all the 5 test positions, and then set to the other channels if necessary. HSDPA and HSUPA body SAR are not required, because maximum average output power of each RF channel with HSDPA and HSUPA active is not 1/4 dB higher than that measured without HSDPA and HSUPA and the maximum SAR for WCDMA 1900 are not above 75% of the SAR limit (see Table 6 for the SAR measurement results)

**EVDO o qf g**

The conducted power for EVDO 800/1900(Rev.0) is as following:

EVDO 800MHZ	Conducted Power (dBm)		
	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)
	23.60	23.50	23.55
EVDO 1900MHZ	Conducted Power (dBm)		
	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
	23.70	23.70	23.60

The conducted power for EVDO 800/1900(Rev.A) is as following:

EVDO 800MHZ	Conducted Power (dBm)		
	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)
	23.45	23.40	23.40
EVDO 1900MHZ	Conducted Power (dBm)		
	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
	23.55	23.80	23.35

According to the conducted power as above, the body measurements are performed for Rev.0 and on the maximum output channel for Rev.A using the exposure configuration that results in the highest SAR for that RF channels in Rev.0.

#### CDMA 1X RTT o qf g

The conducted power for CDMA 800/1900 is as following:

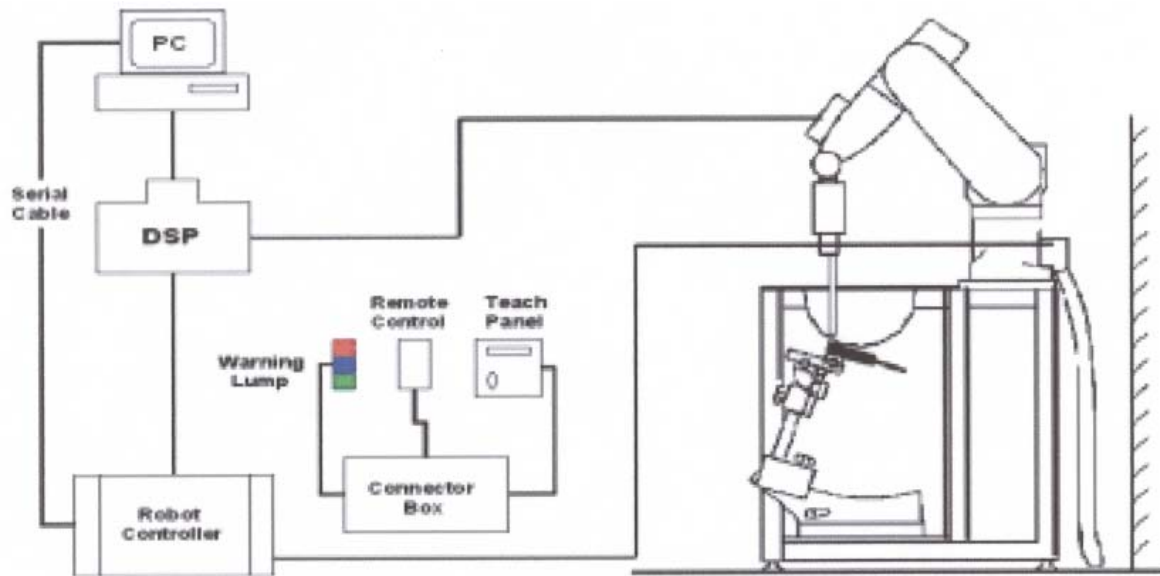
CDMA 800MHZ	Conducted Power (dBm)		
	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)
	23.50	23.50	23.50
CDMA 1900MHZ	Conducted Power (dBm)		
	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
	23.70	23.70	23.60

CDMA body SAR are not required, because maximum average output power of each RF channel with CDMA active is not 1/4 dB higher than that measured with EVDO.

## 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  $\pm 0.02\text{mm}$ . Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines (length =300mm) to the data acquisition unit.

A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the Micron Pentium III 800 MHz computer with Windows 2000 system and SAR Measurement Software DASY4 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 3: 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 ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the standard procedure with an accuracy of better than  $\pm 10\%$ . The spherical isotropy was evaluated and found to be better than  $\pm 0.25\text{dB}$ .

#### ES3DV3 Probe Specification

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 900 and HSL 1810 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 4 GHz; Linearity: $\pm 0.2 \text{ dB}$ (30 MHz to 4 GHz)



**Picture 4: ES3DV3 E-field Probe**

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



**Picture5:ES3DV3 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 below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

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

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

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<sup>3</sup>).



**Picture 6: 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 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).

### 5.5.2 Phantom

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

Shell Thickness 2±0.1 mm  
 Filling Volume Approx. 20 liters  
 Dimensions 810 x 1000 x 500 mm (H x L x W)  
 Available Special



**Picture 7: Generic Twin Phantom**

## 5.6 Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 1 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		
Water	50.93		
Sugar	45.61		
Salt	1.09		
Preventol	0.37		
Cellulose	2.0		
<b>Dielectric Parameters Target Value</b>	<b>f=850MHz</b>	<b>ε=55.2</b>	<b>σ=0.97</b>
MIXTURE %	FREQUENCY 1900MHz		
Water	70.52		
Glycol monobutyl	29.09		
Salt	0.39		
<b>Dielectric Parameters Target Value</b>	<b>f=1900MHz</b>	<b>ε=53.3</b>	<b>σ=1.52</b>

## 5.7 System Specifications

### 5.7.1 Robotic System Specifications

#### Specifications

**Positioner:** Stäubli Unimation Corp. Robot Model: RX90L

**Repeatability:**  $\pm 0.02$  mm

**No. of Axis:** 6

#### Data Acquisition Electronic (DAE) System

##### Cell Controller

**Processor:** Pentium III

**Clock Speed:** 800 MHz

**Operating System:** Windows 2000

##### Data Converter

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

**Software:** DASY4 software

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

## 6 TEST RESULTS

### 6.1 Dielectric Performance

**Table 2: Dielectric Performance of Body Tissue Simulating Liquid**

Measurement is made at temperature 23.3 °C and relative humidity 48%.			
Liquid temperature during the test: 22.5°C			
Measurement Date : 850 MHz <u>September 11, 2010</u> 1900 MHz <u>September 12, 2010</u>			
/	<b>Frequency</b>	<b>Permittivity <math>\epsilon</math></b>	<b>Conductivity <math>\sigma</math> (S/m)</b>
<b>Target value</b>	850 MHz	55.2	0.97
	1900 MHz	53.3	1.52
<b>Measurement value (Average of 10 tests)</b>	850 MHz	53.7	1.01
	1900 MHz	51.7	1.58

### 6.2 System Validation

**Table 3: System Validation**

Measurement is made at temperature 23.3 °C and relative humidity 48%.				
Liquid temperature during the test: 22.5°C				
Measurement Date : 850 MHz <u>September 11, 2010</u> 1900 MHz <u>September 12, 2010</u>				
<b>Liquid parameters</b>	Dipole calibration	<b>Frequency</b>	<b>Permittivity <math>\epsilon</math></b>	<b>Conductivity <math>\sigma</math> (S/m)</b>
		835 MHz	54.5	0.97
	Target value	1900 MHz	52.5	1.51
		Actual Measurement value	835 MHz	53.8
	1900 MHz		51.7	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
	835 MHz	1.57	2.41	1.53	2.34	-2.55%	-2.90%
1900 MHz	5.24	10.4	5.07	10.2	-3.24%	-1.92%	

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 (Body)

Table 4: SAR Values (GSM 850 MHz)

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	
GPRS-2 Txslots, Test Position 1, Mid frequency (See Figure 1)	0.693	0.973	-0.113
GPRS-2 Txslots, Test Position 2 Mid frequency (See Figure 2)	0.661	0.932	-0.002
GPRS-2 Txslots, Test Position 3, Mid frequency (See Figure 3)	0.294	0.432	-0.048
GPRS-2 Txslots, Test Position 4, Mid frequency (See Figure 4)	0.271	0.392	-0.132
GPRS-2 Txslots, Test Position 5, Mid frequency (See Figure 5)	0.041	0.062	0.019
GPRS-2 Txslots, Test Position 1, Top frequency (See Figure 6)	0.828	1.18	-0.139
GPRS-2 Txslots, Test Position 1, Bottom frequency (See Figure 7)	0.662	0.924	-0.023
GPRS-2 Txslots, Test Position 2, Top frequency (See Figure 8)	0.601	0.845	0.057
GPRS-2 Txslots, Test Position 2, Bottom frequency (See Figure 9)	0.570	0.799	-0.050
EGPRS-4 Txslots, Test Position 1, Mid frequency (See Figure 10)	0.809	1.14	-0.140
EGPRS-4 Txslots, Test Position 2 Mid frequency (See Figure 11)	0.613	0.855	-0.164
EGPRS-4 Txslots, Test Position 3, Mid frequency (See Figure 12)	0.329	0.481	-0.197
EGPRS-4 Txslots, Test Position 4, Mid frequency (See Figure 13)	0.306	0.447	-0.151
EGPRS-4 Txslots, Test Position 5, Mid frequency (See Figure 14)	0.038	0.057	-0.053
EGPRS-4 Txslots, Test Position 1, Top frequency (See Figure 15)	0.715	1.05	0.013
EGPRS-2 Txslots, Test Position 1, Bottom frequency (See Figure 16)	0.772	1.09	0.042
EGPRS-4 Txslots, Test Position 2, Top frequency (See Figure 17)	0.627	0.886	0.002
EGPRS-2 Txslots, Test Position 2, Bottom frequency (See Figure 18)	0.577	0.817	-0.108

**Table 5: SAR Values (PCS 1900 MHz)**

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
GPRS-2 Txslots, Test Position 1, Mid frequency (See Figure 19)	0.285	0.521	-0.025
GPRS-2 Txslots, Test Position 2 Mid frequency (See Figure 20)	0.260	0.466	-0.132
GPRS-2 Txslots, Test Position 3, Mid frequency (See Figure 21)	0.167	0.282	0.150
GPRS-2 Txslots, Test Position 4, Mid frequency (See Figure 22)	0.056	0.099	0.195
GPRS-2 Txslots, Test Position 5, Mid frequency (See Figure 23)	0.139	0.250	-0.121
GPRS-2 Txslots, Test Position 1, Top frequency (See Figure 24)	0.305	0.561	-0.032
GPRS-2 Txslots, Test Position 1, Bottom frequency (See Figure 25)	0.345	0.547	0.034
EGPRS-4 Txslots, Test Position 1, Top frequency (See Figure 26)	0.336	0.559	-0.111
EGPRS-4 Txslots, Test Position 2 Top frequency (See Figure 27)	0.273	0.490	-0.019
EGPRS-4 Txslots, Test Position 3, Top frequency (See Figure 28)	0.176	0.299	0.006
EGPRS-4 Txslots, Test Position 4, Top frequency (See Figure 29)	0.101	0.179	0.075
EGPRS-4 Txslots, Test Position 5, Top frequency (See Figure 30)	0.163	0.296	-0.049
EGPRS-4 Txslots, Test Position 1, Mid frequency (See Figure 31)	0.324	0.533	-0.013
EGPRS-4 Txslots, Test Position 1, Bottom frequency (See Figure 32)	0.358	0.568	0.039

**Table 6: SAR Values (WCDMA 1900 MHz)**

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
WCDMA, Test Position 1, Bottom frequency (See Figure 33)	0.409	1.03	-0.138
WCDMA, Test Position 2, Bottom frequency (See Figure 34)	0.380	0.665	-0.076
WCDMA, Test Position 3, Bottom frequency (See Figure 35)	0.278	0.465	-0.173
WCDMA, Test Position 4, Bottom frequency (See Figure 36)	0.284	0.471	-0.086
WCDMA, Test Position 5, Bottom frequency (See Figure 37)	0.268	0.485	0.026
WCDMA, Test Position 1, Top frequency (See Figure 38)	0.513	0.815	-0.025
WCDMA, Test Position 1, Mid frequency (See Figure 39)	0.458	0.824	-0.134

**Table 7: SAR Values (EVDO 800 MHz) – Rev.0**

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Test Position 1, Top frequency (See Figure 40)	0.621	0.876	-0.151
Test Position 2, Top frequency (See Figure 41)	0.469	0.654	-0.182
Test Position 3, Top frequency (See Figure 42)	0.248	0.361	-0.024



Test Position 4, Top frequency (See Figure 43)	0.228	0.331	0.066
Test Position 5, Top frequency (See Figure 44)	0.035	0.054	-0.036
Test Position 1, Mid frequency (See Figure 45)	0.576	0.815	-0.024
Test Position 1, Bottom frequency (See Figure 46)	0.541	0.752	-0.182

**Table 8: SAR Values (EVDO 1900 MHz) – Rev.0**

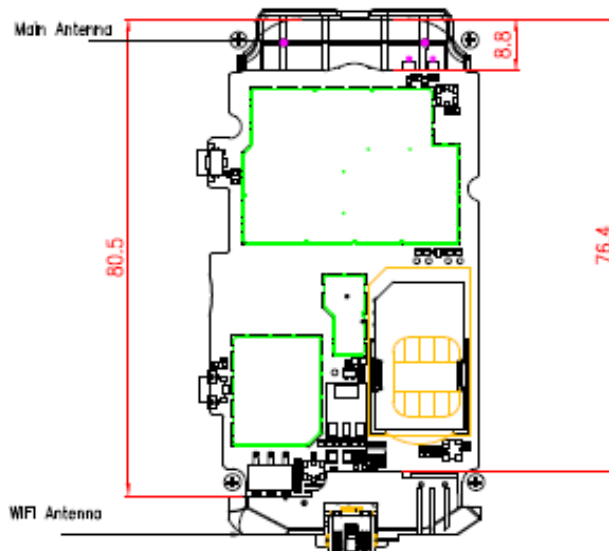
Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Test Position 1, Mid frequency (See Figure 47)	0.648	1.03	-0.181
Test Position 2, Mid frequency (See Figure 48)	0.523	0.934	0.046
Test Position 3, Mid frequency (See Figure 49)	0.323	0.542	-0.178
Test Position 4, Mid frequency (See Figure 50)	0.161	0.283	-0.075
Test Position 5, Mid frequency (See Figure 51)	0.292	0.521	-0.180
Test Position 1, Top frequency (See Figure 52)	0.561	0.898	-0.125
Test Position 1, Bottom frequency (See Figure 53)	0.635	1.02	-0.127
Test Position 2, Top frequency (See Figure 54)	0.497	0.878	-0.178
Test Position 2, Bottom frequency (See Figure 55)	0.412	0.728	-0.146

**Table 9: SAR Values (EVDO 1900 MHz) – Rev.A**

Limit of SAR (W/kg)	10 g Average	1 g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Test Position 1, Mid frequency (See Figure 56)	0.612	0.979	-0.194

#### 6.4 Summary of Measurement Results (WiFi function)

The distance between WiFi antenna and GSM antenna is >5cm. The location of the antennas inside mobile phone is shown below:



The conducted RF output power measurements were made at the RF output terminal of the EUT. The channel power option of the Vector Signal Analyzer was used to perform the power test, and the detector mode was RMS. The EUT was controlled via laptop selecting the required modes of modulation and sub-sets. The power measurements below incorporate the pass loss that was measured on the day for each device. The channel power listed below are source-based time-averaging power.

The average conducted power for WiFi is as following:

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	12.42	12.46	12.38	12.30
6	13.39	13.41	13.40	13.37
11	13.55	13.24	13.30	13.28

802.11g (dBm)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	11.85	11.96	11.90	11.89	11.77	11.71	11.70	11.65
6	13.02	12.92	12.89	12.91	12.77	12.70	12.77	12.69
11	13.13	13.08	12.99	13.00	12.86	12.78	12.77	12.71

According to the output power measurement result and the distance between the two antennas, we can draw the conclusion that: stand-alone SAR and simultaneous transmission SAR are not required for WiFi transmitter, because the output power of WiFi transmitter is  $\leq 2P_{Ref}$  and its antenna is  $> 5\text{cm}$  from other antenna

802.11b/g PAR (Peak to Average Ratio) at Channel 6

Data rate (Mbps)	PAR (dB)
1	2.83
11	2.38
6	6.76
24	7.62
54	8.15

## 6.5 Conclusion

Localized Specific Absorption Rate (SAR) of this fixed terminal station 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 **GSM 850 Body, GPRS-2 Txslots, Test Position 1, Top frequency (Table 4)**, and the value are: **0.828(10g), 1.18(1g)**.

## 7 Measurement Uncertainty

No.	Error Description	Type	Tolerance (±%)	Probability Distribution	Divisor	$c_i$	Standard Uncertainty (%) $u_i$ (%)	Degree of freedom $V_{eff}$ or $v_i$
1	System repeatability	A	0.5	N	1	1	0.5	9
<b>Measurement system</b>								
2	– probe calibration	B	3.5	N	1	1	3.5	$\infty$
3	– axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	0.5	4.3	$\infty$
4	– hemisphere isotropy of the probe	B	9.4	R	$\sqrt{3}$			
5	– space resolution	B	0	R	$\sqrt{3}$	1	0	$\infty$
6	– boundary effect	B	11.0	R	$\sqrt{3}$	1	6.4	$\infty$
7	– probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	$\infty$
8	– detection limit	B	1.0	R	$\sqrt{3}$	1	0.6	$\infty$
9	– readout electronics	B	1.0	N	1	1	1.0	$\infty$
10	– RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	$\infty$
11	– Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	$\infty$
12	– Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	$\infty$
13	– Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	$\infty$
<b>Test sample Related</b>								
14	– Test Sample Positioning	A	4.9	N	1	1	4.9	5
15	– Device Holder	A	6.1	N	1	1	6.1	5
16	– Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	$\infty$
<b>Phantom and Tissue Parameters</b>								
17	– Phantom Uncertainty (shape and thickness tolerances)	B	1.0	R	$\sqrt{3}$	1	0.6	$\infty$

18	— liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	$\infty$
19	— liquid conductivity (measurement error)	A	0.23	N	1	1	0.23	9
20	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	$\infty$
21	— liquid permittivity (measurement error)	A	0.46	N	1	1	0.46	9
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$		/			12.2	88.7
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2		24.4	/

## 8 MAIN TEST INSTRUMENTS

Table 10: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 29,2010	One year
02	Power meter	NRVD	101253	September 4, 2010	One year
03	Power sensor	NRV-Z5	100333		
04	Signal Generator	E4433C	MY49070393	November 13, 2009	One Year
05	Amplifier	VTL5400	0505	No Calibration Requested	
06	BTS	CMU 200	105948	August 24, 2010	One year
07	E-field Probe	SPEAG ES3DV3	3149	September 25, 2009	One year
08	DAE	SPEAG DAE4	771	November 19, 2009	One year
09	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Two years
10	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	Two years

\*\*\*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.

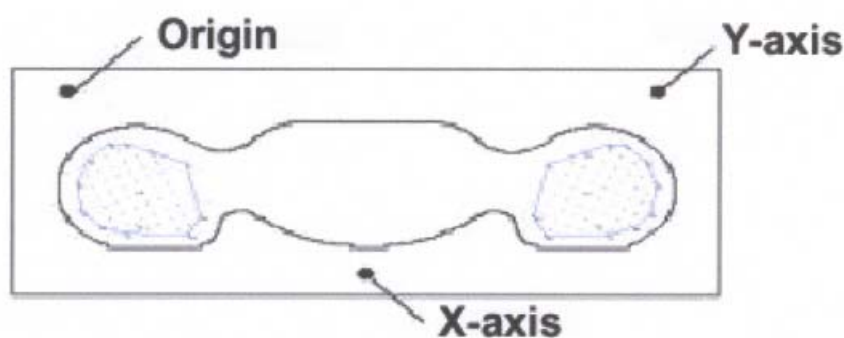
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

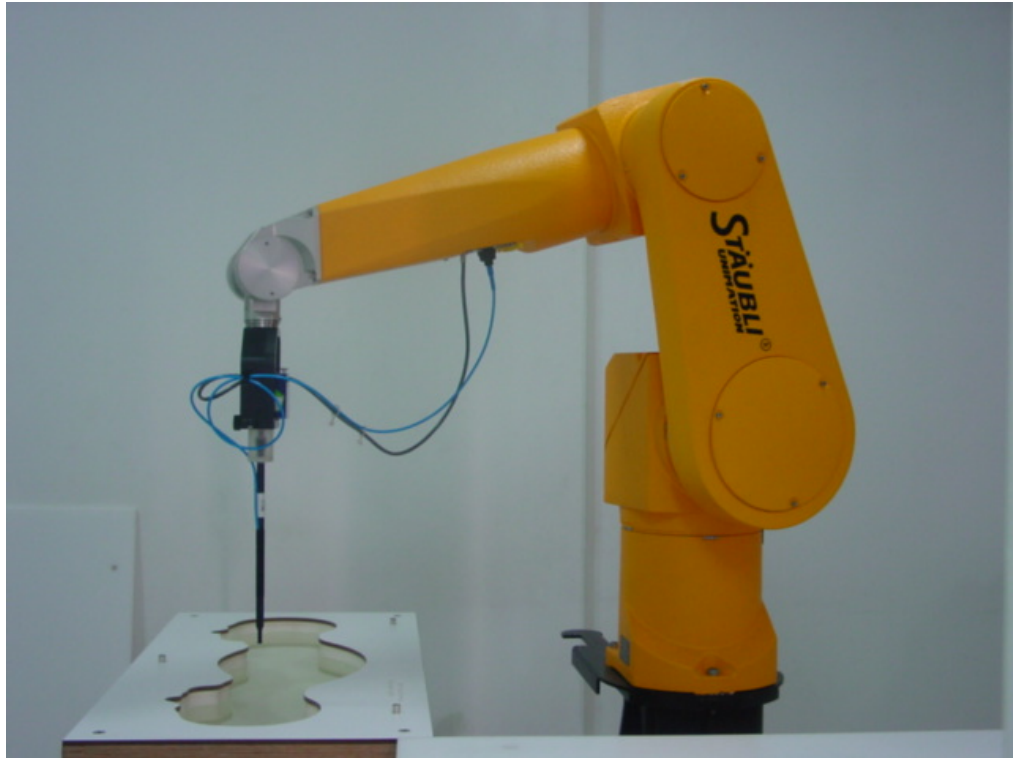
c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

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.

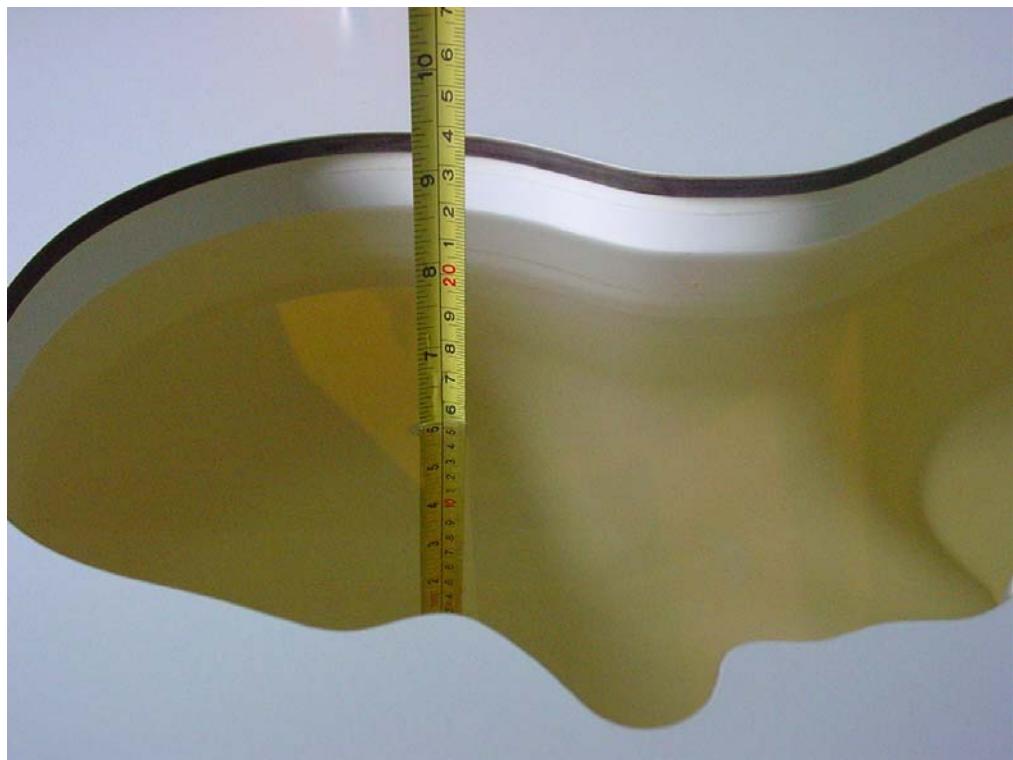


Picture A: SAR Measurement Points in Area Scan

**ANNEX B TEST LAYOUT**



**Picture B1: Specific Absorption Rate Test Layout**



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



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

## ANNEX C GRAPH RESULTS

### GPRS 850 Test Position 1 Middle

Date/Time: 2010-9-11 8:09:43

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Position 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.05 mW/g

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

Reference Value = 30.0 V/m; Power Drift = -0.113 dB

Peak SAR (extrapolated) = 1.29 W/kg

**SAR(1 g) = 0.973 mW/g; SAR(10 g) = 0.693 mW/g**

Maximum value of SAR (measured) = 1.03 mW/g

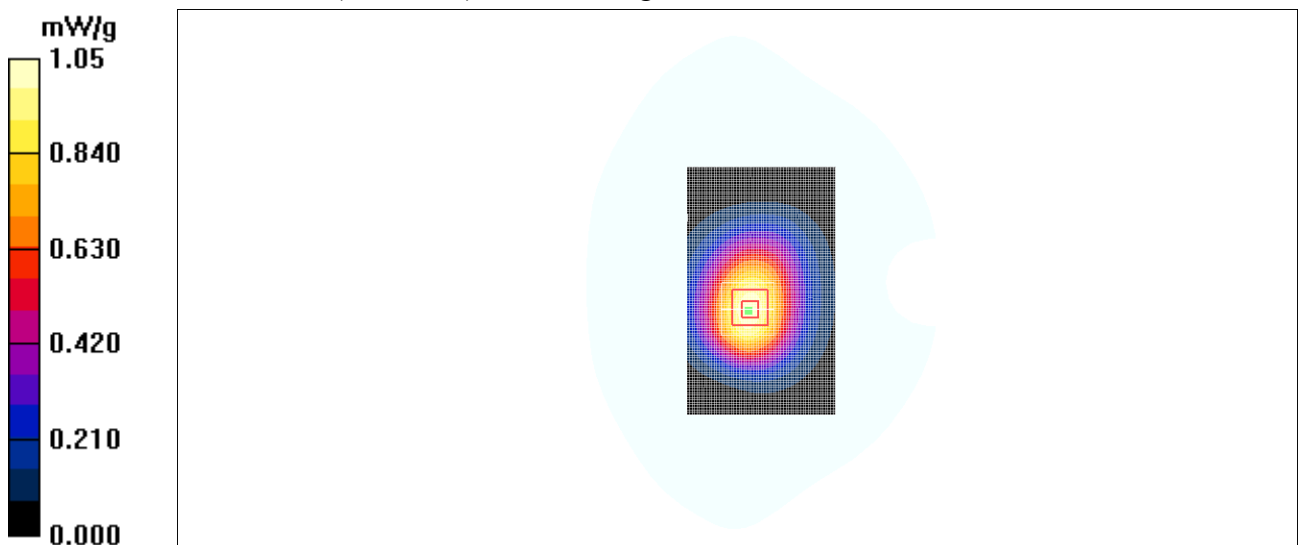


Fig. 1 GPRS 850 Test Position 1



**GPRS 850 Test Position 2 Middle**

Date/Time: 2010-9-11 8:25:18

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Position 2 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.995 mW/g

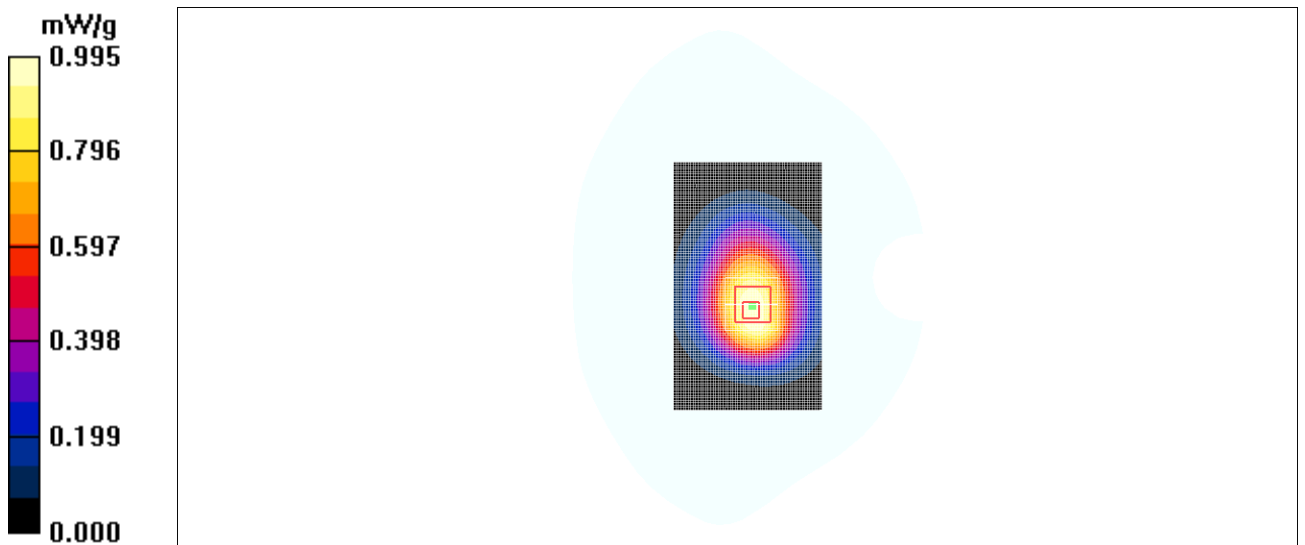
**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.3 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 1.71 W/kg

**SAR(1 g) = 0.932 mW/g; SAR(10 g) = 0.661 mW/g**

Maximum value of SAR (measured) = 0.979 mW/g



**Fig. 2 GPRS 850 Test Position 2**

**GPRS 850 Test Position 3 Middle**

Date/Time: 2010-9-11 8:40:36

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Position 3 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.461 mW/g

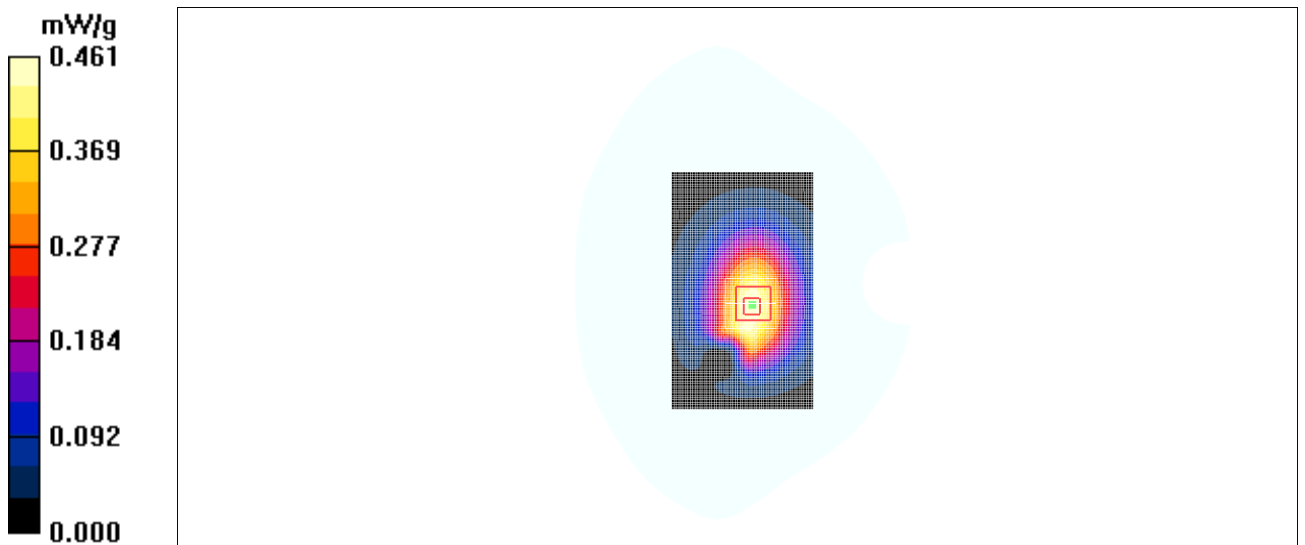
**Test Position 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.9 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.596 W/kg

**SAR(1 g) = 0.432 mW/g; SAR(10 g) = 0.294 mW/g**

Maximum value of SAR (measured) = 0.459 mW/g



**Fig. 3 GPRS 850 Test Position 3**

**GPRS 850 Test Position 4 Middle**

Date/Time: 2010-9-11 8:56:03

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 4 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

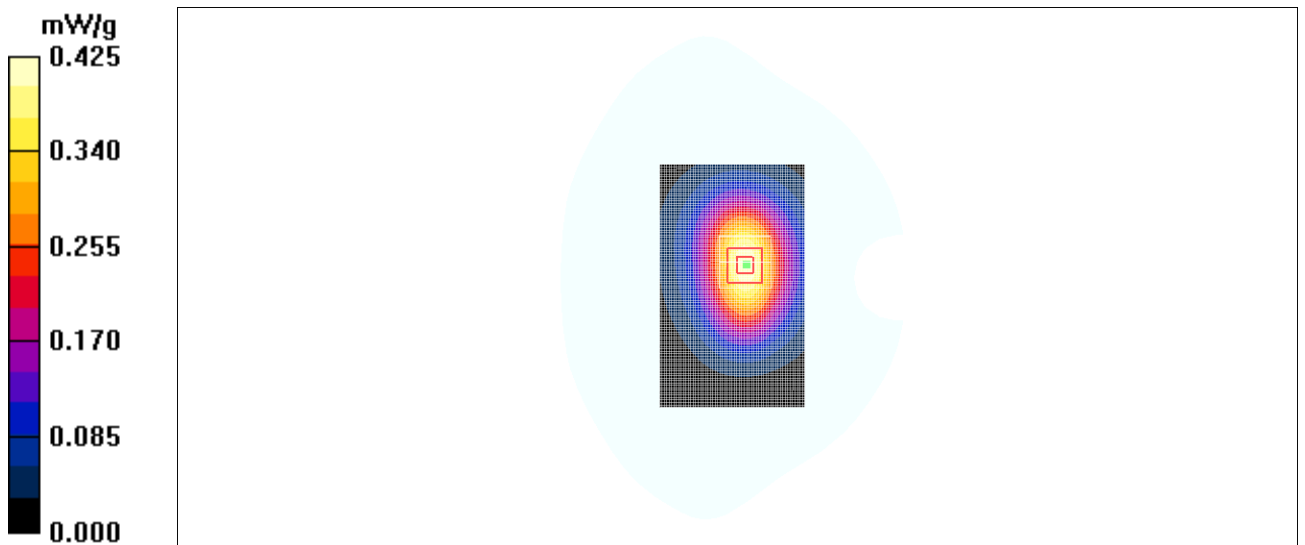
**Test Postion 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.6 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.543 W/kg

**SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.271 mW/g**

Maximum value of SAR (measured) = 0.417 mW/g



**Fig. 4 GPRS 850 Test Position 4**

**GPRS 850 Test Position 5 Middle**

Date/Time: 2010-9-11 9:11:27

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Position 5 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.069 mW/g

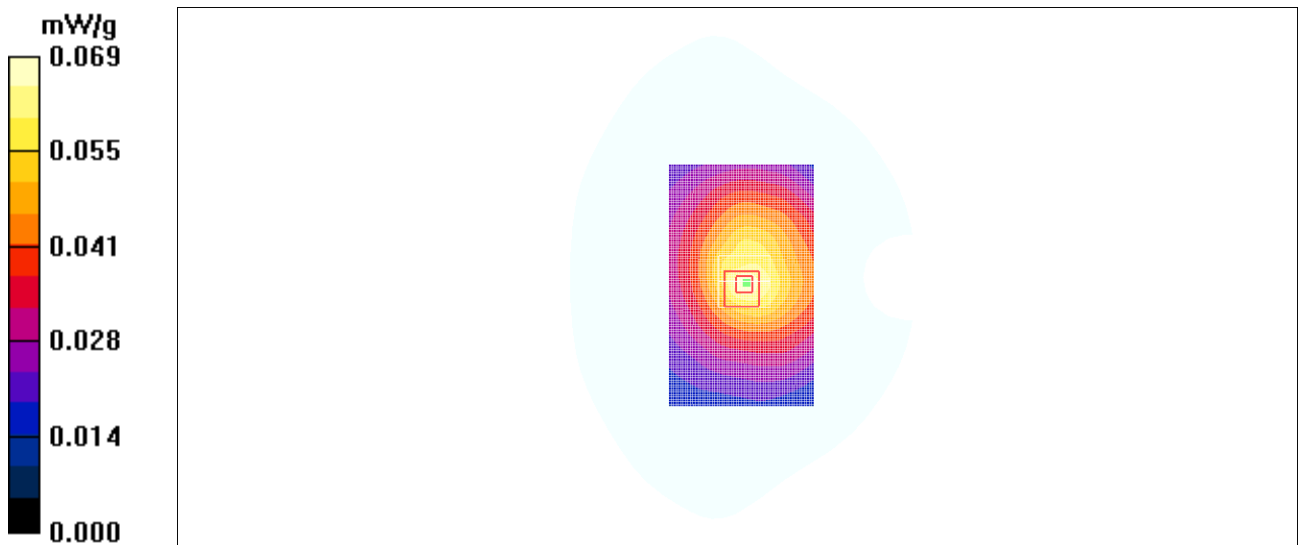
**Test Position 5 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.28 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.100 W/kg

**SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.041 mW/g**

Maximum value of SAR (measured) = 0.066 mW/g



**Fig. 5 GPRS 850 Test Position 5**

**GPRS 850 Test Position 1 High**

Date/Time: 2010-9-11 9:27:33

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

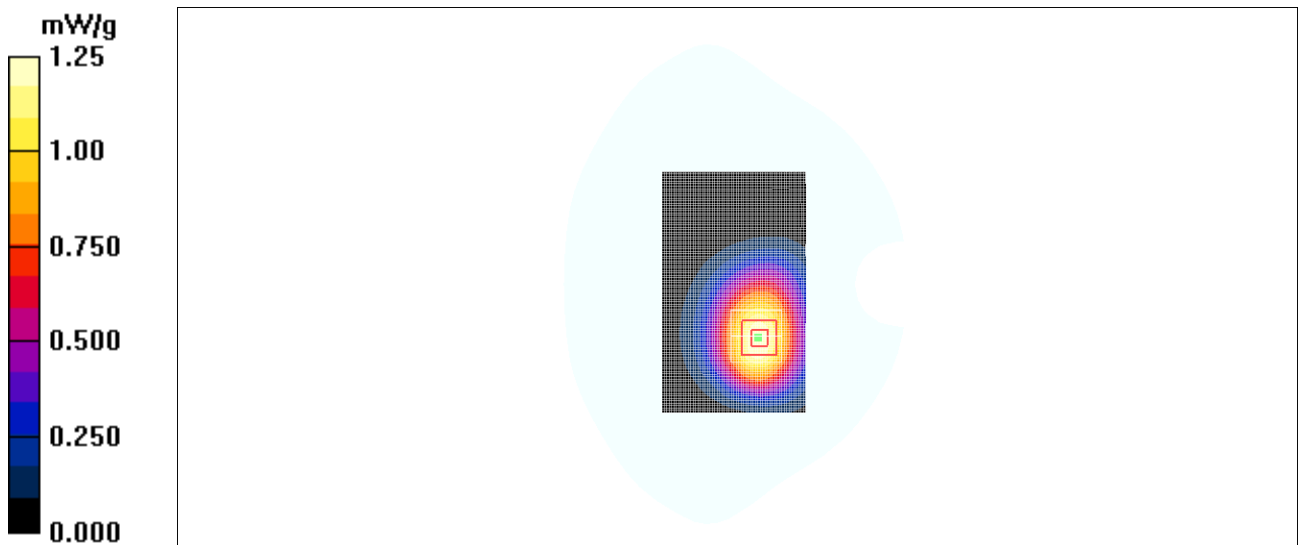
**Test Postion 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.1 V/m; Power Drift = -0.139 dB

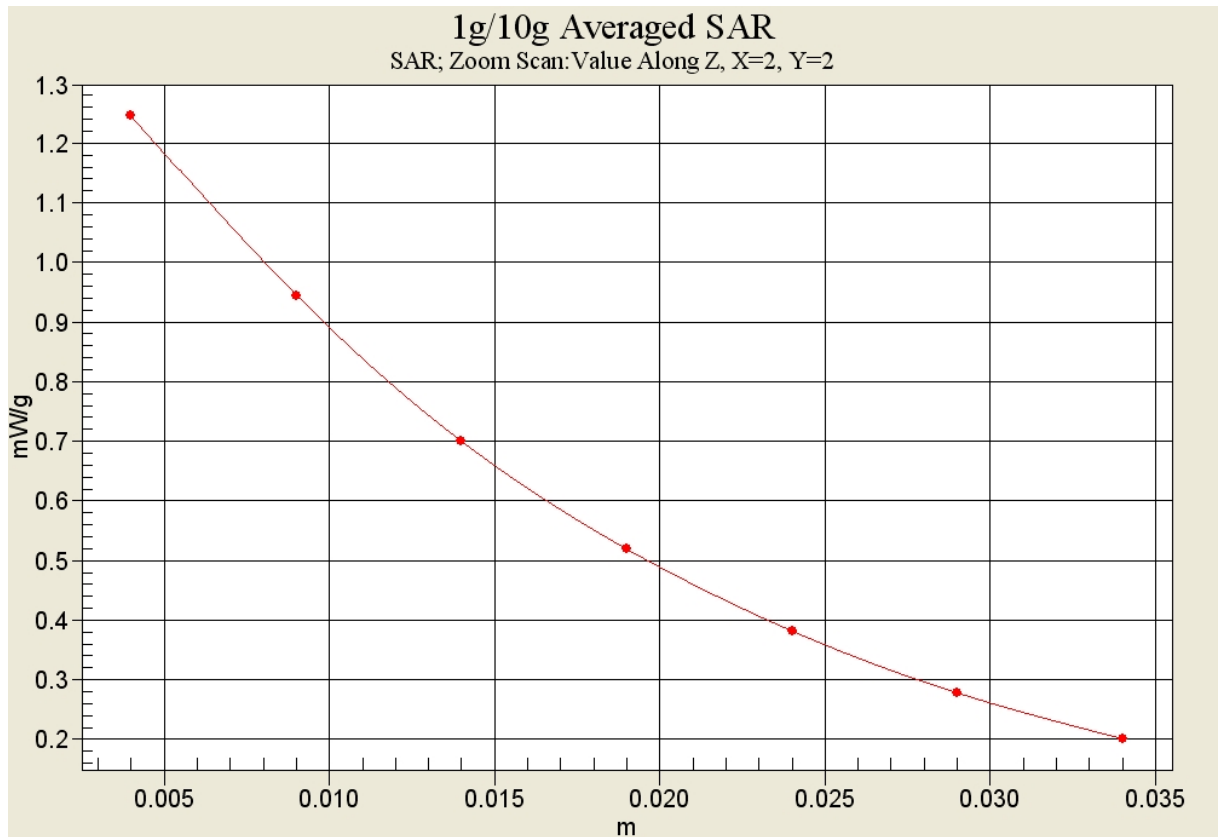
Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.828 mW/g**

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



**Fig. 6 GPRS 850 Test Position 1**



**Fig. 6-1 Z-Scan at power reference point (850 MHz CH251)**

**GPRS 850 Test Position 1 Low**

Date/Time: 2010-9-11 9:42:54

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.983$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.996 mW/g

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

Reference Value = 29.1 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.19 W/kg

**SAR(1 g) = 0.924 mW/g; SAR(10 g) = 0.662 mW/g**

Maximum value of SAR (measured) = 0.978 mW/g

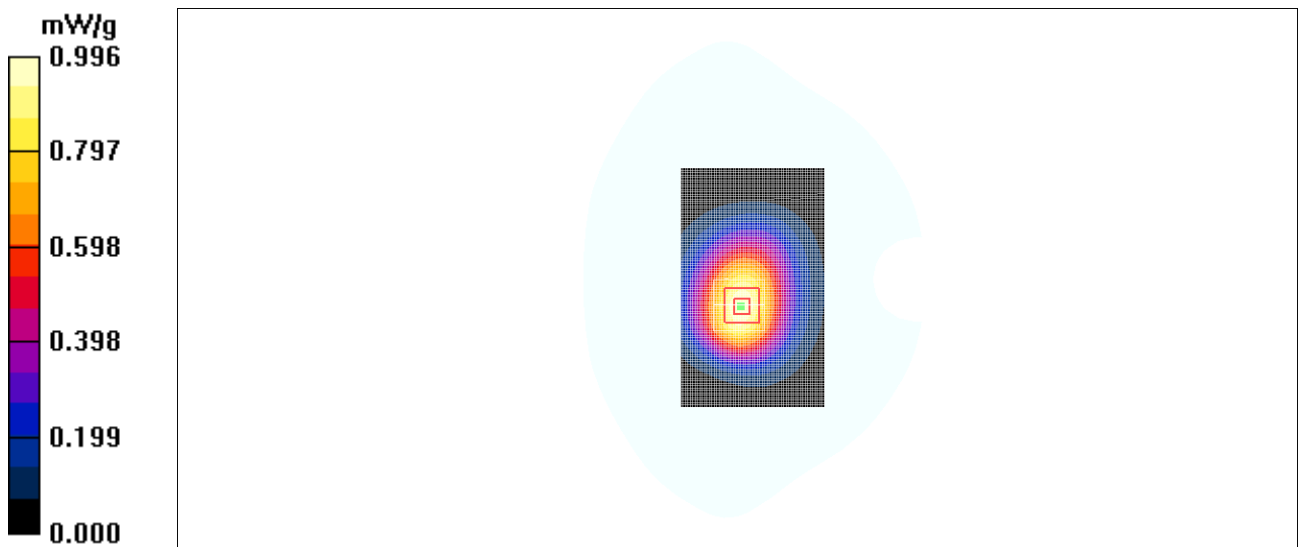


Fig. 7 GPRS 850 Test Position 1

**GPRS 850 Test Position 2 High**

Date/Time: 2010-9-11 9:58:35

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 2 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.896 mW/g

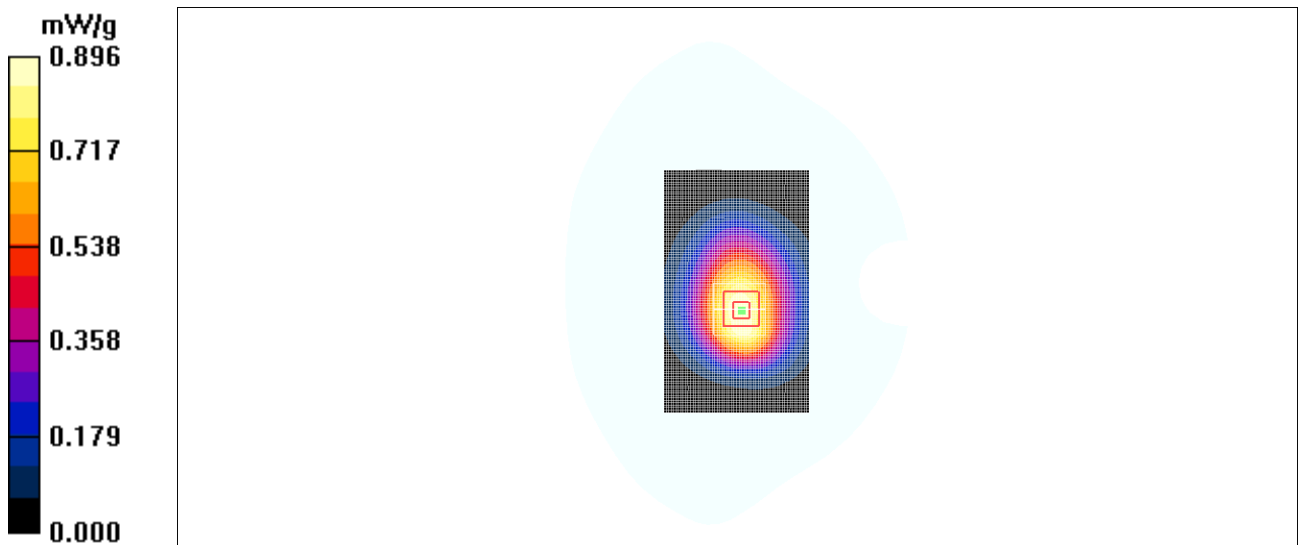
**Test Postion 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.8 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.845 mW/g; SAR(10 g) = 0.601 mW/g**

Maximum value of SAR (measured) = 0.902 mW/g



**Fig. 8 GPRS 850 Test Position 2**



**GPRS 850 Test Position 2 Low**

Date/Time: 2010-9-11 10:14:01

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.983$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 2 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.844 mW/g

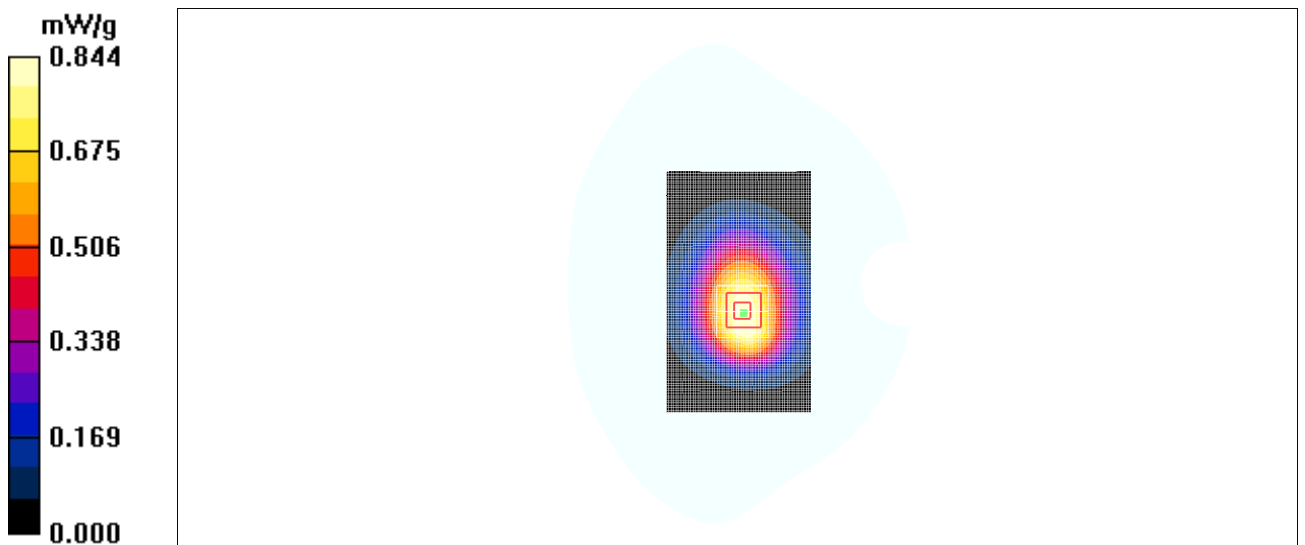
**Test Postion 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.4 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 1.05 W/kg

**SAR(1 g) = 0.799 mW/g; SAR(10 g) = 0.570 mW/g**

Maximum value of SAR (measured) = 0.851 mW/g



**Fig. 9 GPRS 850 Test Position 2**

**EGPRS 850 Test Position 1 Middle**

Date/Time: 2010-9-11 10:31:24

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

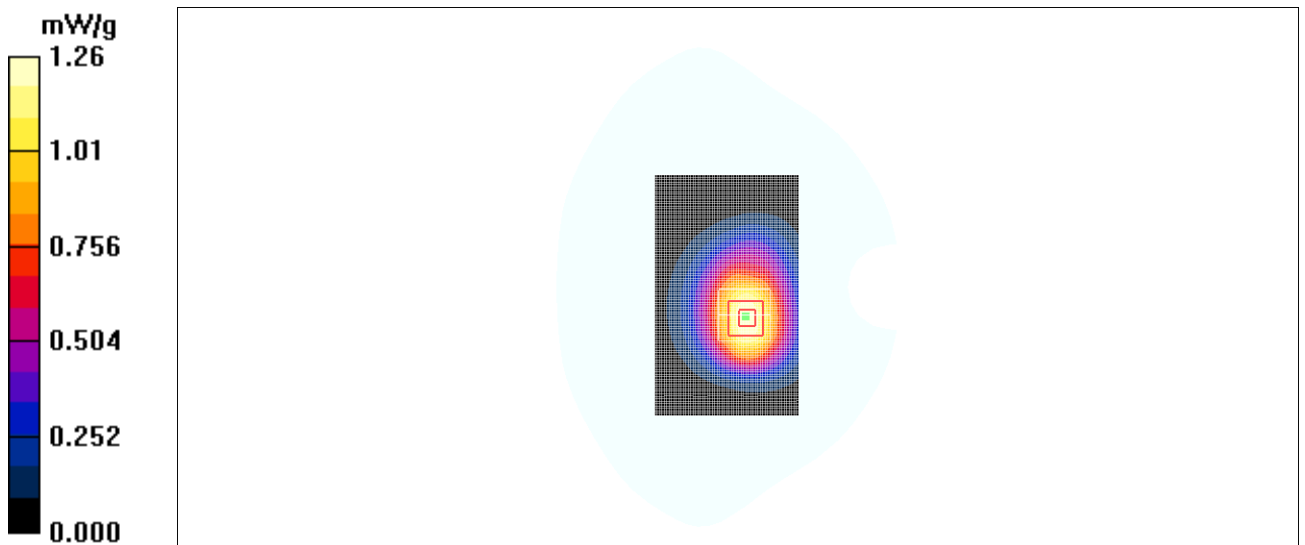
**Test Postion 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.8 V/m; Power Drift = -0.140 dB

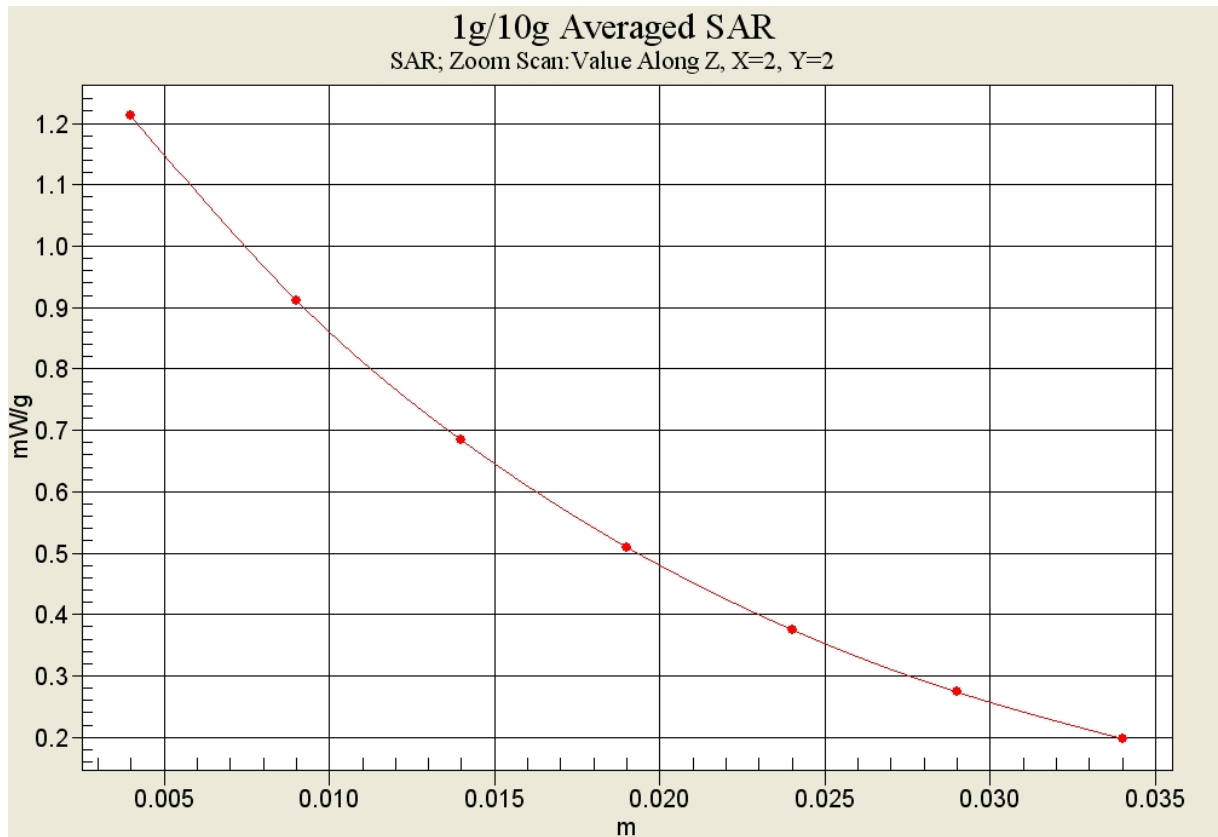
Peak SAR (extrapolated) = 1.48 W/kg

**SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.809 mW/g**

Maximum value of SAR (measured) = 1.21 mW/g



**Fig. 10 EGPRS 850 Test Position 1**



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

**EGPRS 850 Test Position 2 Middle**

Date/Time: 2010-9-11 10:46:51

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 2 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.936 mW/g

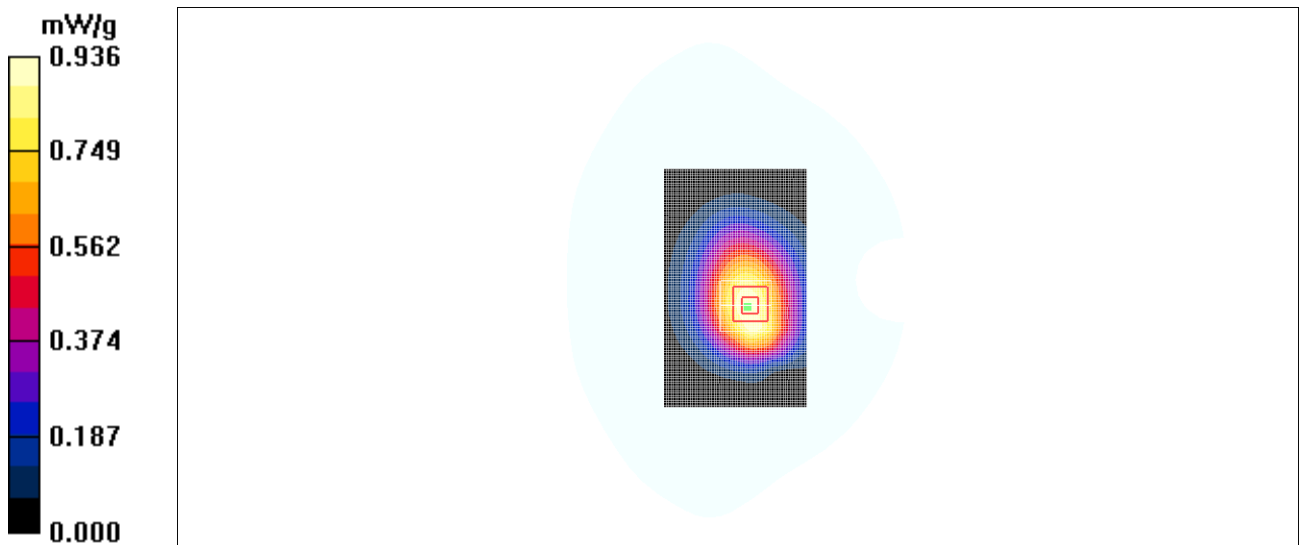
**Test Postion 2 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.2 V/m; Power Drift = -0.164 dB

Peak SAR (extrapolated) = 1.12 W/kg

**SAR(1 g) = 0.855 mW/g; SAR(10 g) = 0.613 mW/g**

Maximum value of SAR (measured) = 0.900 mW/g



**Fig. 11 EGPRS 850 Test Position 2**

**EGPRS 850 Test Position 3 Middle**

Date/Time: 2010-9-11 11:02:23

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 3 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.515 mW/g

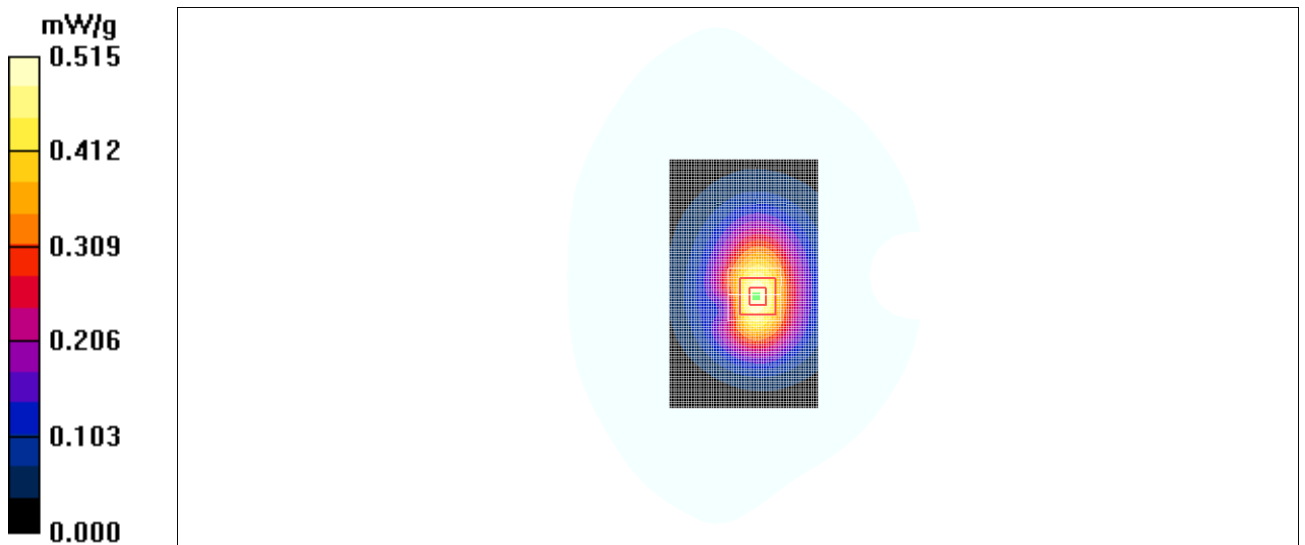
**Test Postion 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.0 V/m; Power Drift = -0.197 dB

Peak SAR (extrapolated) = 0.670 W/kg

**SAR(1 g) = 0.481 mW/g; SAR(10 g) = 0.329 mW/g**

Maximum value of SAR (measured) = 0.511 mW/g



**Fig. 12 EGPRS 850 Test Position 3**

**EGPRS 850 Test Position 4 Middle**

Date/Time: 2010-9-11 11:17:50

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 4 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.486 mW/g

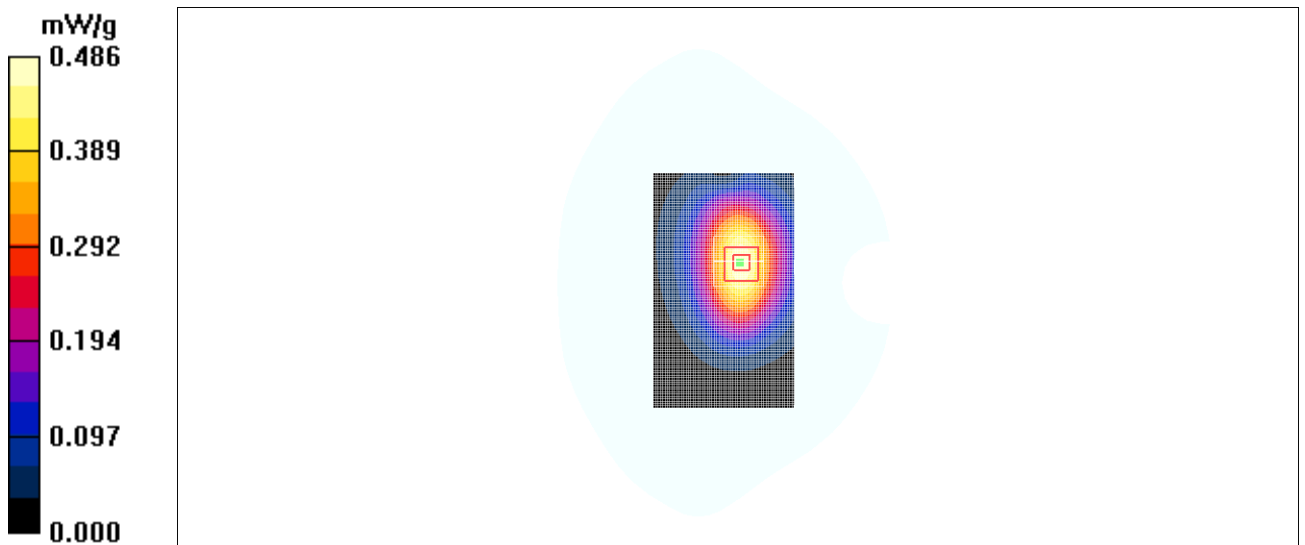
**Test Postion 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.9 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.629 W/kg

**SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.306 mW/g**

Maximum value of SAR (measured) = 0.478 mW/g



**Fig. 13 EGPRS 850 Test Position 4**

**EGPRS 850 Test Position 5 Middle**

Date/Time: 2010-9-11 11:33:26

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 5 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.062 mW/g

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

Reference Value = 7.75 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.125 W/kg

**SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.038 mW/g**

Maximum value of SAR (measured) = 0.061 mW/g

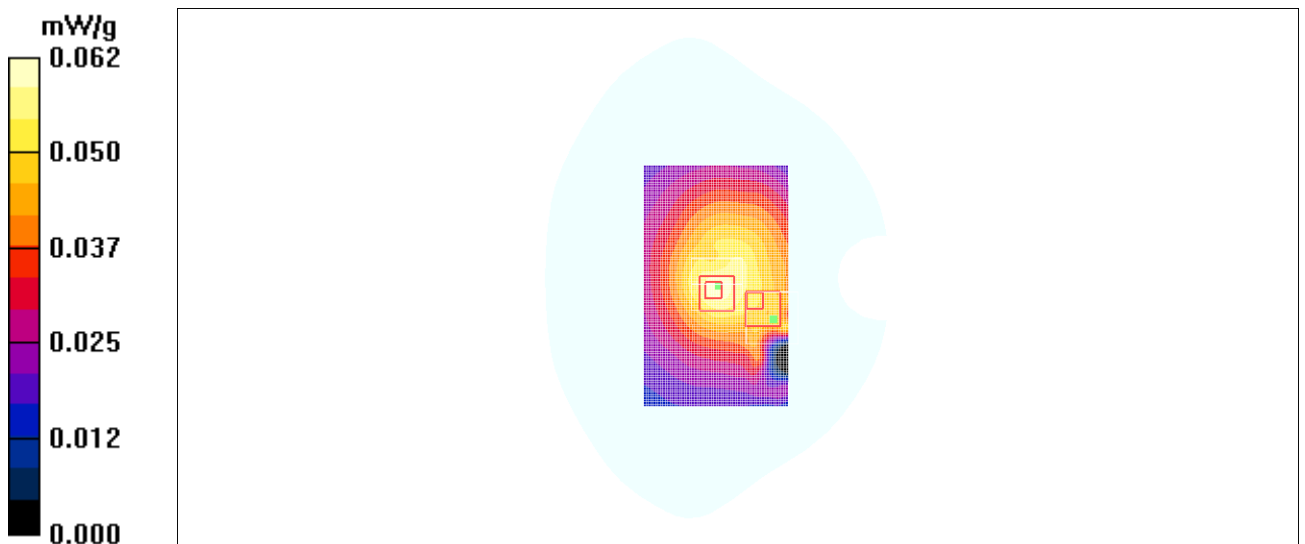
**Test Postion 5 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.75 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.067 W/kg

**SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.033 mW/g**

Maximum value of SAR (measured) = 0.053 mW/g



**Fig. 14 EGPRS 850 Test Position 5**

**EGPRS 850 Test Position 1 High**

Date/Time: 2010-9-11 11:48:49

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.08 mW/g

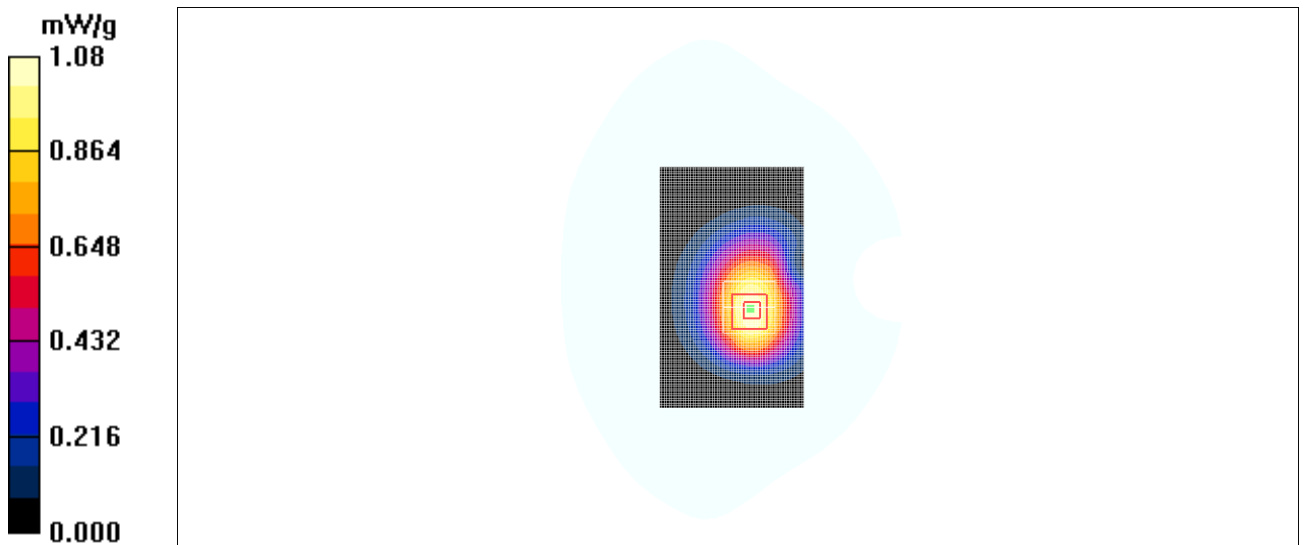
**Test Postion 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.2 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 2.39 W/kg

**SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.715 mW/g**

Maximum value of SAR (measured) = 1.08 mW/g



**Fig. 15 EGPRS 850 Test Position 1**



**EGPRS 850 Test Position 1 Low**

Date/Time: 2010-9-11 12:04:28

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.983$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

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

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.15 mW/g

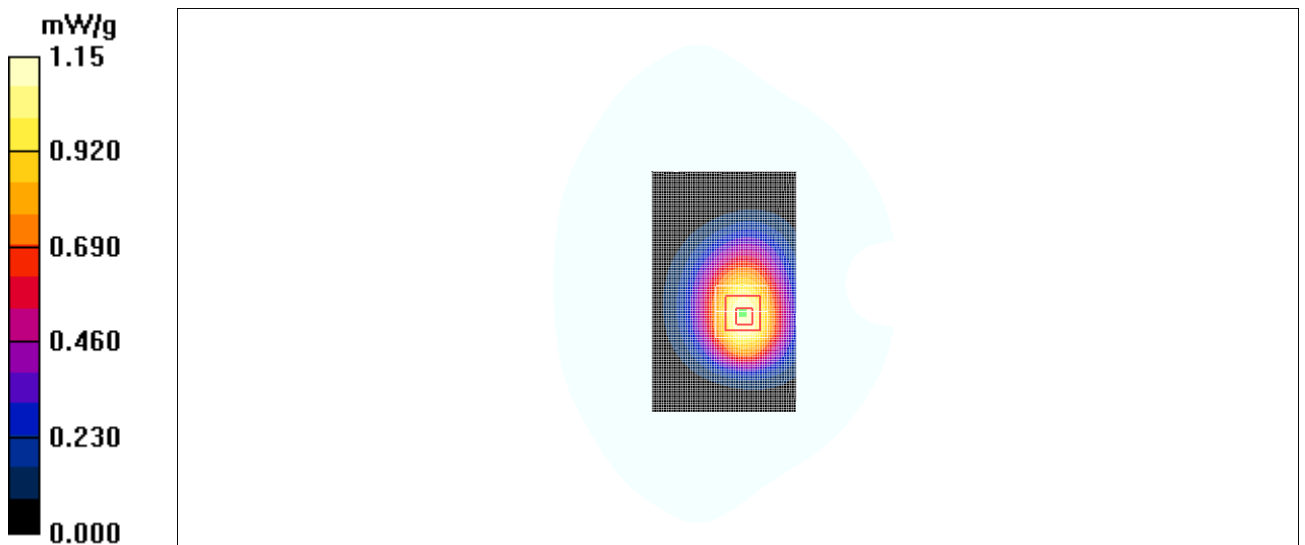
**Test Postion 1 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.3 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.772 mW/g**

Maximum value of SAR (measured) = 1.15 mW/g



**Fig. 16 EGPRS 850 Test Position 1**

**EGPRS 850 Test Position 2 High**

Date/Time: 2010-9-11 12:20:01

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 2 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.928 mW/g

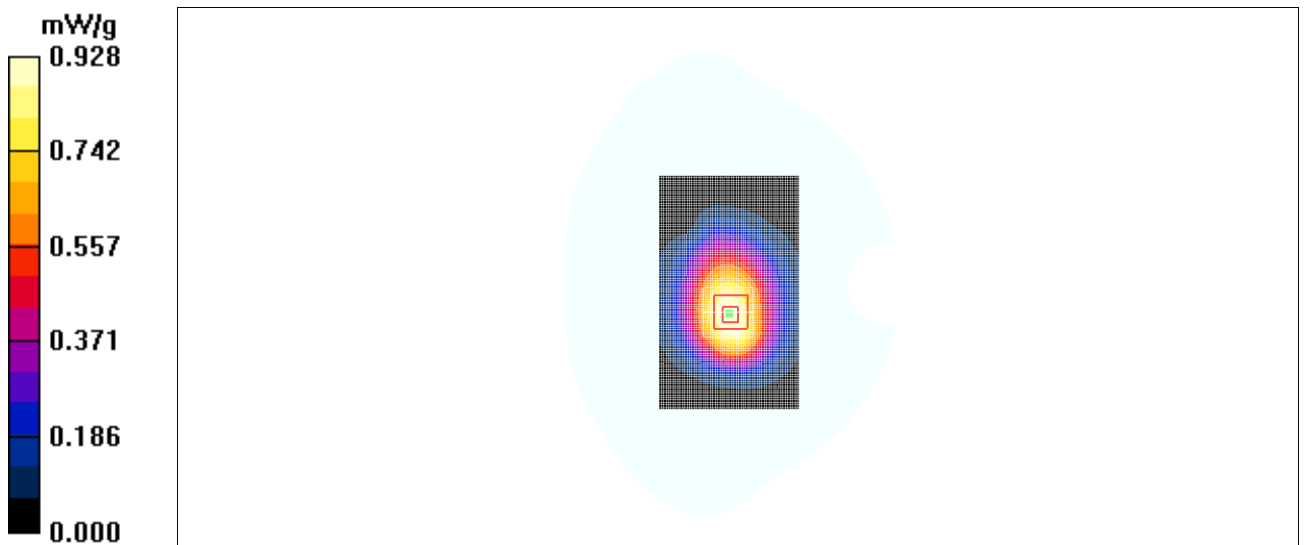
**Test Postion 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.0 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 1.64 W/kg

**SAR(1 g) = 0.886 mW/g; SAR(10 g) = 0.627 mW/g**

Maximum value of SAR (measured) = 0.935 mW/g



**Fig. 17 EGPRS 850 Test Position 2**

**EGPRS 850 Test Position 2 Low**

Date/Time: 2010-9-11 12:35:32

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.983 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $23.3^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: GSM 850 Frequency:  $824.2 \text{ MHz}$  Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Postion 2 Low/Area Scan (61x101x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.958 \text{ mW/g}$

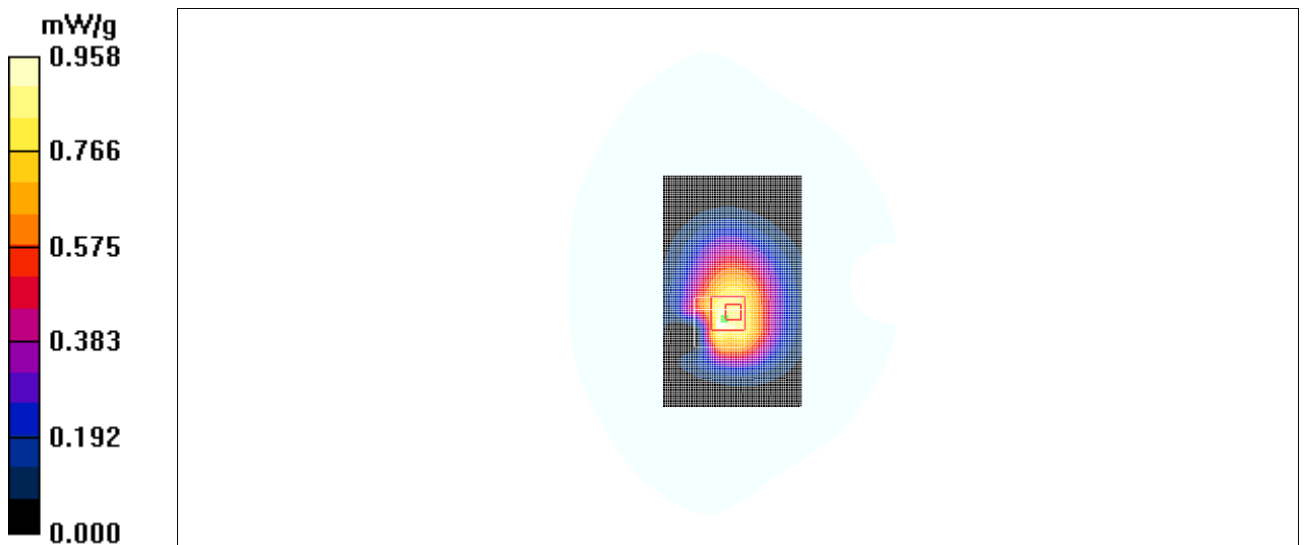
**Test Postion 2 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $27.5 \text{ V/m}$ ; Power Drift =  $-0.108 \text{ dB}$

Peak SAR (extrapolated) =  $1.08 \text{ W/kg}$

**SAR(1 g) =  $0.817 \text{ mW/g}$ ; SAR(10 g) =  $0.577 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.866 \text{ mW/g}$



**Fig. 18 EGPRS 850 Test Position 2**

**GPRS 1900 Test Position 1 Middle**

Date/Time: 2010-9-12 8:11:23

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.610 mW/g

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

Reference Value = 18.0 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.965 W/kg

**SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.285 mW/g**

Maximum value of SAR (measured) = 0.550 mW/g

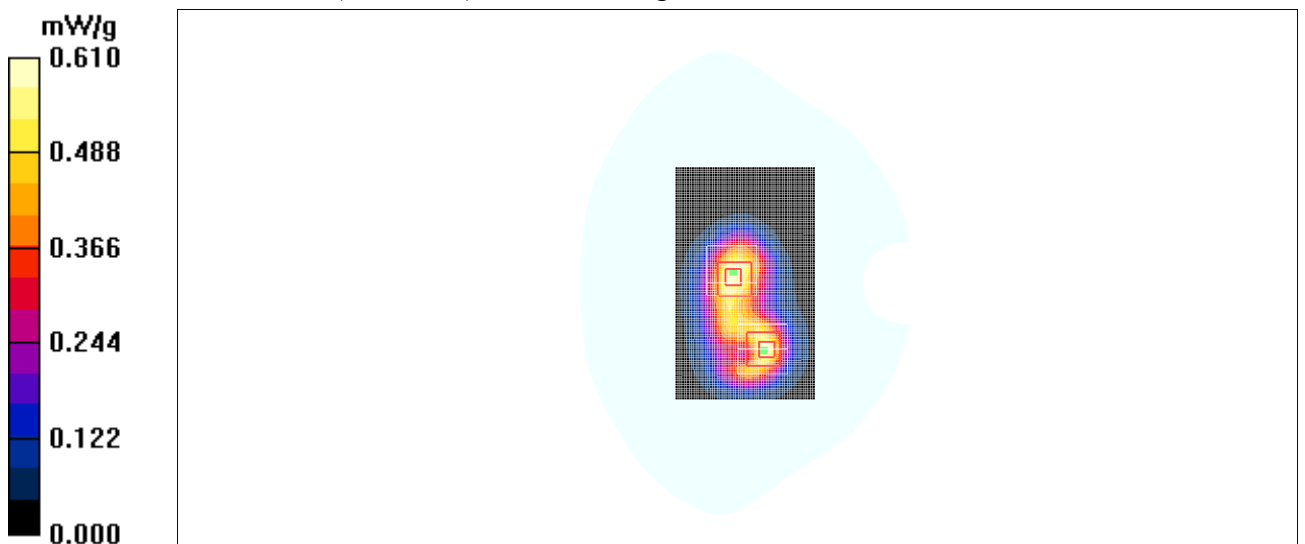
**Test Postion 1 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.0 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.793 W/kg

**SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.324 mW/g**

Maximum value of SAR (measured) = 0.547 mW/g



**Fig. 19 GPRS 1900 Test Position 1**

**GPRS 1900 Test Position 2 Middle**

Date/Time: 2010-9-12 8:26:49

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 2 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.513 mW/g

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

Reference Value = 15.3 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.826 W/kg

**SAR(1 g) = 0.466 mW/g; SAR(10 g) = 0.260 mW/g**

Maximum value of SAR (measured) = 0.516 mW/g

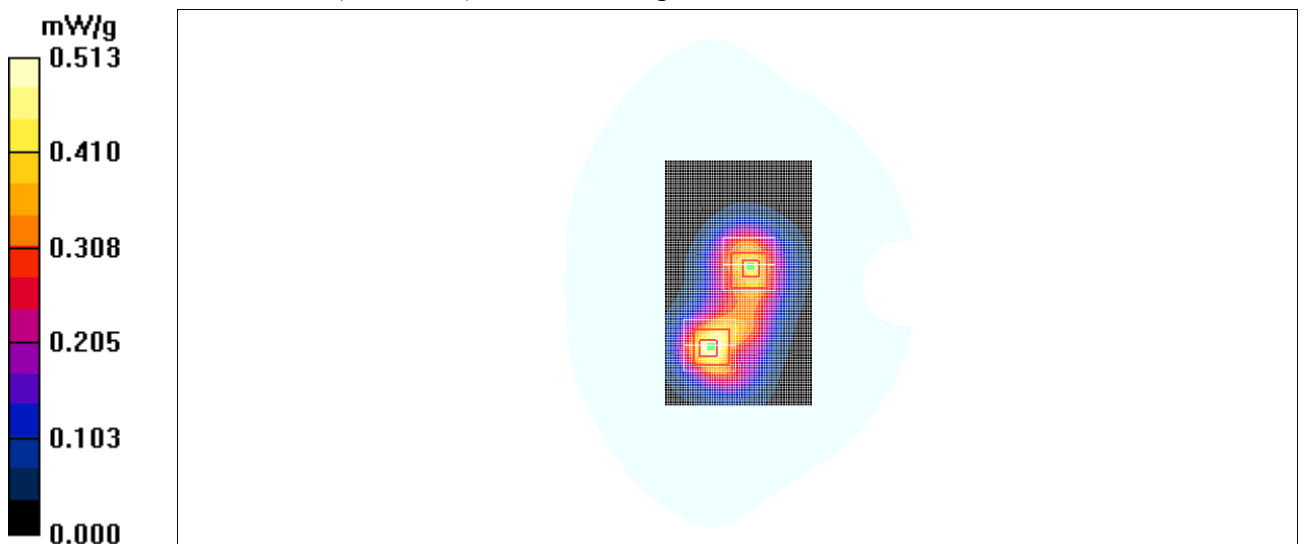
**Test Postion 2 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.3 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.589 W/kg

**SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.240 mW/g**

Maximum value of SAR (measured) = 0.411 mW/g



**Fig. 20 GPRS 1900 Test Position 2**

**GPRS 1900 Test Position 3 Middle**

Date/Time: 2010-9-12 8:42:20

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 3 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

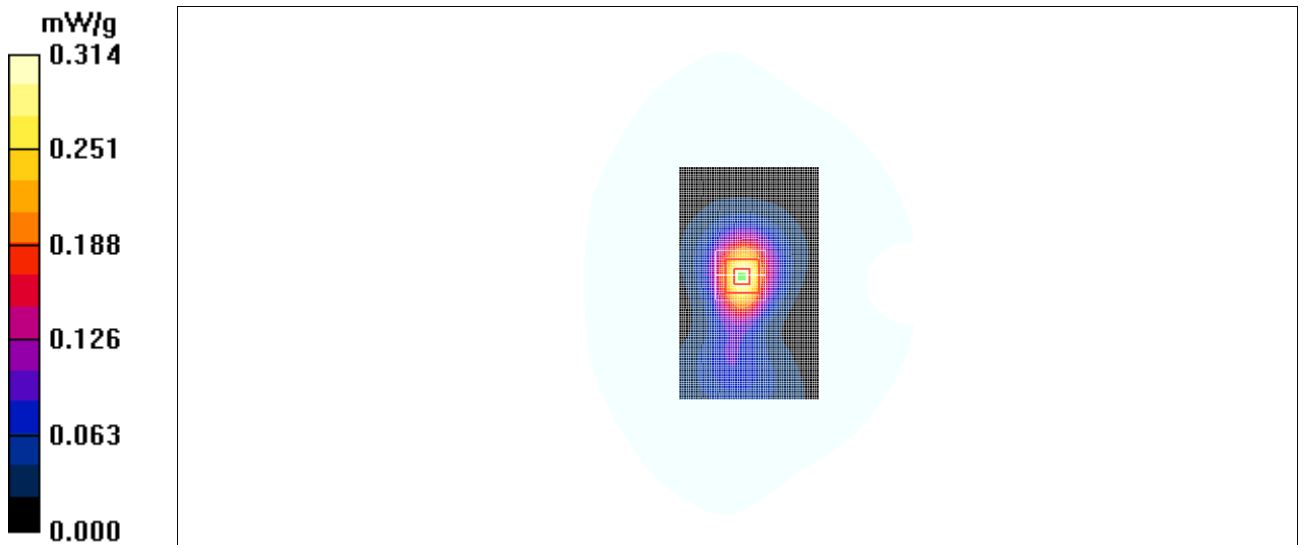
**Test Postion 3 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = 0.150 dB

Peak SAR (extrapolated) = 0.464 W/kg

**SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.167 mW/g**

Maximum value of SAR (measured) = 0.307 mW/g



**Fig. 21 GPRS 1900 Test Position 3**

**GPRS 1900 Test Position 4 Middle**

Date/Time: 2010-9-12 8:57:43

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 4 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

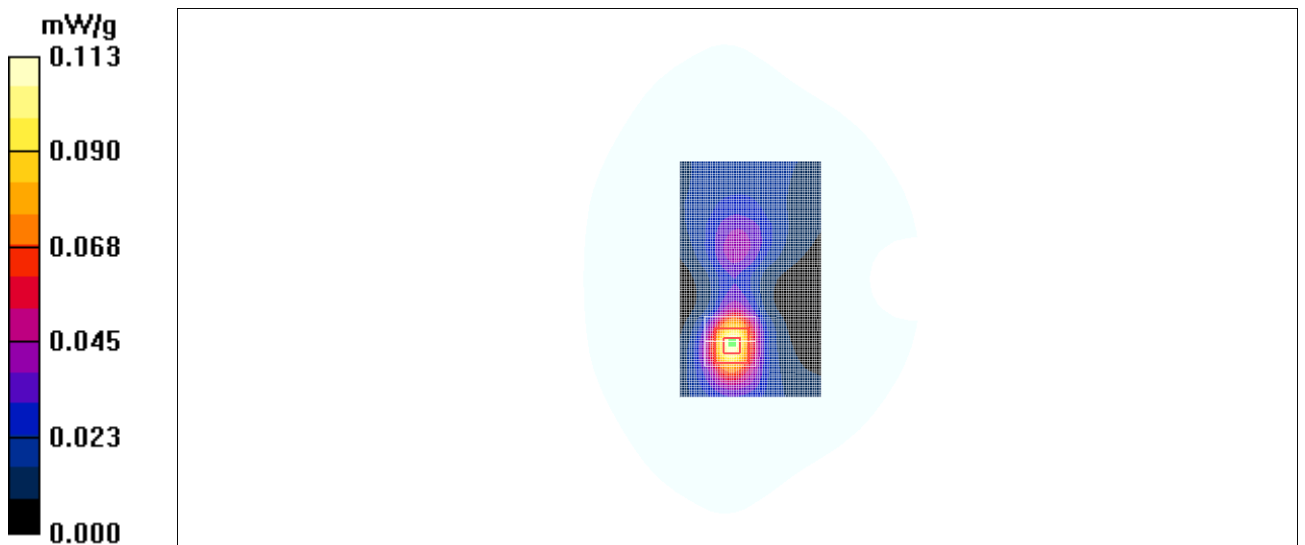
**Test Postion 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.83 V/m; Power Drift = 0.195 dB

Peak SAR (extrapolated) = 0.167 W/kg

**SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.056 mW/g**

Maximum value of SAR (measured) = 0.107 mW/g



**Fig. 22 GPRS 1900 Test Position 4**

**GPRS 1900 Test Position 5 Middle**

Date/Time: 2010-9-12 9:13:22

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 5 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.271 mW/g

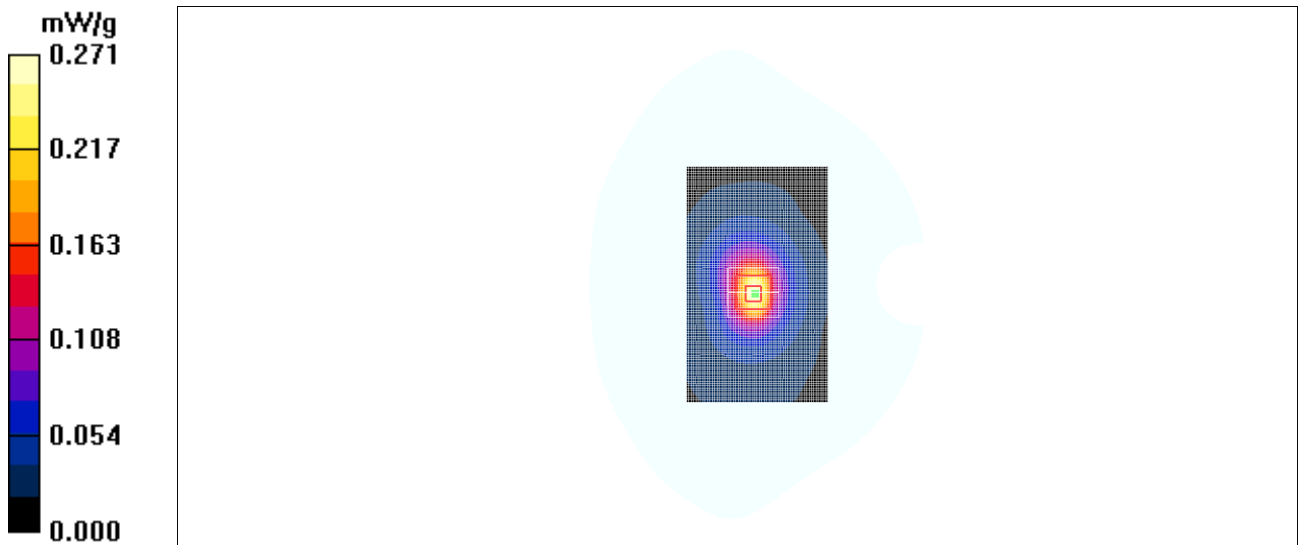
**Test Postion 5 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.9 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.415 W/kg

**SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.139 mW/g**

Maximum value of SAR (measured) = 0.281 mW/g



**Fig. 23 GPRS 1900 Test Position 5**



**GPRS 1900 Test Position 1 High**

Date/Time: 2010-9-12 9:29:54

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.632 mW/g

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

Reference Value = 16.9 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.561 mW/g; SAR(10 g) = 0.305 mW/g**

Maximum value of SAR (measured) = 0.601 mW/g

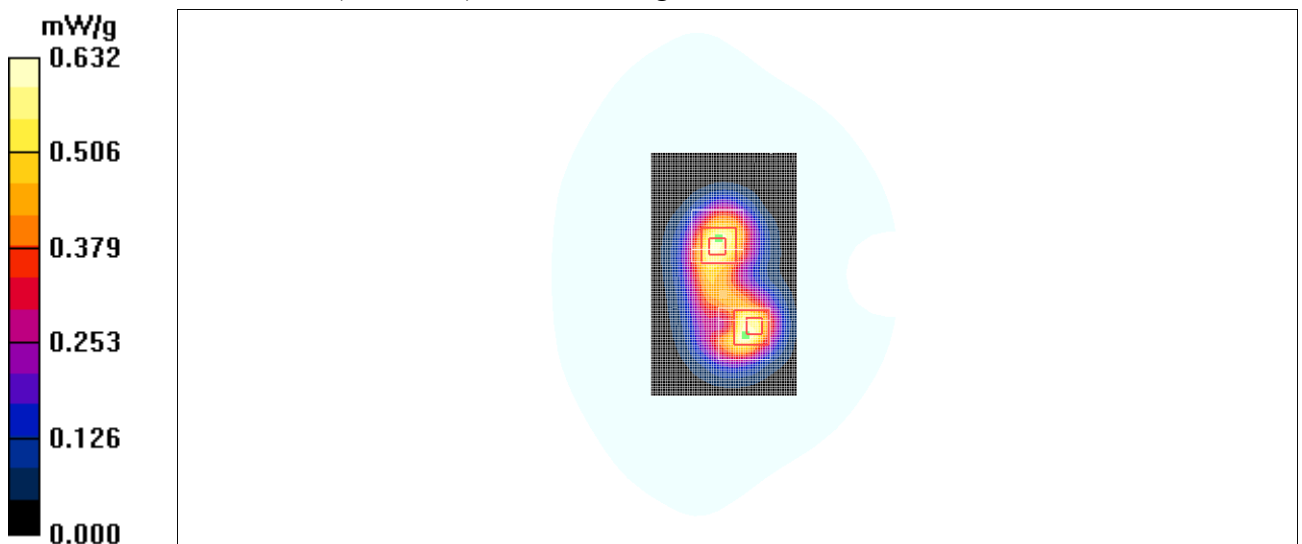
**Test Postion 1 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.9 V/m; Power Drift = -0.032 dB

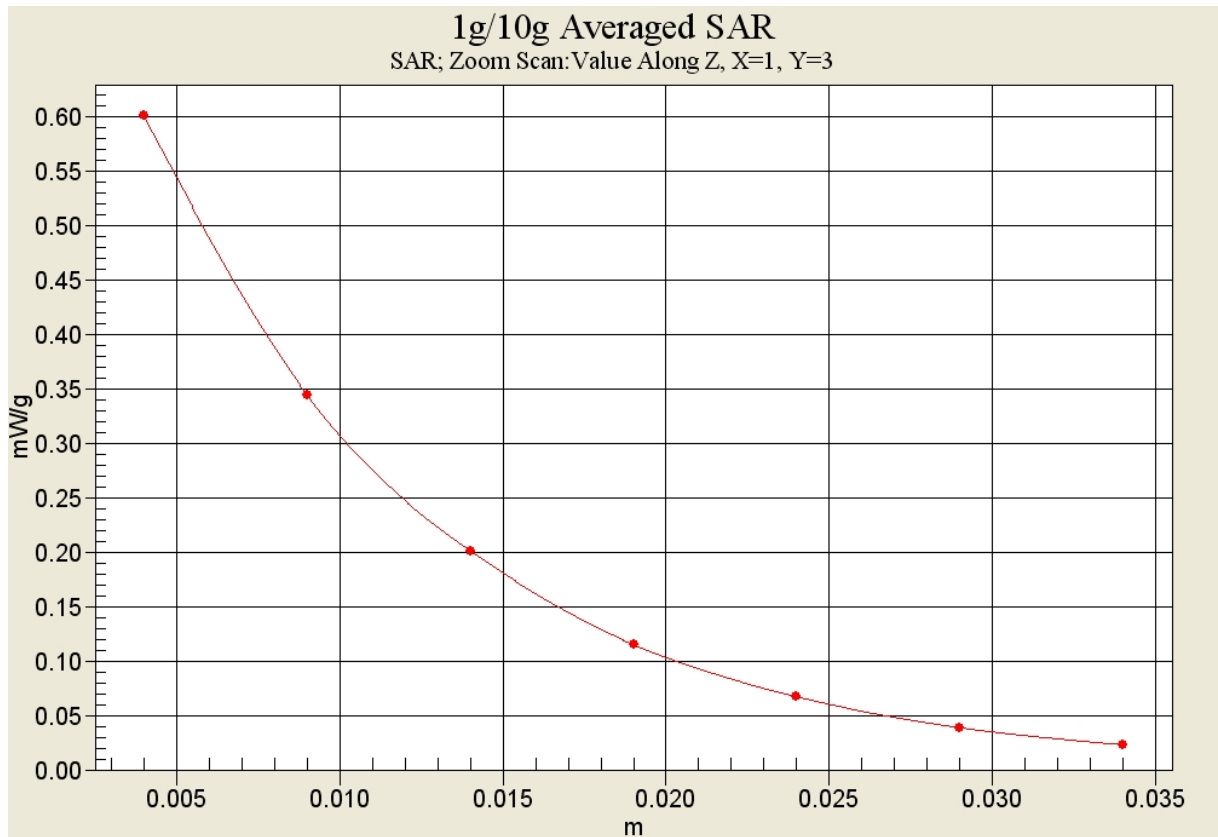
Peak SAR (extrapolated) = 0.871 W/kg

**SAR(1 g) = 0.554 mW/g; SAR(10 g) = 0.342 mW/g**

Maximum value of SAR (measured) = 0.595 mW/g



**Fig. 24 GPRS 1900 Test Position 1**



**Fig. 24-1 Z-Scan at power reference point (1900 MHz CH810)**

**GPRS 1900 Test Position 1 Low**

Date/Time: 2010-9-12 9:46:13

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

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

Reference Value = 18.1 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.840 W/kg

**SAR(1 g) = 0.547 mW/g; SAR(10 g) = 0.345 mW/g**

Maximum value of SAR (measured) = 0.580 mW/g

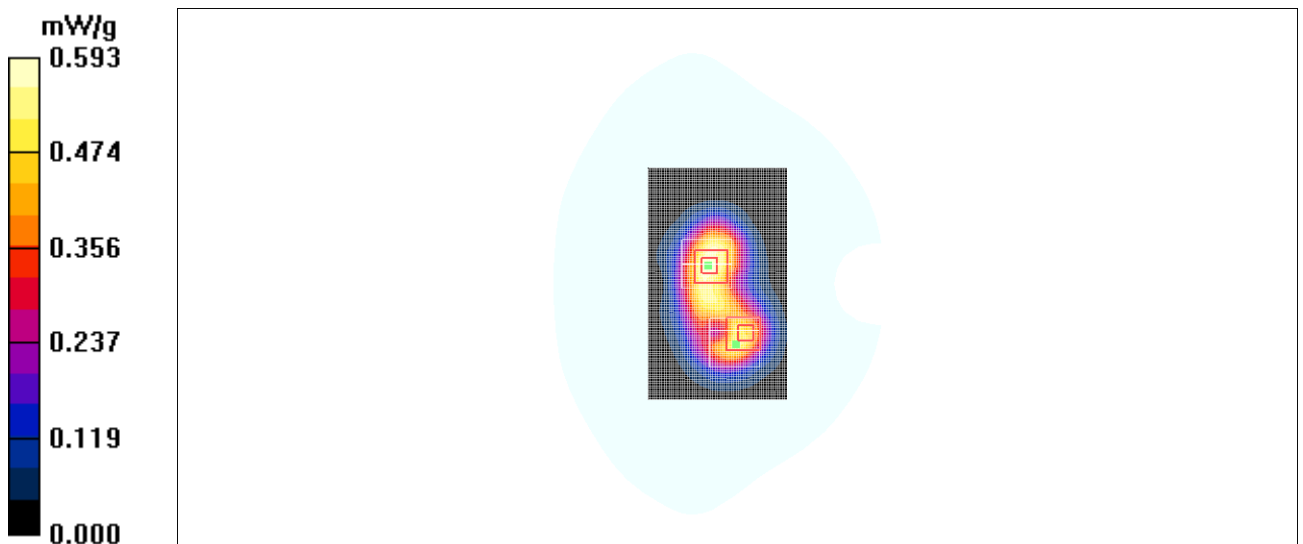
**Test Postion 1 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.1 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.845 W/kg

**SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.256 mW/g**

Maximum value of SAR (measured) = 0.517 mW/g



**Fig. 25 GPRS 1900 Test Position 1**

**EGPRS 1900 Test Position 1 High**

Date/Time: 2010-9-12 10:02:57

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.636 mW/g

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

Reference Value = 17.6 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.878 W/kg

**SAR(1 g) = 0.559 mW/g; SAR(10 g) = 0.336 mW/g**

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

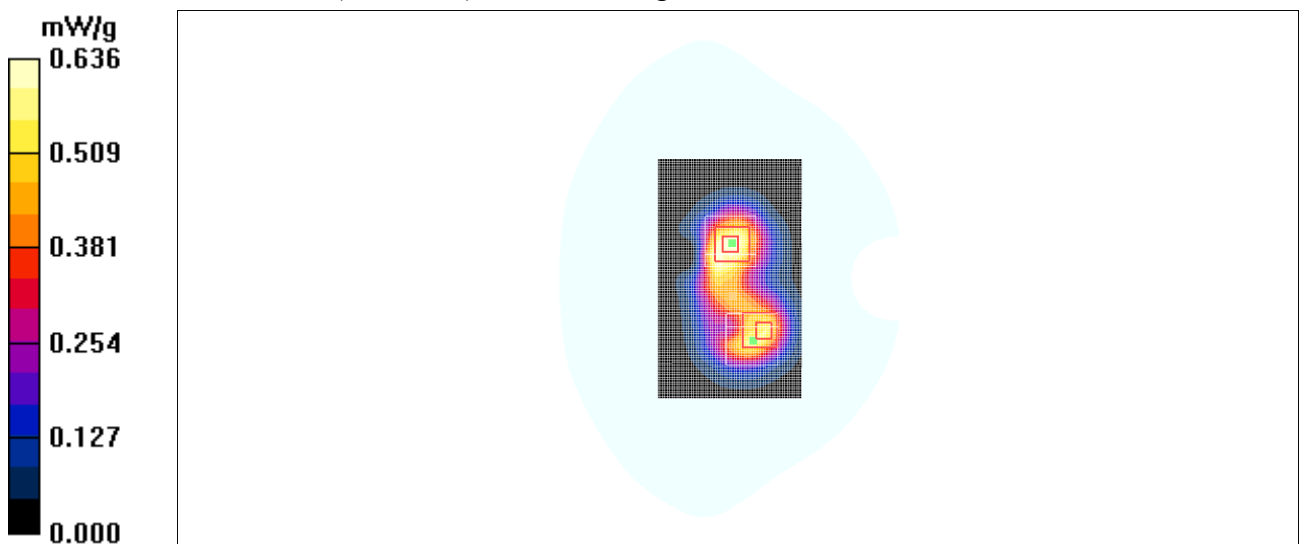
**Test Postion 1 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.6 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 0.983 W/kg

**SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.295 mW/g**

Maximum value of SAR (measured) = 0.603 mW/g



**Fig. 26 EGPRS 1900 Test Position 1**

**EGPRS 1900 Test Position 2 High**

Date/Time: 2010-9-12 10:19:21

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 2 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.541 mW/g

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

Reference Value = 11.5 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.876 W/kg

**SAR(1 g) = 0.490 mW/g; SAR(10 g) = 0.273 mW/g**

Maximum value of SAR (measured) = 0.537 mW/g

**Test Postion 2 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.604 W/kg

**SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.240 mW/g**

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

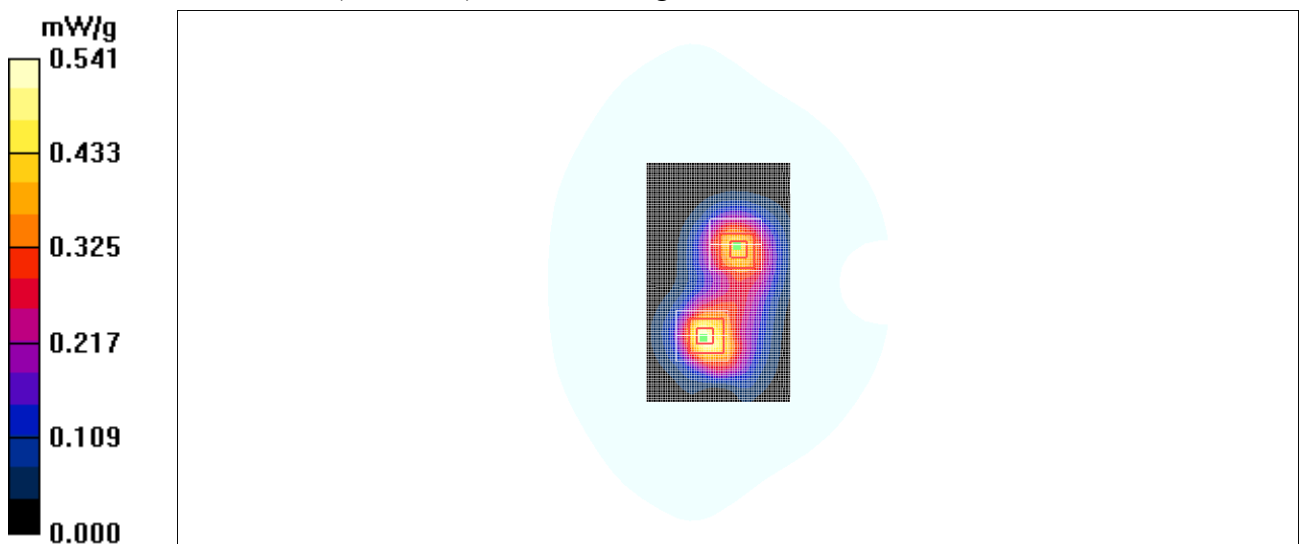


Fig. 27 EGPRS 1900 Test Position 2

**EGPRS 1900 Test Position 3 High**

Date/Time: 2010-9-12 10:34:55

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 3 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.329 mW/g

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

Reference Value = 11.5 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.497 W/kg

**SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.176 mW/g**

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

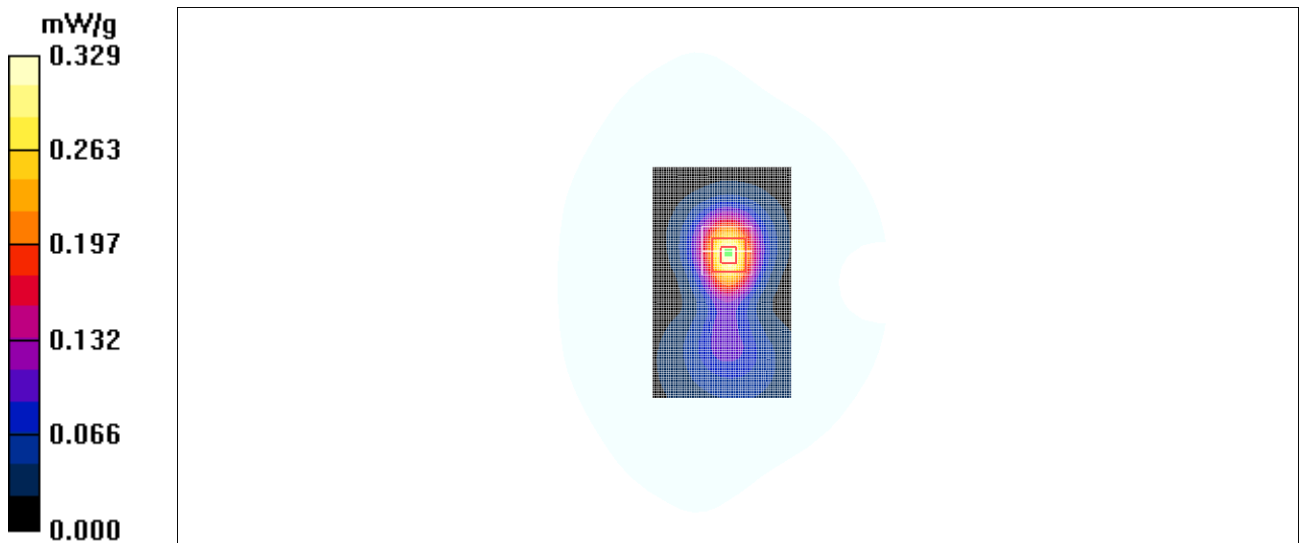


Fig. 28 EGPRS 1900 Test Position 3

**EGPRS 1900 Test Position 4 High**

Date/Time: 2010-9-12 10:50:31

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 4 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

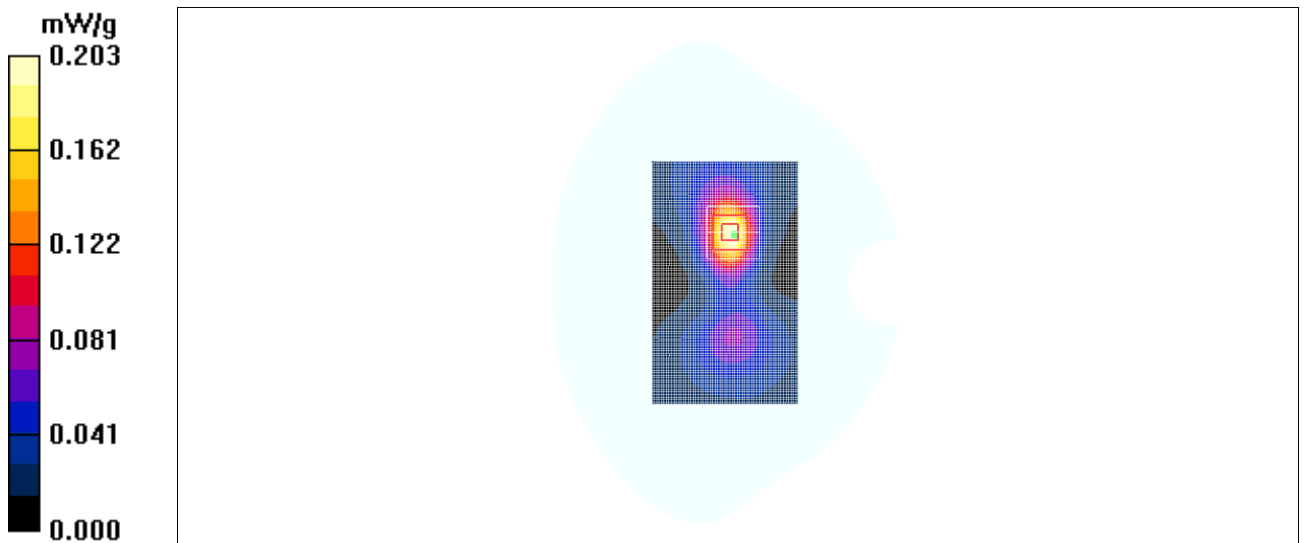
**Test Postion 4 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.16 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 0.307 W/kg

**SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.101 mW/g**

Maximum value of SAR (measured) = 0.195 mW/g



**Fig. 29 EGPRS 1900 Test Position 4**

**EGPRS 1900 Test Position 5 High**

Date/Time: 2010-9-12 11:06:02

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1910$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 5 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.300 mW/g

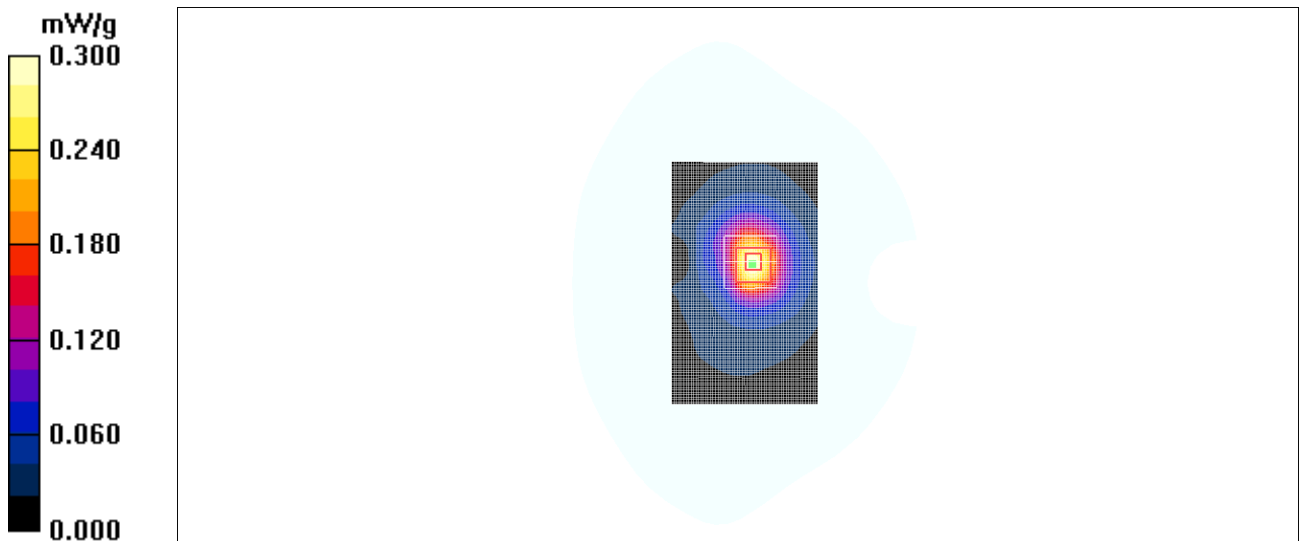
**Test Postion 5 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.8 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.515 W/kg

**SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.163 mW/g**

Maximum value of SAR (measured) = 0.313 mW/g



**Fig. 30 EGPRS 1900 Test Position 5**



**EGPRS 1900 Test Position 1 Middle**

Date/Time: 2010-9-12 11:21:39

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.555 mW/g

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

Reference Value = 17.6 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.842 W/kg

**SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.324 mW/g**

Maximum value of SAR (measured) = 0.557 mW/g

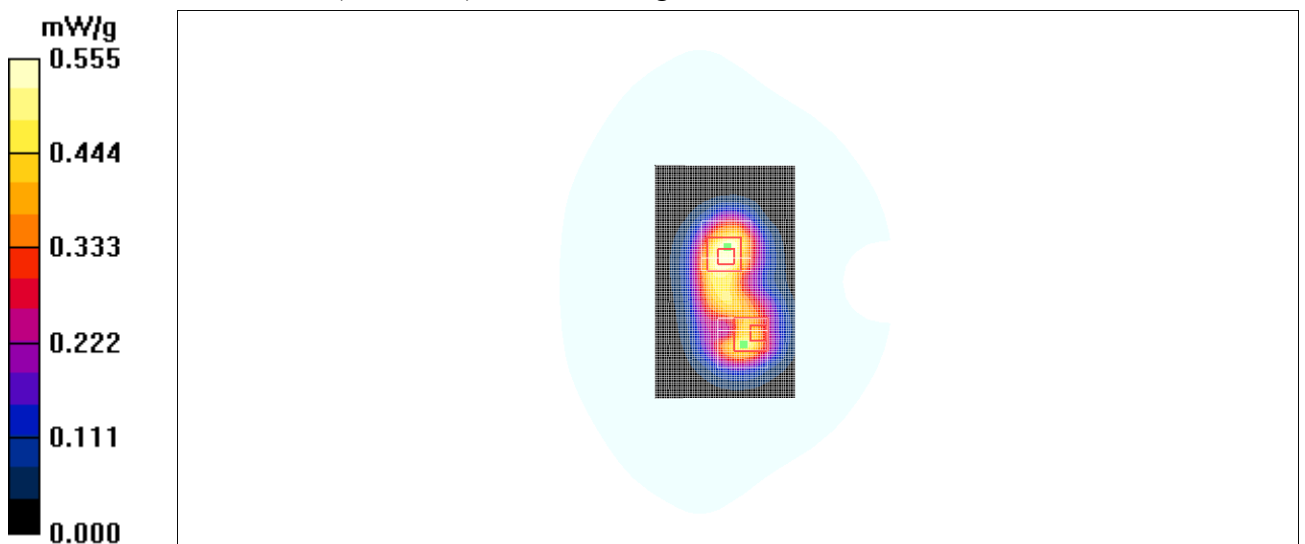
**Test Postion 1 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.6 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.807 W/kg

**SAR(1 g) = 0.451 mW/g; SAR(10 g) = 0.245 mW/g**

Maximum value of SAR (measured) = 0.496 mW/g



**Fig.31 EGPRS 1900 Test Position 1**

**EGPRS 1900 Test Position 1 Low**

Date/Time: 2010-9-12 11:37:04

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz Frequency: 1850.2 MHz Duty Cycle: 1:2

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.619 mW/g

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

Reference Value = 19.1 V/m; Power Drift = 0.039 dB

Peak SAR (extrapolated) = 0.878 W/kg

**SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.358 mW/g**

Maximum value of SAR (measured) = 0.611 mW/g

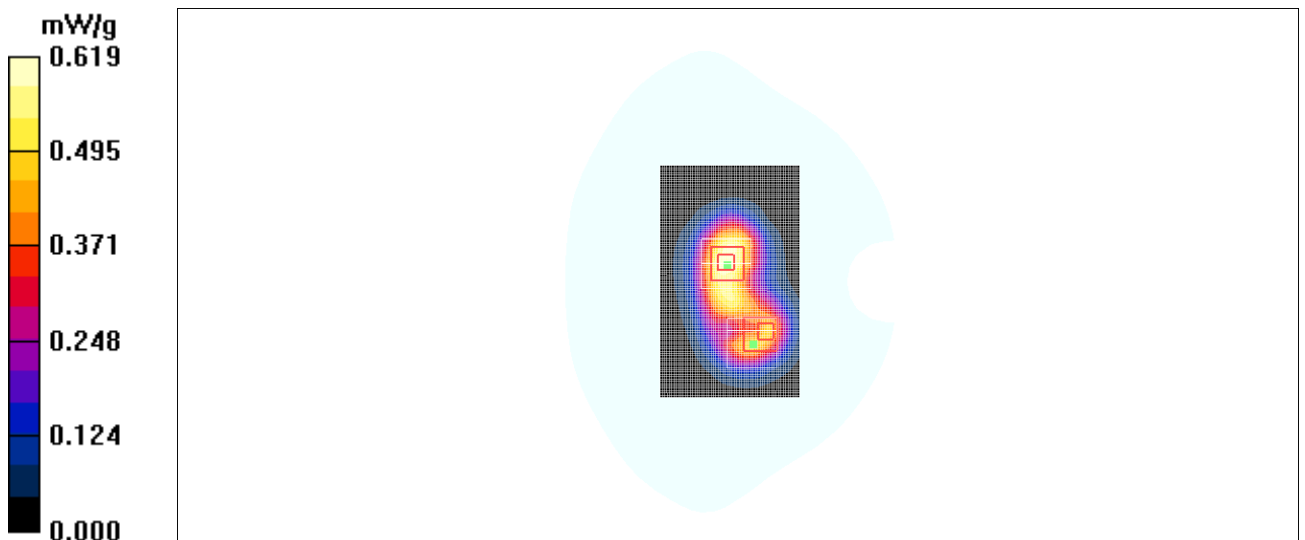
**Test Postion 1 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.1 V/m; Power Drift = 0.039 dB

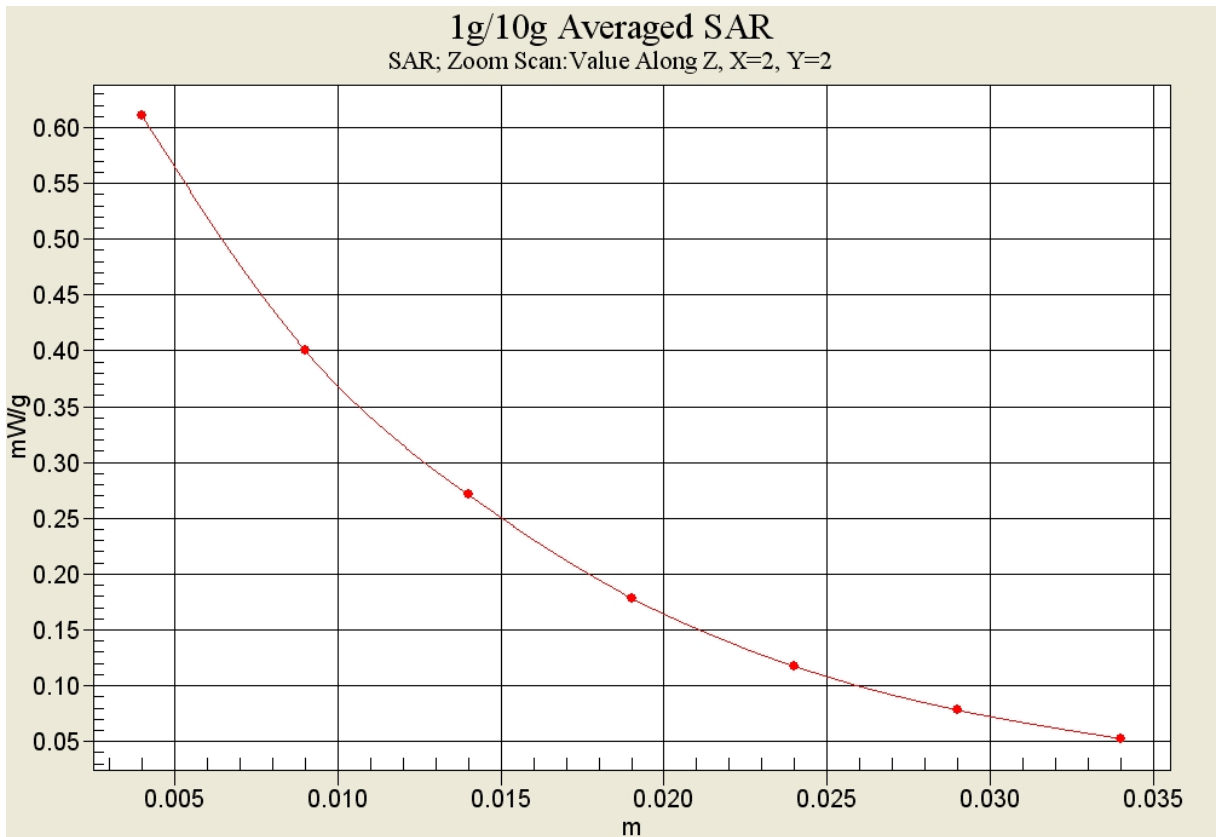
Peak SAR (extrapolated) = 0.796 W/kg

**SAR(1 g) = 0.446 mW/g; SAR(10 g) = 0.248 mW/g**

Maximum value of SAR (measured) = 0.500 mW/g



**Fig. 32 EGPRS 1900 Test Position 1**



**Fig. 32-1 Z-Scan at power reference point (1900 MHz CH512)**

**WCDMA 1900 Test Position 1 Low**

Date/Time: 2010-9-12 12:03:22

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.07 mW/g

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

Reference Value = 24.1 V/m; Power Drift = -0.138 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 0.917 mW/g; SAR(10 g) = 0.579 mW/g**

Maximum value of SAR (measured) = 0.984 mW/g

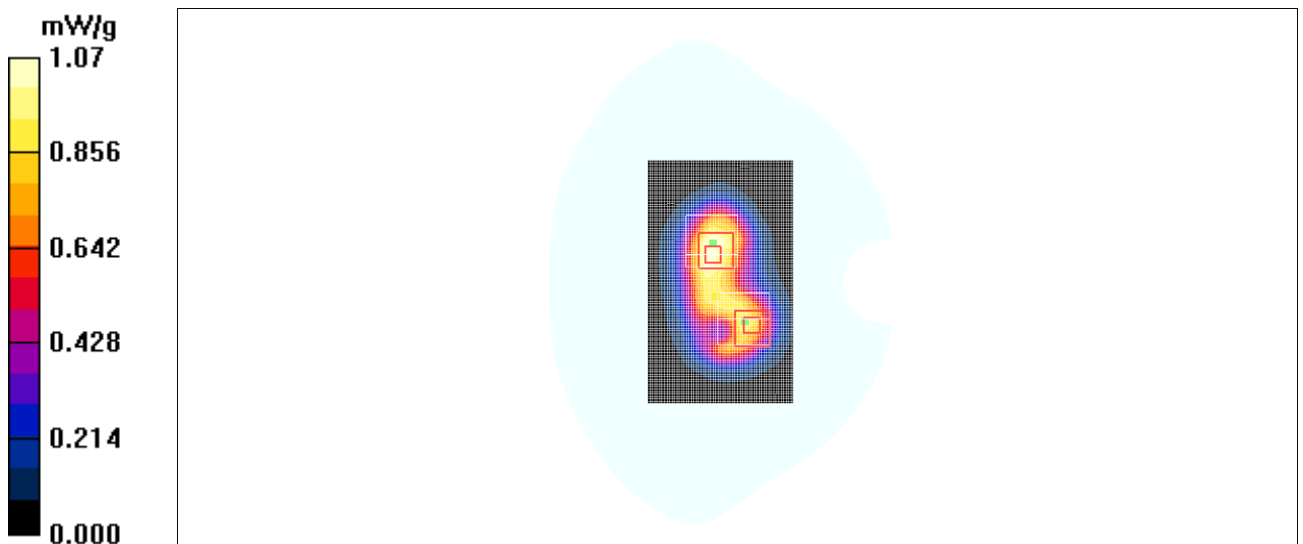
**Test Postion 1 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.1 V/m; Power Drift = -0.138 dB

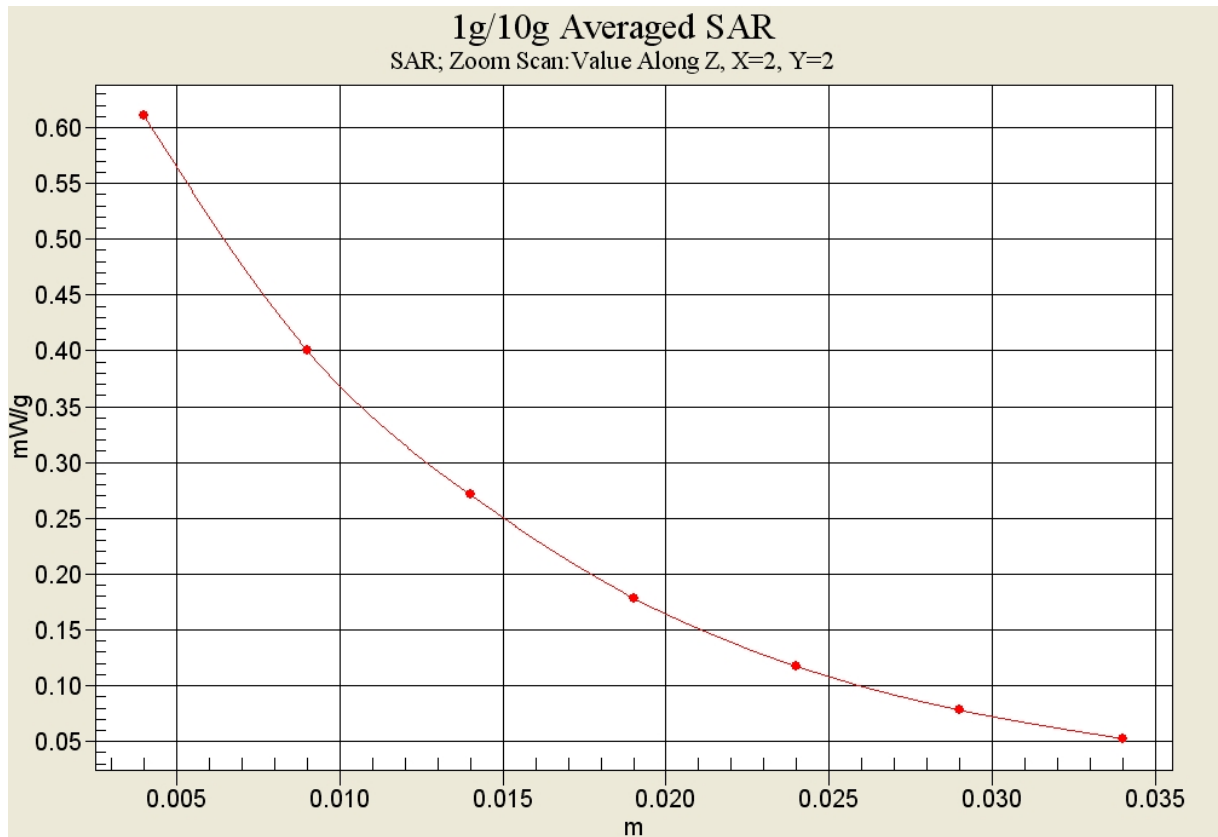
Peak SAR (extrapolated) = 2.54 W/kg

**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.409 mW/g**

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



**Fig. 33 WCDMA 1900 Test Position 1**



**Fig. 33-1 Z-Scan at power reference point (WCDMA1900 MHz CH9262)**

**WCDMA 1900 Test Position 2 Low**

Date/Time: 2010-9-12 12:18:49

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 2 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.747 mW/g

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

Reference Value = 19.6 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.17 W/kg

**SAR(1 g) = 0.665 mW/g; SAR(10 g) = 0.380 mW/g**

Maximum value of SAR (measured) = 0.726 mW/g

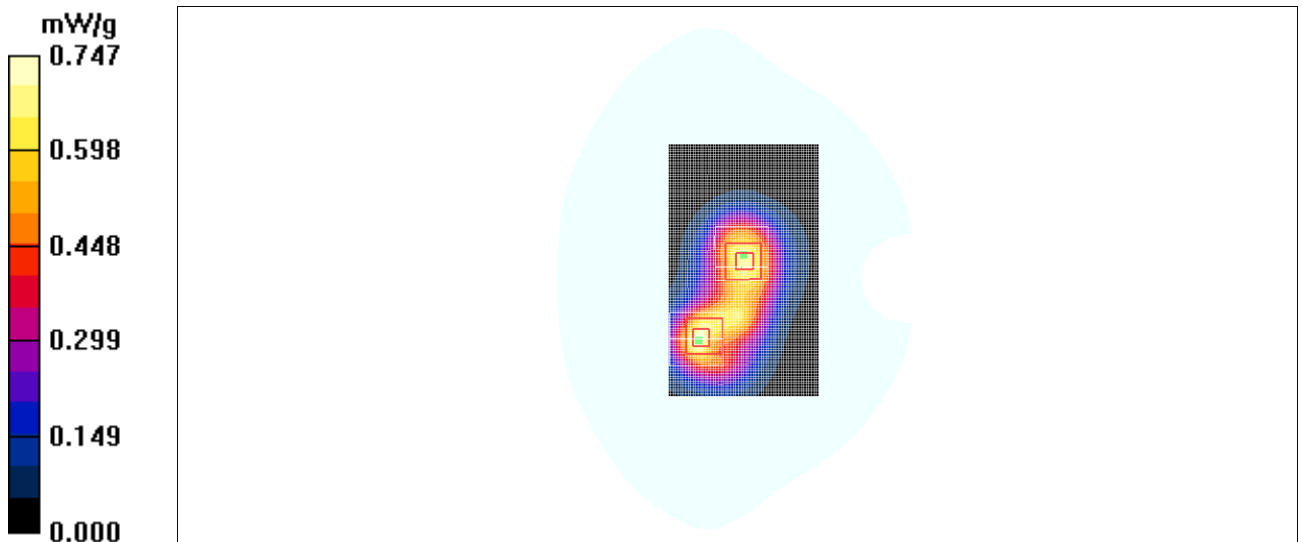
**Test Postion 2 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.6 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.930 W/kg

**SAR(1 g) = 0.612 mW/g; SAR(10 g) = 0.388 mW/g**

Maximum value of SAR (measured) = 0.648 mW/g



**Fig. 34 WCDMA 1900 Test Position 2**

**WCDMA 1900 Test Position 3 Low**

Date/Time: 2010-9-12 12:34:25

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 3 Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.535 mW/g

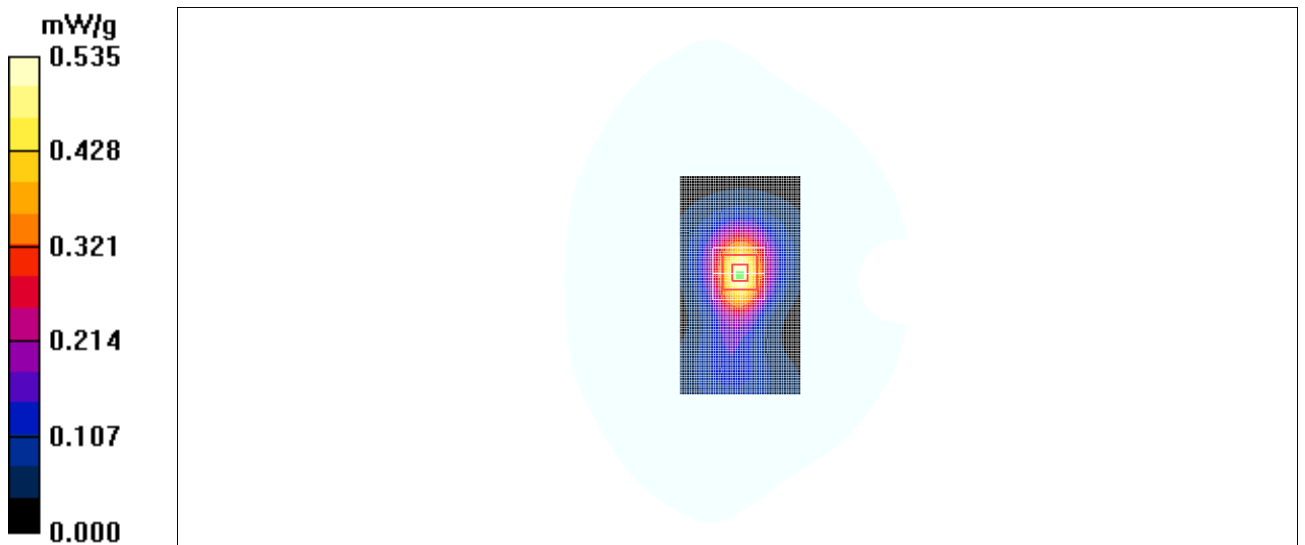
**Test Position 3 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.2 V/m; Power Drift = -0.173 dB

Peak SAR (extrapolated) = 0.751 W/kg

**SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.278 mW/g**

Maximum value of SAR (measured) = 0.505 mW/g



**Fig. 35 WCDMA 1900 Test Position 3**

**WCDMA 1900 Test Position 4 Low**

Date/Time: 2010-9-12 12:49:54

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 4 Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.518 mW/g

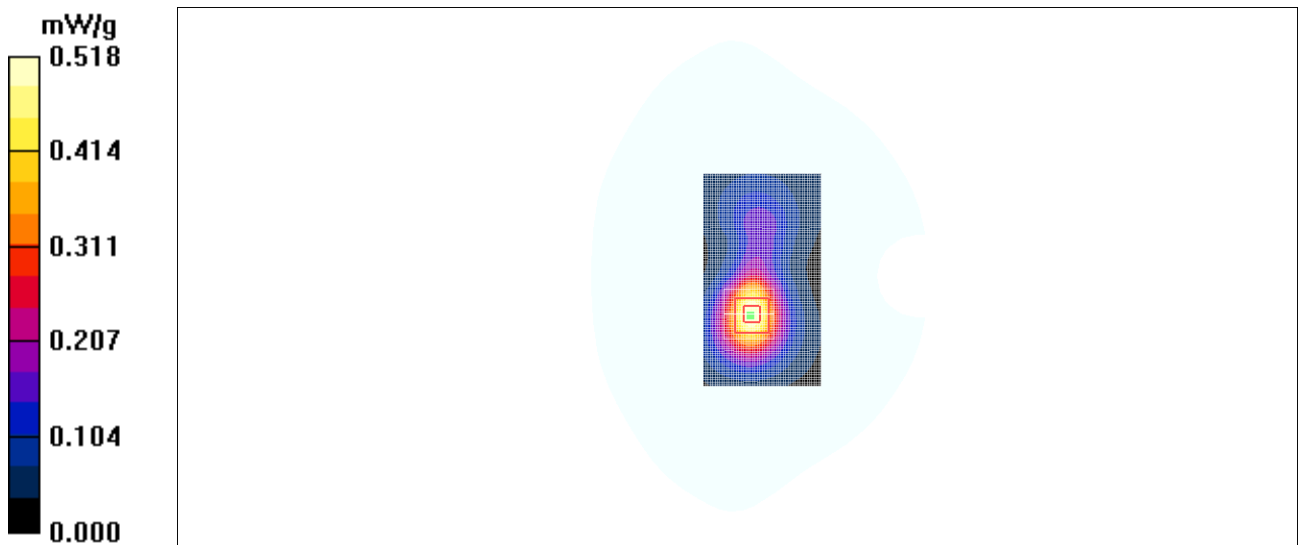
**Test Postion 4 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.086 dB

Peak SAR (extrapolated) = 0.755 W/kg

**SAR(1 g) = 0.471 mW/g; SAR(10 g) = 0.284 mW/g**

Maximum value of SAR (measured) = 0.509 mW/g



**Fig. 36 WCDMA 1900 Test Position 4**



**WCDMA 1900 Test Position 5 Low**

Date/Time: 2010-9-12 13:05:27

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 5 Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.536 mW/g

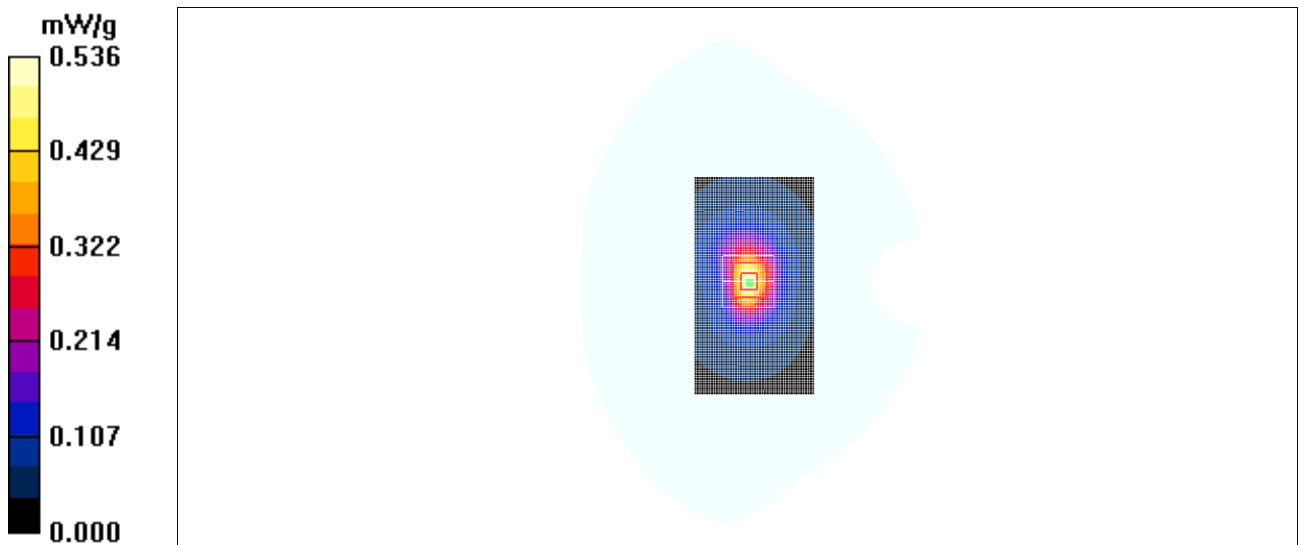
**Test Position 5 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.1 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.807 W/kg

**SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.268 mW/g**

Maximum value of SAR (measured) = 0.549 mW/g



**Fig. 37 WCDMA 1900 Test Position 5**

### WCDMA 1900 Test Position 1 High

Date/Time: 2010-9-12 13:21:01

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1907.6$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 51.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 High\_pretest/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.904 mW/g

**Test Postion 1 High\_pretest/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.2 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.26 W/kg

**SAR(1 g) = 0.815 mW/g; SAR(10 g) = 0.513 mW/g**

Maximum value of SAR (measured) = 0.877 mW/g

**Test Postion 1 High\_pretest/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.2 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 0.744 mW/g; SAR(10 g) = 0.416 mW/g**

Maximum value of SAR (measured) = 0.820 mW/g

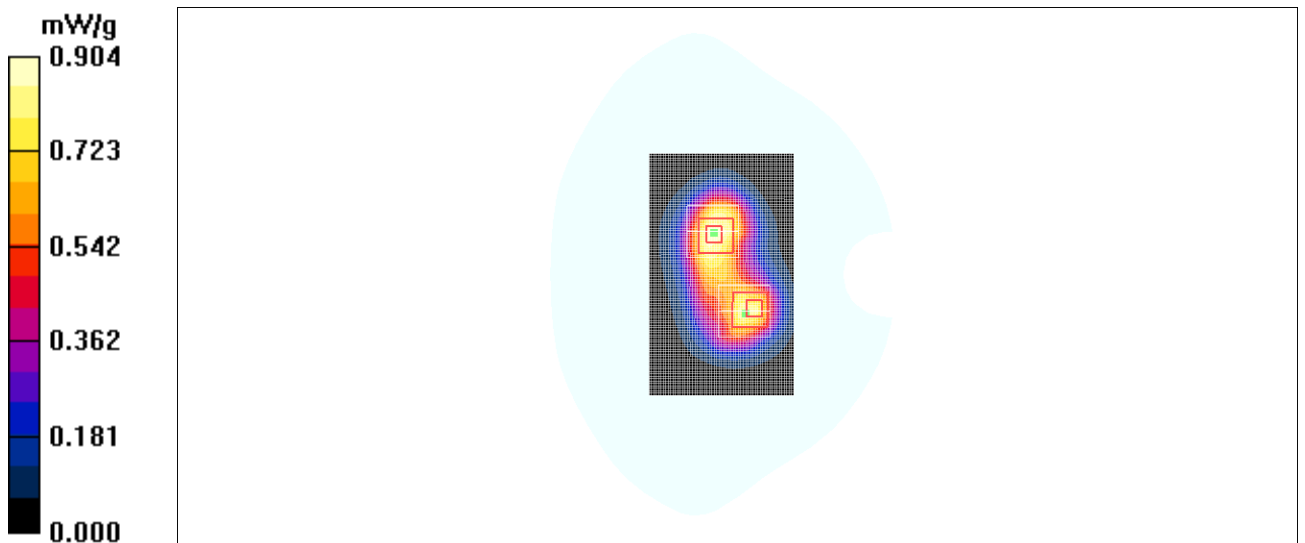


Fig. 38 WCDMA 1900 Test Position 1

**WCDMA 1900 Test Position 1 Middle**

Date/Time: 2010-9-12 13:36:38

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Postion 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.01 mW/g

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

Reference Value = 21.6 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 1.50 W/kg

**SAR(1 g) = 0.824 mW/g; SAR(10 g) = 0.458 mW/g**

Maximum value of SAR (measured) = 0.871 mW/g

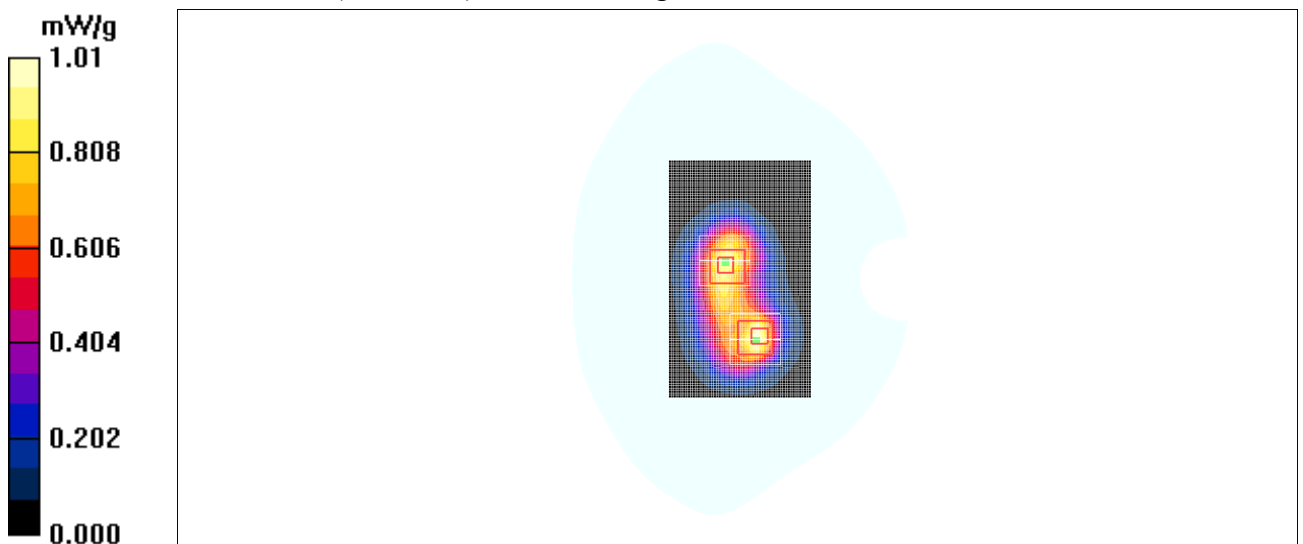
**Test Postion 1 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.6 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.809 mW/g; SAR(10 g) = 0.510 mW/g**

Maximum value of SAR (measured) = 0.870 mW/g



**Fig. 39 WCDMA 1900 Test Position 1**

**EVDO 800 Test Position 1 High**

Date/Time: 2010-9-11 13:14:42

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.972 mW/g

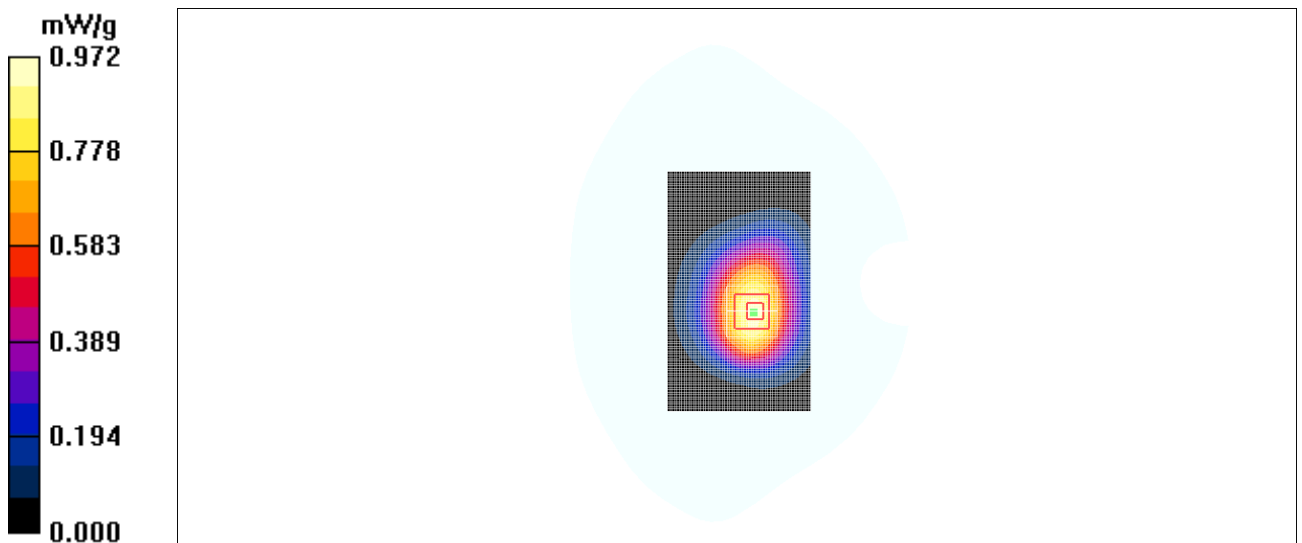
**Test Positon 1 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.6 V/m; Power Drift = -0.151 dB

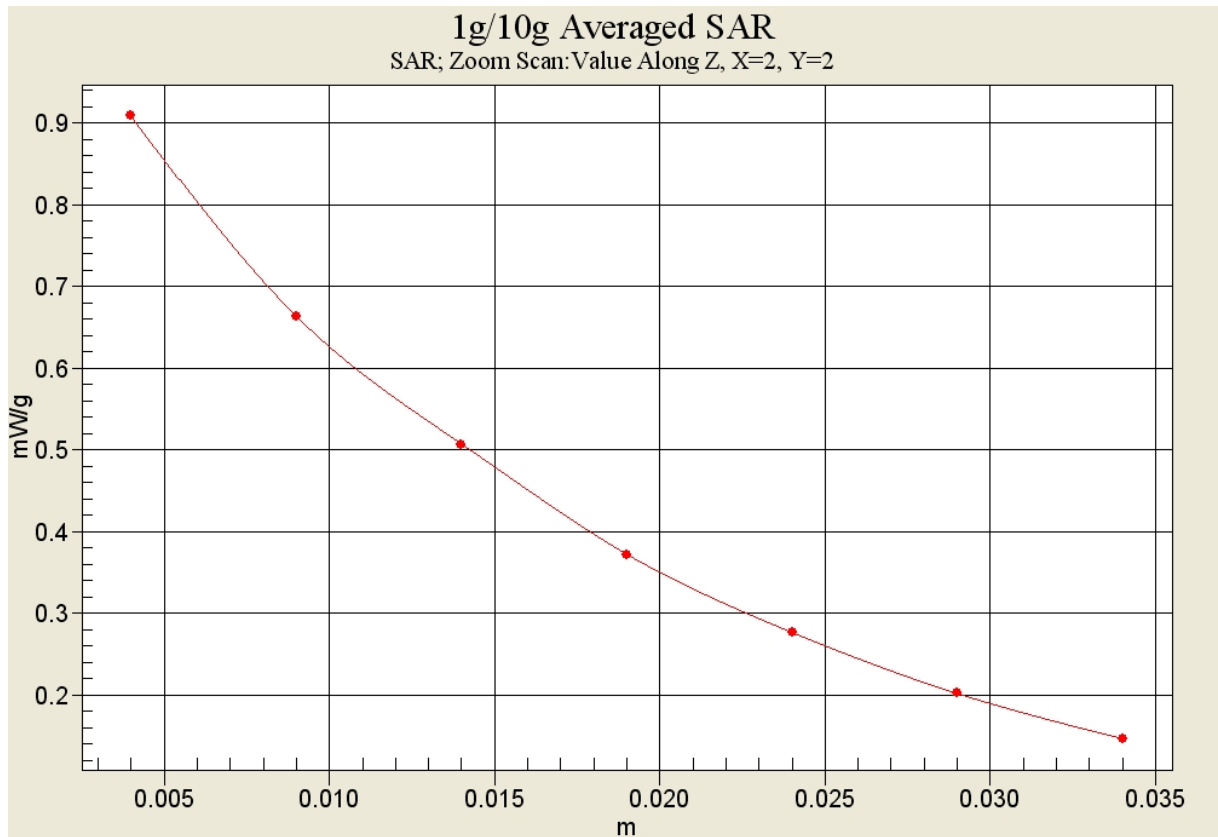
Peak SAR (extrapolated) = 1.36 W/kg

**SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.621 mW/g**

Maximum value of SAR (measured) = 0.931 mW/g



**Fig. 40 EVDO 800 Test Position 1**



**Fig. 40-1 Z-Scan at power reference point (EVDO800 MHz CH777)**

**EVDO 800 Test Position 2 High**

Date/Time: 2010-9-11 13:30:21

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 2 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.695 mW/g

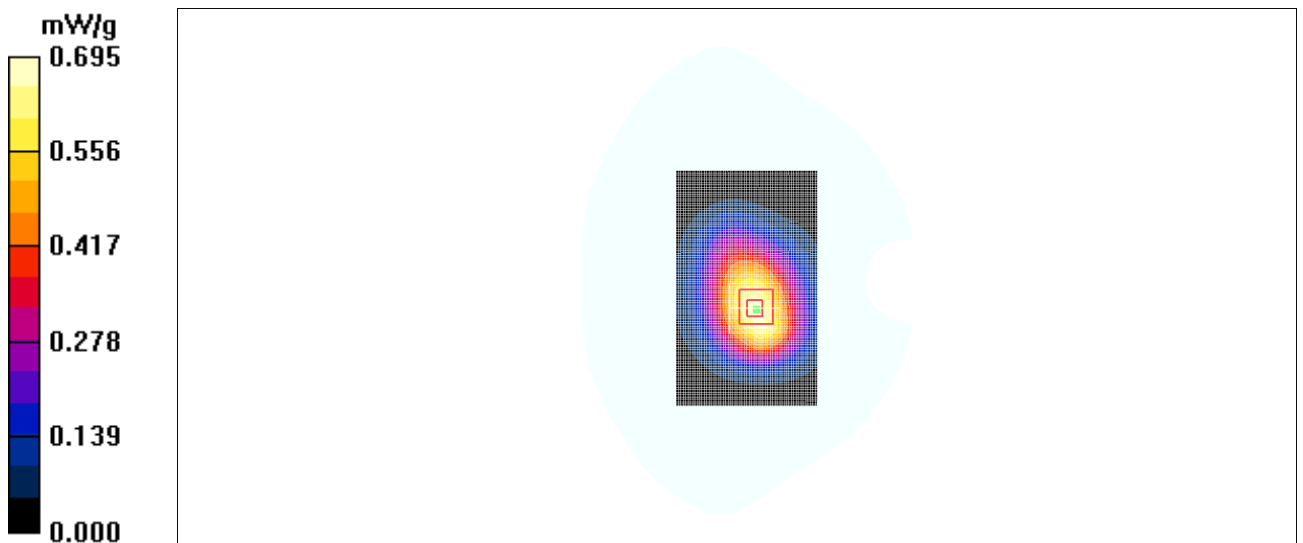
**Test Positon 2 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.2 V/m; Power Drift = -0.182 dB

Peak SAR (extrapolated) = 0.865 W/kg

**SAR(1 g) = 0.654 mW/g; SAR(10 g) = 0.469 mW/g**

Maximum value of SAR (measured) = 0.683 mW/g



**Fig. 41 EVDO 800 Test Position 2**

**EVDO 800 Test Position 3 High**

Date/Time: 2010-9-11 13:45:53

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 3 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.383 mW/g

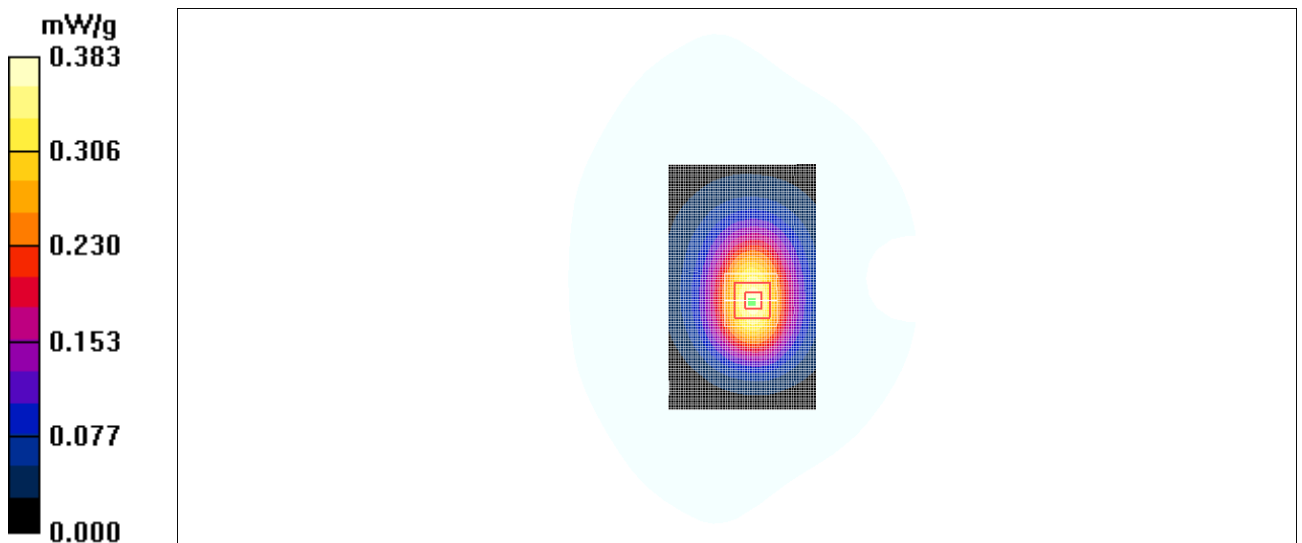
**Test Positon 3 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.0 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.497 W/kg

**SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.248 mW/g**

Maximum value of SAR (measured) = 0.384 mW/g



**Fig. 42 EVDO 800 Test Position 3**

**EVDO 800 Test Position 4 High**

Date/Time: 2010-9-11 14:01:29

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 4 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.352 mW/g

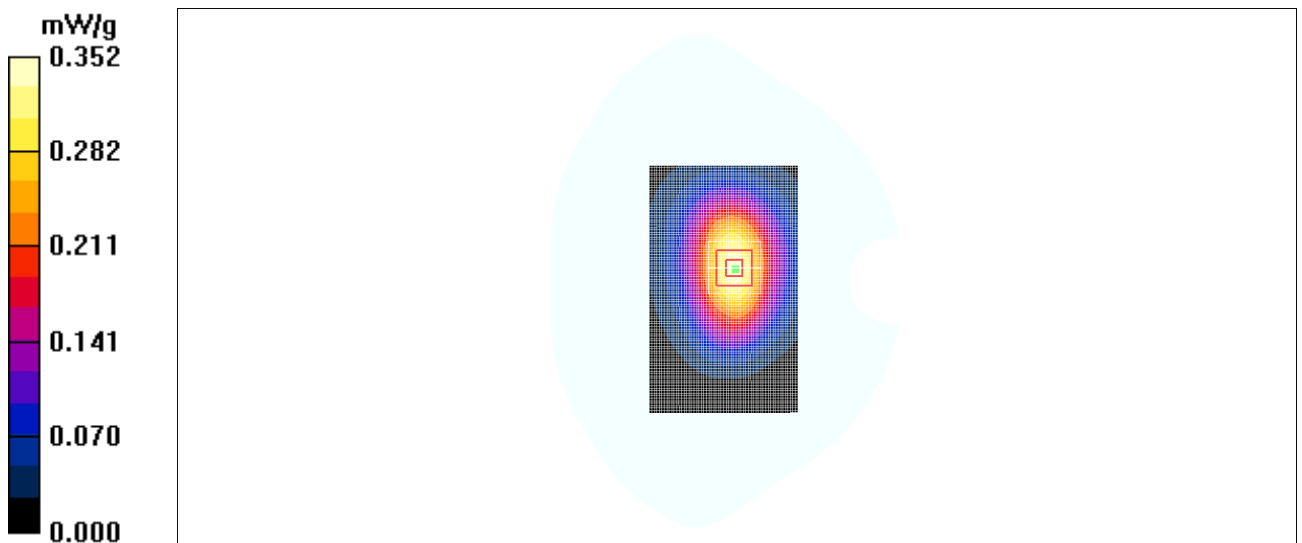
**Test Positon 4 High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.0 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 0.451 W/kg

**SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.228 mW/g**

Maximum value of SAR (measured) = 0.356 mW/g



**Fig. 43 EVDO 800 Test Position 4**



**EVDO 800 Test Position 5 High**

Date/Time: 2010-9-11 14:16:55

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.01$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 5 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

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

Reference Value = 7.56 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 0.091 W/kg

**SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.035 mW/g**

Maximum value of SAR (measured) = 0.057 mW/g

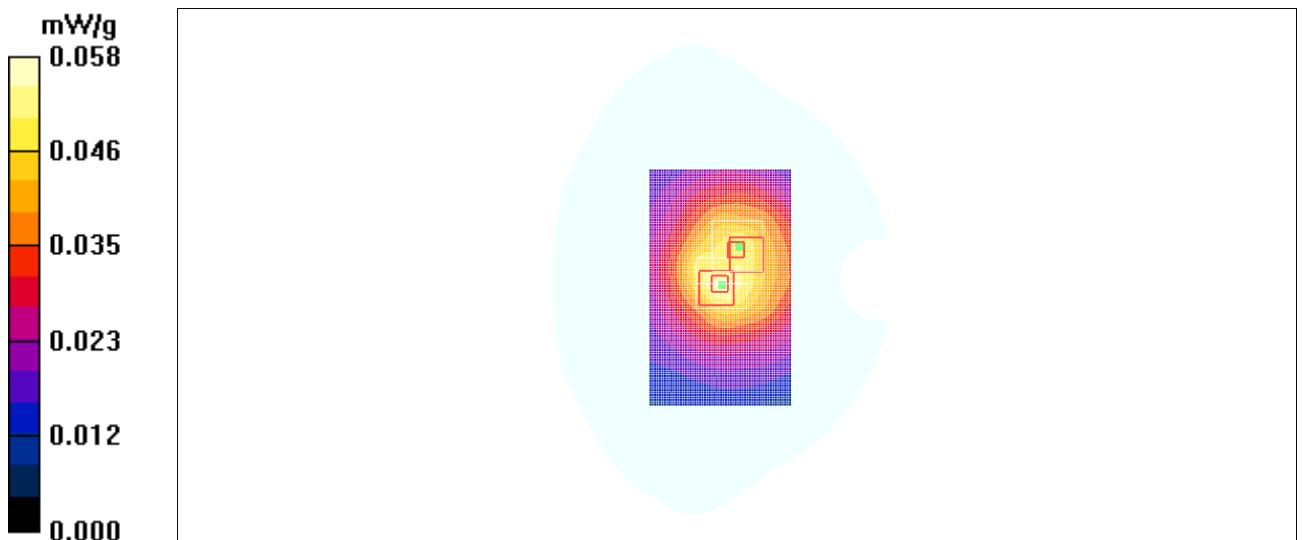
**Test Positon 5 High/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.56 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 0.094 W/kg

**SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.032 mW/g**

Maximum value of SAR (measured) = 0.055 mW/g



**Fig. 44 EVDO 800 Test Position 5**

**EVDO 800 Test Position 1 Middle**

Date/Time: 2010-9-11 14:32:37

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 1.00$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 800 Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Positon 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.885 mW/g

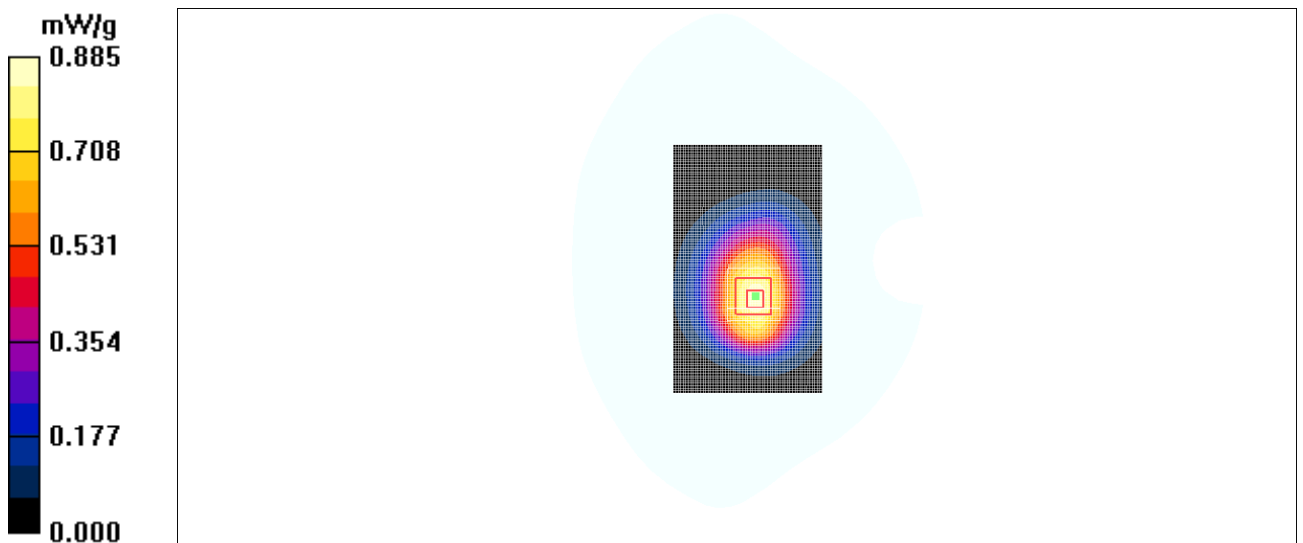
**Test Positon 1 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.8 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 1.28 W/kg

**SAR(1 g) = 0.815 mW/g; SAR(10 g) = 0.576 mW/g**

Maximum value of SAR (measured) = 0.865 mW/g



**Fig. 45 EVDO 800 Test Position 1**

**EVDO 800 Test Position 1 Low**

Date/Time: 2010-9-11 14:47:59

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.983 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $23.3^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: EVDO 800 Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Test Position 1 Low/Area Scan (61x101x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.838 \text{ mW/g}$

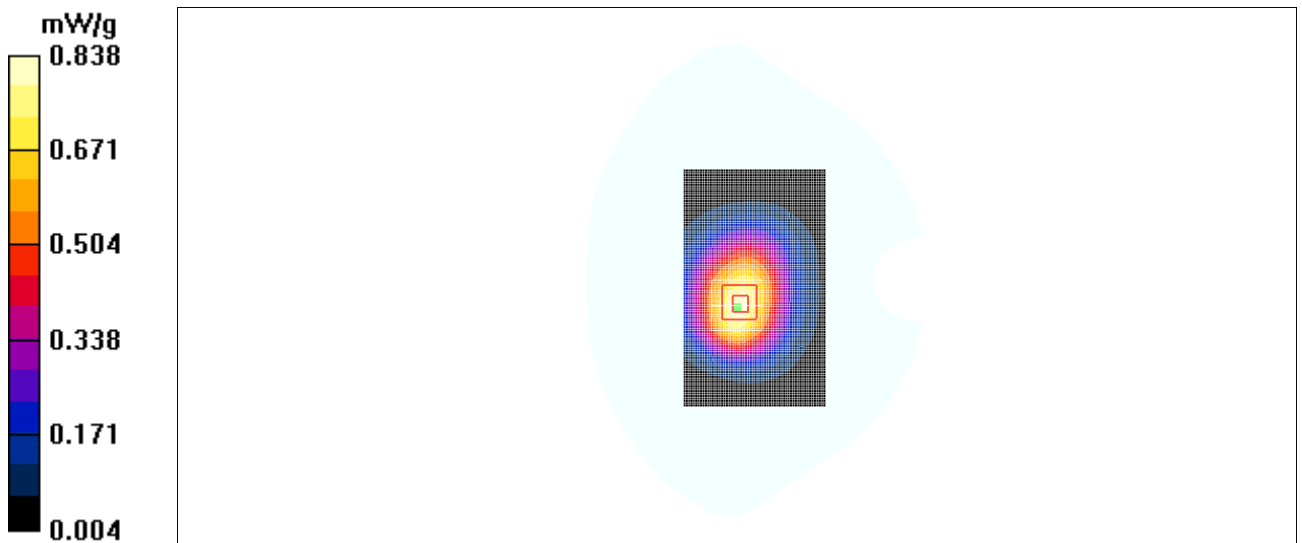
**Test Position 1 Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $26.3 \text{ V/m}$ ; Power Drift =  $-0.182 \text{ dB}$

Peak SAR (extrapolated) =  $0.982 \text{ W/kg}$

**SAR(1 g) =  $0.752 \text{ mW/g}$ ; SAR(10 g) =  $0.541 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.796 \text{ mW/g}$



**Fig. 46 EVDO 800 Test Position 1**

**EVDO 1900 Test Position 1 Middle**

Date/Time: 2010-9-12 13:59:17

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

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

Reference Value = 24.3 V/m; Power Drift = -0.181 dB

Peak SAR (extrapolated) = 1.59 W/kg

**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.648 mW/g**

Maximum value of SAR (measured) = 1.10 mW/g

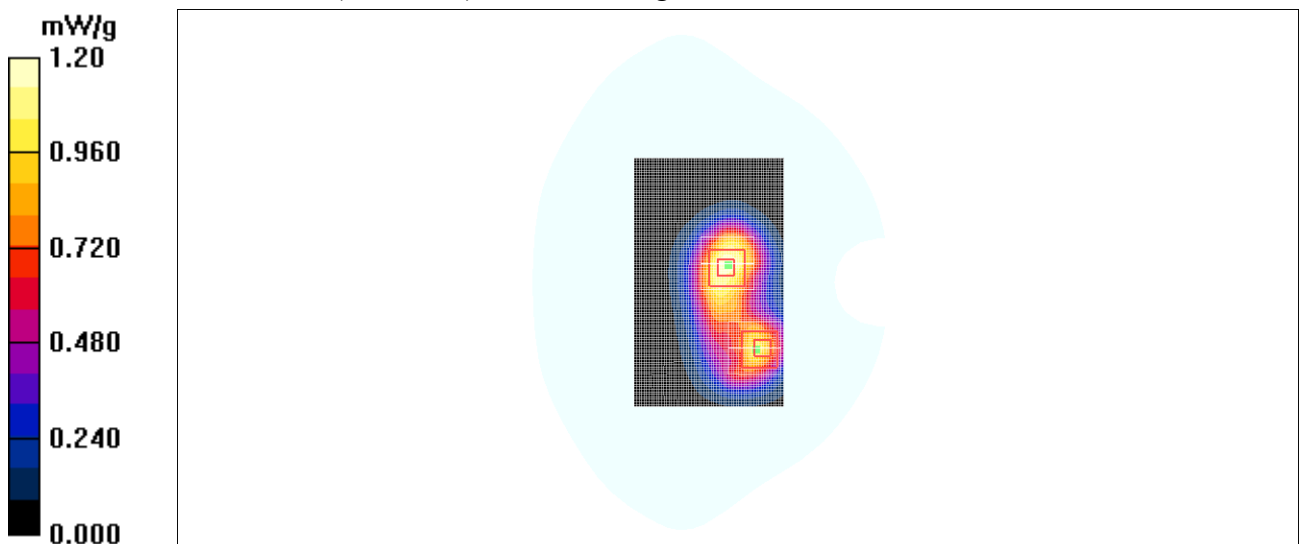
**Test Position 1 Middle/Zoom Scan (5x5x7)/Cube 1:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.3 V/m; Power Drift = -0.181 dB

Peak SAR (extrapolated) = 1.57 W/kg

**SAR(1 g) = 0.863 mW/g; SAR(10 g) = 0.479 mW/g**

Maximum value of SAR (measured) = 0.930 mW/g



**Fig. 47 EVDO 1900 Test Position 1**

**EVDO 1900 Test Position 2 Middle**

Date/Time: 2010-9-12 14:14:48

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 2 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.981 mW/g

**Test Position 2 Middle/Zoom Scan (7x5x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.2 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 1.63 W/kg

**SAR(1 g) = 0.934 mW/g; SAR(10 g) = 0.523 mW/g**

Maximum value of SAR (measured) = 0.982 mW/g

**Test Position 2 Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.2 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 1.09 W/kg

**SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.456 mW/g**

Maximum value of SAR (measured) = 0.763 mW/g

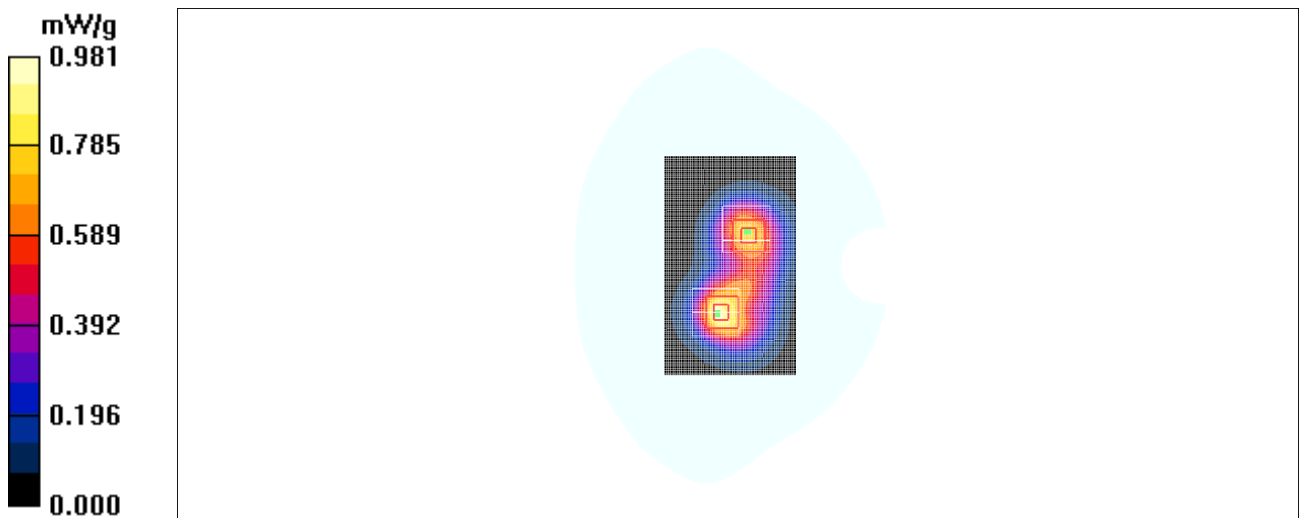


Fig. 48 EVDO 1900 Test Position 2

**EVDO 1900 Test Position 3 Middle**

Date/Time: 2010-9-12 14:30:31

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 3 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.604 mW/g

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

Reference Value = 15.5 V/m; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 0.868 W/kg

**SAR(1 g) = 0.542 mW/g; SAR(10 g) = 0.323 mW/g**

Maximum value of SAR (measured) = 0.595 mW/g

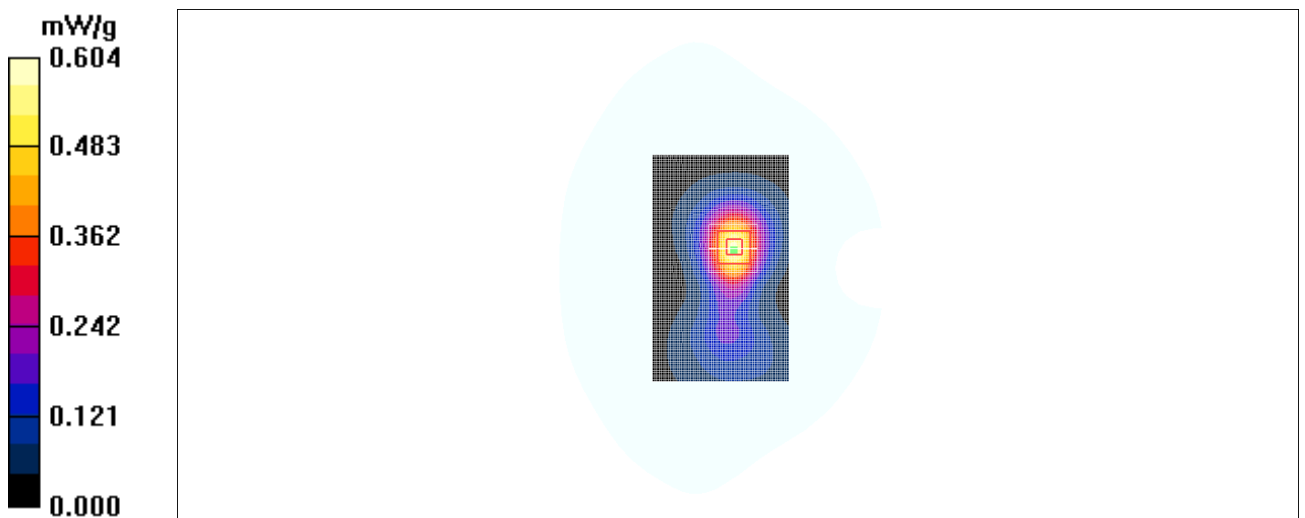


Fig. 49 EVDO 1900 Test Position 3

**EVDO 1900 Test Position 4 Middle**

Date/Time: 2010-9-12 14:46:00

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 4 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.337 mW/g

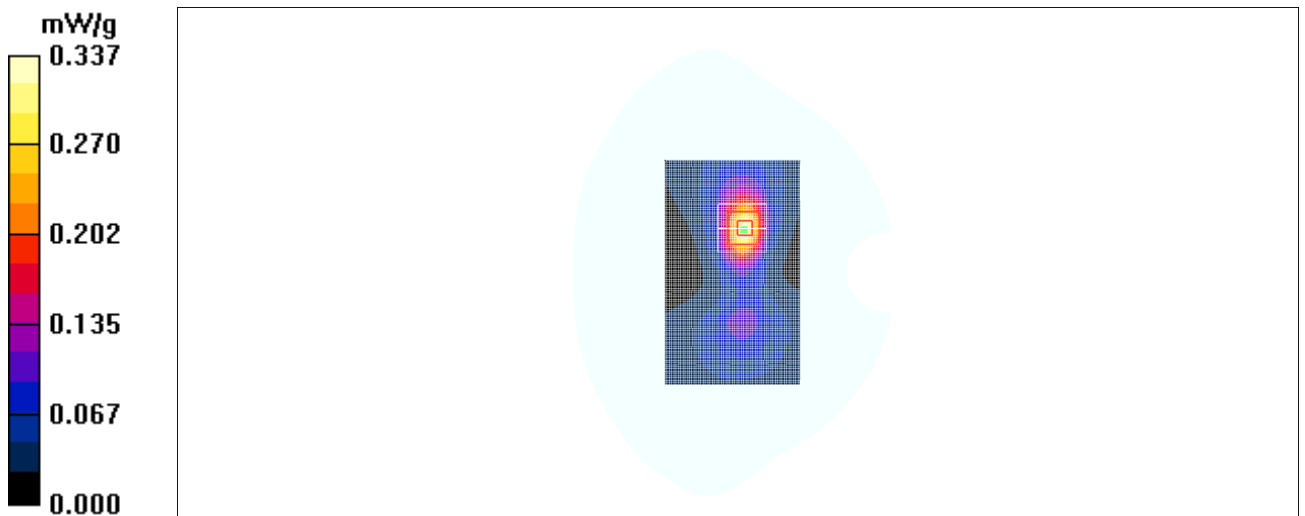
**Test Position 4 Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.55 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.441 W/kg

**SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.161 mW/g**

Maximum value of SAR (measured) = 0.306 mW/g



**Fig. 50 EVDO 1900 Test Position 4**

**EVDO 1900 Test Position 5 Middle**

Date/Time: 2010-9-12 15:01:43

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 5 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.556 mW/g

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

Reference Value = 13.8 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 0.851 W/kg

**SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.292 mW/g**

Maximum value of SAR (measured) = 0.574 mW/g

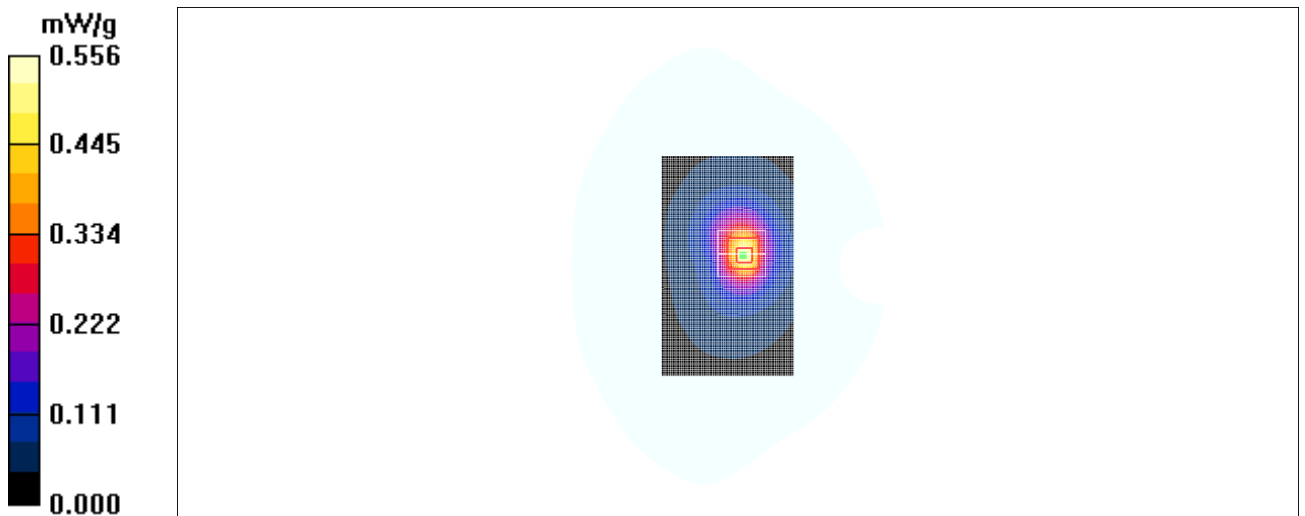


Fig. 51 EVDO 1900 Test Position 5



**EVDO 1900 Test Position 1 High**

Date/Time: 2010-9-12 15:17:26

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1908.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 1 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.03 mW/g

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

Reference Value = 15.2 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 1.36 W/kg

**SAR(1 g) = 0.898 mW/g; SAR(10 g) = 0.561 mW/g**

Maximum value of SAR (measured) = 0.961 mW/g

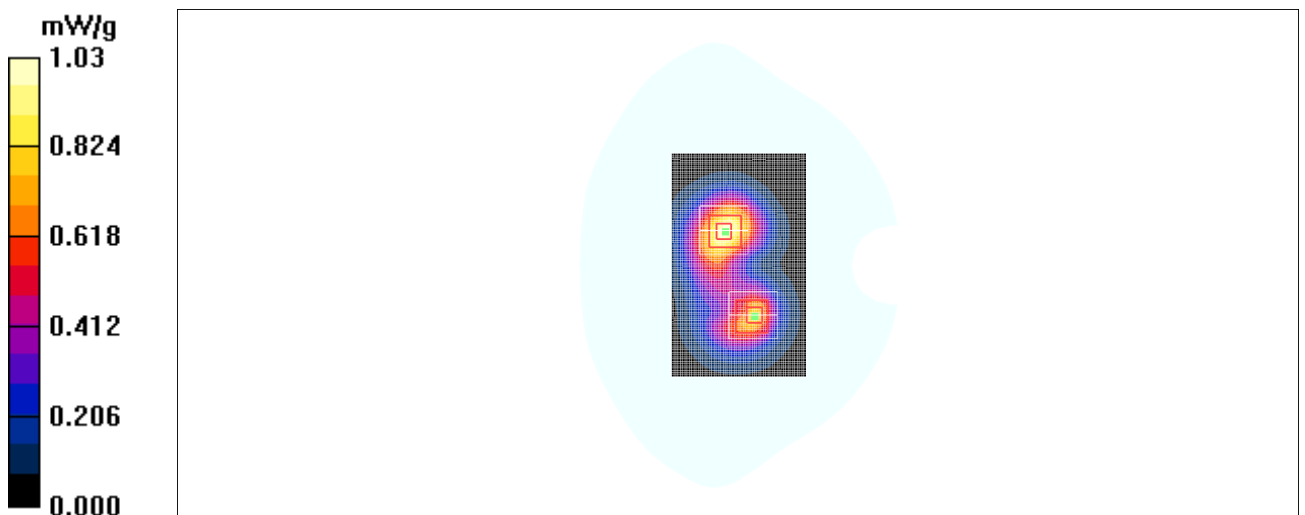
**Test Position 1 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.718 mW/g; SAR(10 g) = 0.404 mW/g**

Maximum value of SAR (measured) = 0.791 mW/g



**Fig. 52 EVDO 1900 Test Position 1**

**EVDO 1900 Test Position 1 Low**

Date/Time: 2010-9-12 15:33:11

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 51.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1851.25 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 1 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

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

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

Reference Value = 24.6 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.59 W/kg

**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.635 mW/g**

Maximum value of SAR (measured) = 1.12 mW/g

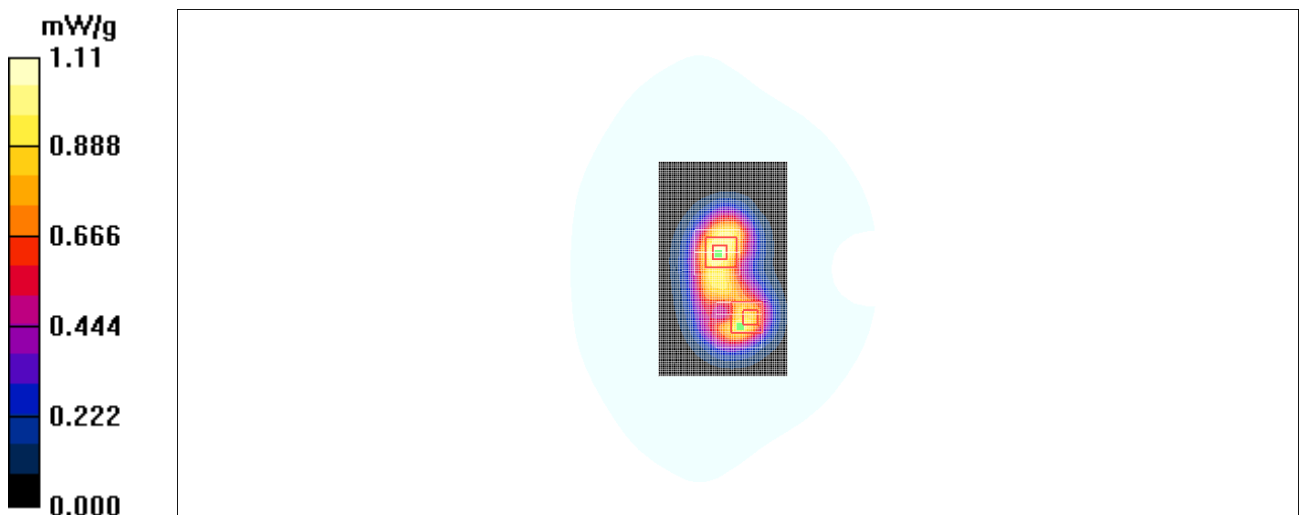
**Test Position 1 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.6 V/m; Power Drift = -0.127 dB

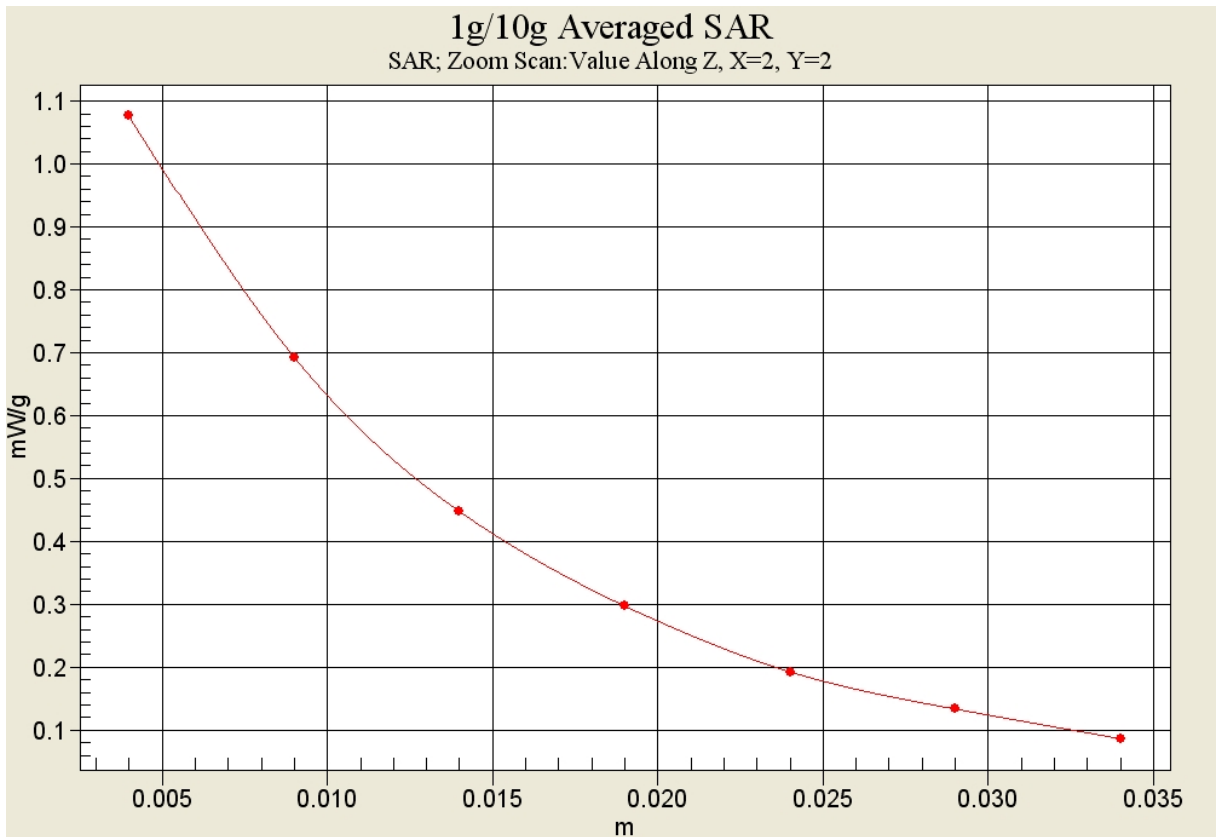
Peak SAR (extrapolated) = 1.46 W/kg

**SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.467 mW/g**

Maximum value of SAR (measured) = 0.921 mW/g



**Fig. 53 EVDO 1900 Test Position 1**



**Fig. 53-1 Z-Scan at power reference point (EVDO1900 MHz CH25)**

**EVDO 1900 Test Position 2 High**

Date/Time: 2010-9-12 15:49:08

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.59$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1908.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 2 High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.06 mW/g

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

Reference Value = 15.0 V/m; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.878 mW/g; SAR(10 g) = 0.497 mW/g**

Maximum value of SAR (measured) = 0.942 mW/g

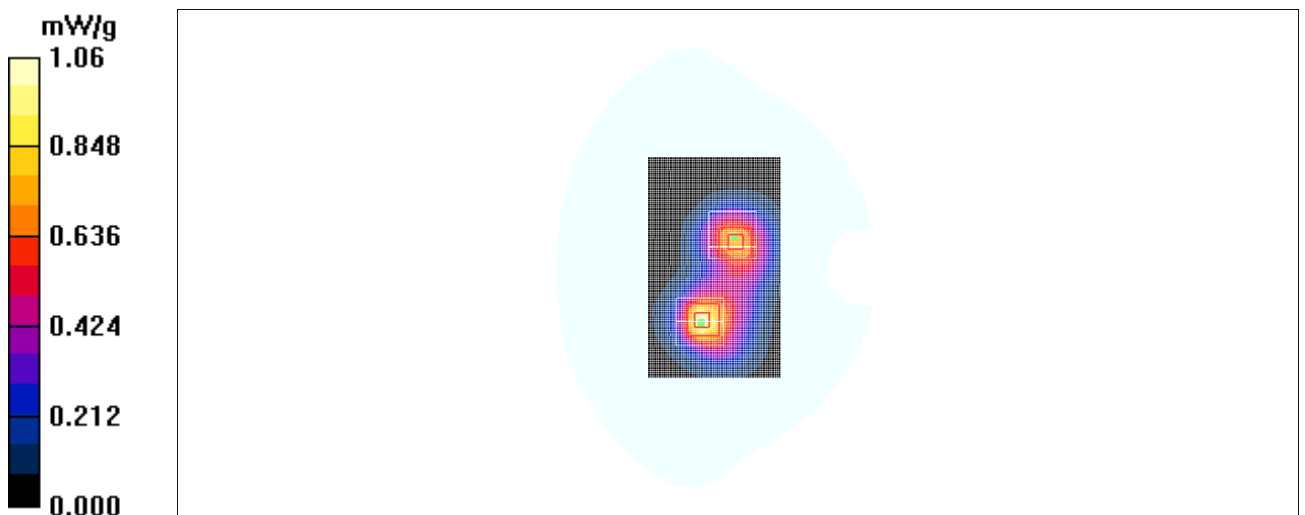
**Test Position 2 High/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.0 V/m; Power Drift = -0.178 dB

Peak SAR (extrapolated) = 1.07 W/kg

**SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.429 mW/g**

Maximum value of SAR (measured) = 0.724 mW/g



**Fig. 54 EVDO 1900 Test Position 2**

**EVDO 1900 Test Position 2 Low**

Date/Time: 2010-9-12 16:04:47

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 51.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1851.25 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 2 Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.812 mW/g

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

Reference Value = 14.5 V/m; Power Drift = -0.146 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.728 mW/g; SAR(10 g) = 0.412 mW/g**

Maximum value of SAR (measured) = 0.786 mW/g

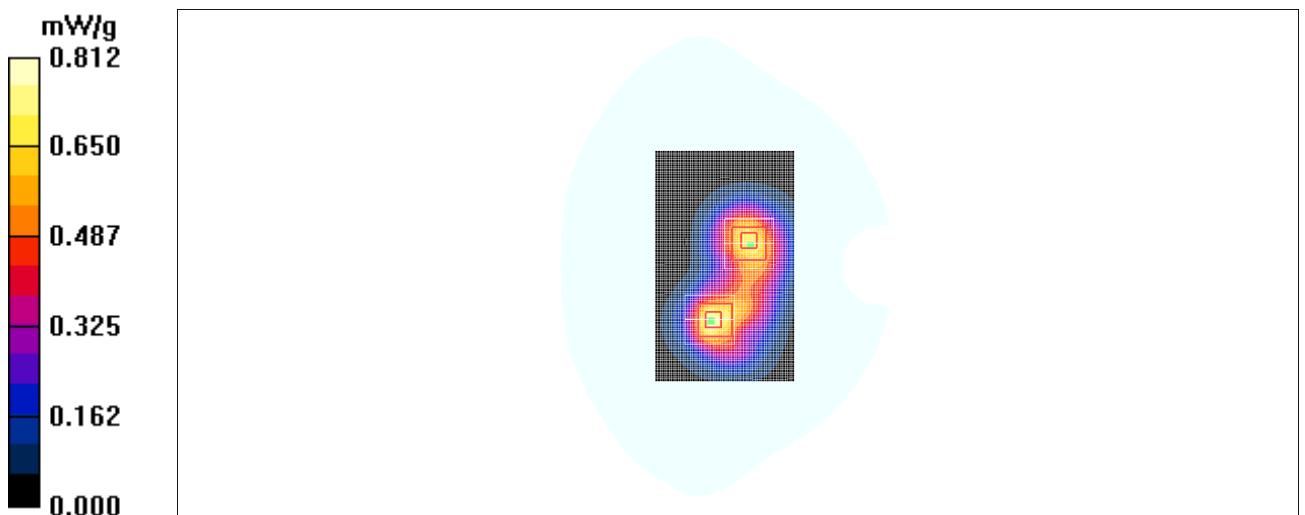
**Test Position 2 Low/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.5 V/m; Power Drift = -0.146 dB

Peak SAR (extrapolated) = 1.01 W/kg

**SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.413 mW/g**

Maximum value of SAR (measured) = 0.723 mW/g



**Fig. 55 EVDO 1900 Test Position 2**

**EVDO 1900 Test Position 1 Middle**

Date/Time: 2010-9-12 16:29:13

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 51.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 23.3°C      Liquid Temperature: 22.5°C

Communication System: EVDO 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Test Position 1 Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.16 mW/g

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

Reference Value = 25.5 V/m; Power Drift = -0.194 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.510 mW/g**

Maximum value of SAR (measured) = 1.01 mW/g

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

Reference Value = 25.5 V/m; Power Drift = -0.194 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.979 mW/g; SAR(10 g) = 0.612 mW/g**

Maximum value of SAR (measured) = 1.03 mW/g

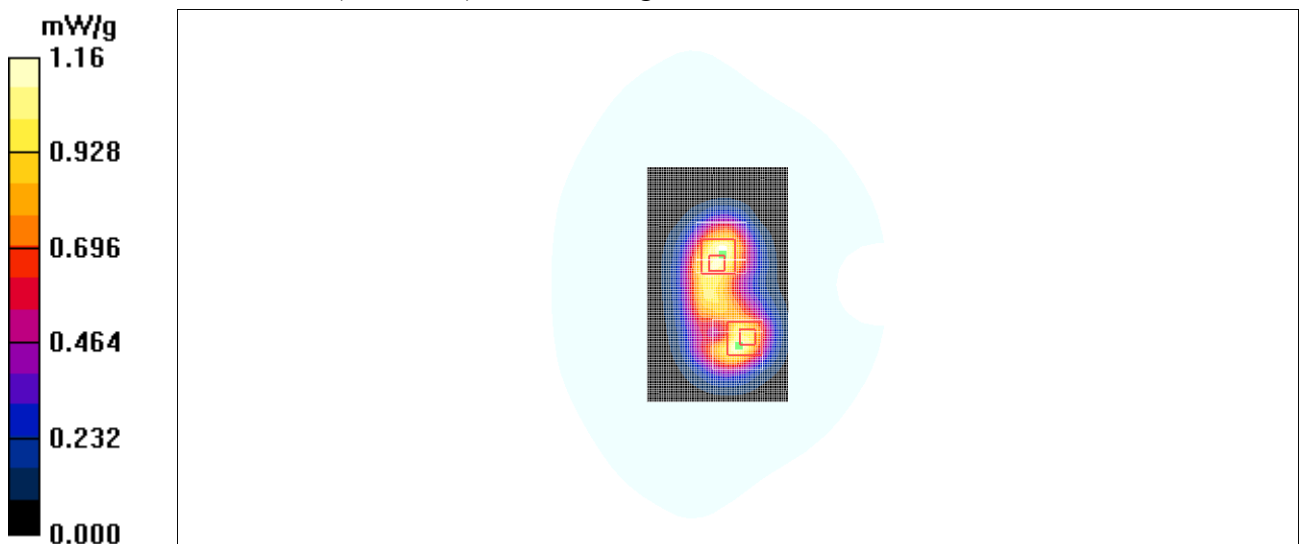


Fig. 56 EVDO 1900 Test Position 1

## ANNEX D SYSTEM VALIDATION RESULTS

### 835MHz

Date/Time: 2010-9-11 7:24:51

Electronics: DAE4 Sn771

Medium: Body 850 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 1.00 \text{ mho/m}$ ;  $\epsilon_r = 53.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $23.0^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**System Validation /Area Scan (101x101x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$   
Maximum value of SAR (interpolated) = 2.50 mW/g

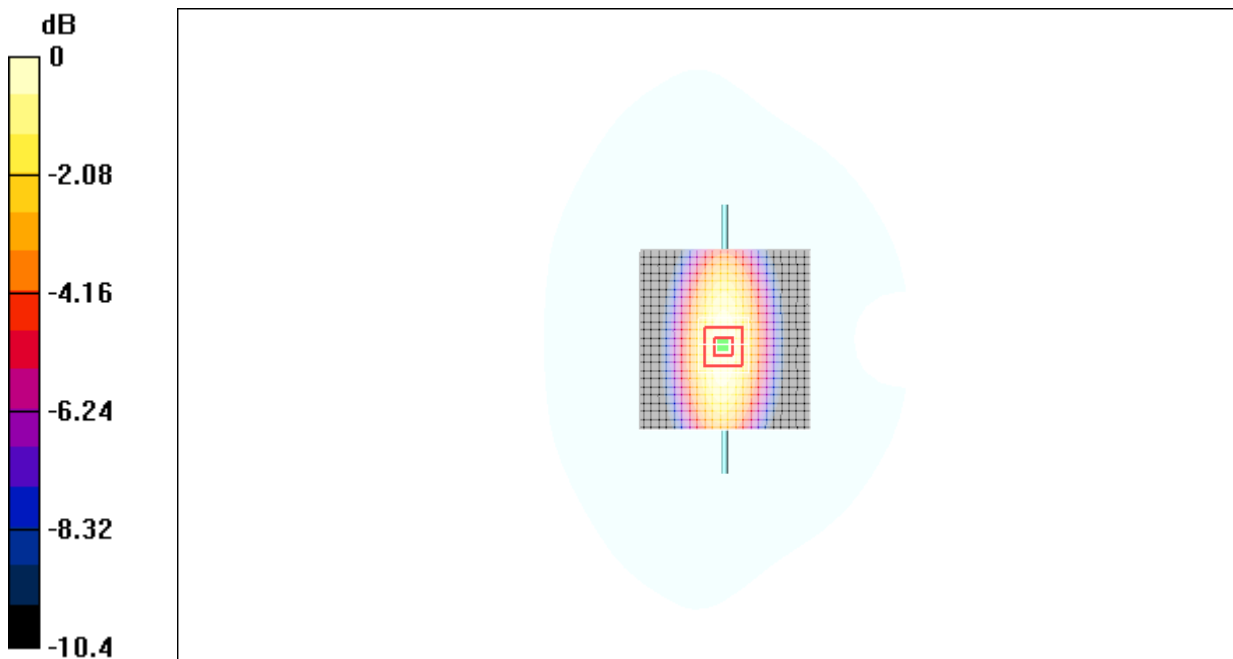
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 50.9 V/m; Power Drift = 0.079 dB

Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.53 mW/g**

Maximum value of SAR (measured) = 2.42 mW/g



0 dB = 2.42mW/g

**Fig.57 validation 835MHz 250mW**

## 1900MHz

Date/Time: 2010-9-12 7:27:45

Electronics: DAE4 Sn771

Medium: Body 1900 MHz

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.58 \text{ mho/m}$ ;  $\epsilon_r = 51.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $23.0^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**System Validation/Area Scan (101x101x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$   
Maximum value of SAR (interpolated) =  $11.2 \text{ mW/g}$

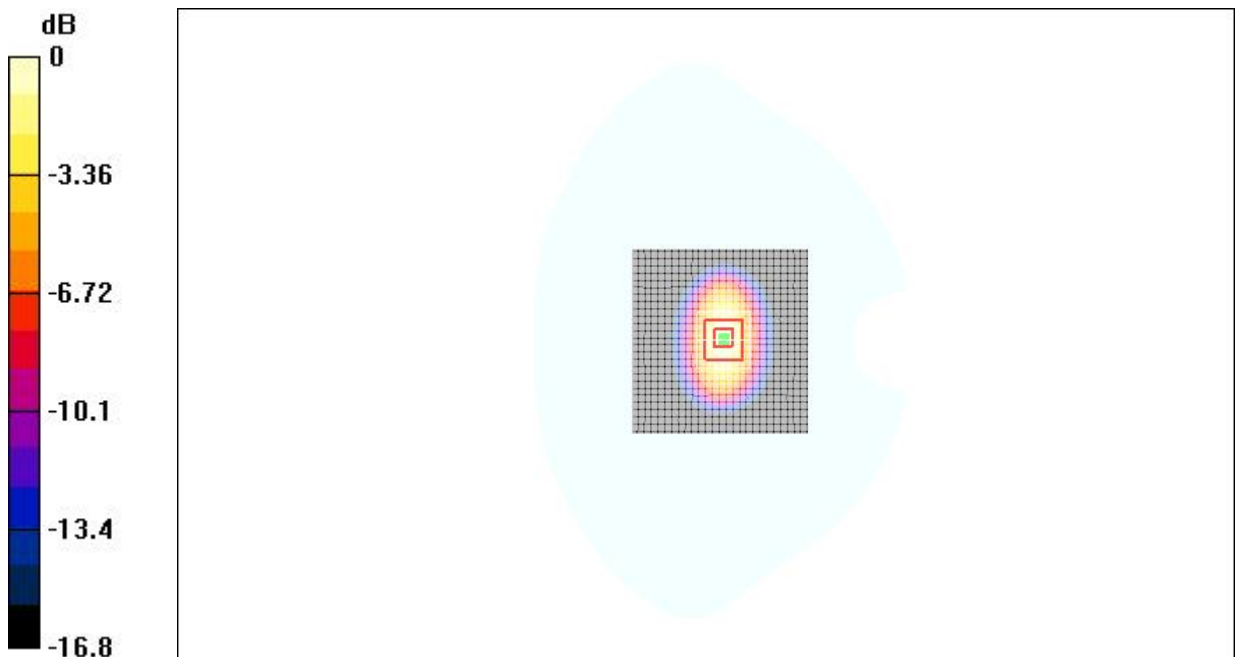
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  
 $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $91.1 \text{ V/m}$ ; Power Drift =  $-0.057 \text{ dB}$

Peak SAR (extrapolated) =  $16.0 \text{ W/kg}$

**SAR(1 g) =  $10.2 \text{ mW/g}$ ; SAR(10 g) =  $5.07 \text{ mW/g}$**

Maximum value of SAR (measured) =  $10.6 \text{ mW/g}$



0 dB =  $10.6\text{mW/g}$

**Fig.58 validation 1900MHz 250mW**