



# SAR TEST REPORT

No. 2009SAR00018

For

**ZTE CORPORATION**

**CDMA 2000 1X Digital Mobile Phone**

**ZTE C90**

With

**Hardware Version: C93A**

**Software Version: ZTEC90V1.0.0B01**

**FCCID: Q78-ZTEC90**

**Issued Date: 2009-03-30**



**No. DAT-P-114/01-01**

**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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## 1 Test Laboratory

### 1.1 Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MII  
Address: No 52, Huayuan beilu, Haidian District, Beijing,P.R.China  
Postal Code: 100083  
Telephone: +86-10-62303288  
Fax: +86-10-62304793

### 1.2 Testing Environment

Temperature: 18°C~25 °C,  
Relative humidity: 30%~ 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: Sun Qian  
Test Engineer: Lin Xiaojun  
Testing Start Date: March 25, 2009  
Testing End Date: March 27, 2009

### 1.4 Signature



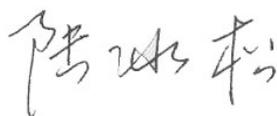
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Lin Xiaojun  
(Prepared this test report)



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Sun Qian  
(Reviewed this test report)



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Lu Bingsong  
Deputy Director of the laboratory  
(Approved this test report)

## 2 Client Information

### 2.1 Applicant Information

Company Name: ZTE CORPORATION  
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City: Shenzhen  
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Telephone: 0086 21 6889 7541  
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### 2.2 Manufacturer Information

Company Name: ZTE CORPORATION  
Address /Post: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan  
District, Shenzhen, Guangdong, 518057, P.R.China  
City: Shenzhen  
Postal Code: 518057  
Country: P. R. China  
Telephone: 0086 21 6889 7541  
Fax: 0086 21 5080 1070

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

#### 3.1 About EUT

EUT Description: CDMA 2000 1X Digital Mobile Phone  
 Model Name: ZTE C90  
 Frequency Band: CDMA 800 / CDMA 1900 / AWS 1700



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	A000000B17A927	C93A	ZTEC90V1.0.0B01

\*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-A22O50U5	800811270272064	ZTE CORPORATION
AE2	Battery	Li3710T42P3h504057	B0010810080134871	ZTE CORPORATION
AE3	Battery	Li3710T42P3h504057	B0010810080135614	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

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

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

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

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

### 4.2 Applicable Measurement Standards

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

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

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

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

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

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

## 5 OPERATIONAL CONDITIONS DURING TEST

### 5.1 Schematic Test Configuration

A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1013, 384 and 777 respectively in the case of CDMA 835 MHz, to 25, 600 and 1175 respectively in the case of CDMA 1900MHz, or to 25, 450 and 875 respectively in the case of AWS 1700MHz. The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 30 dB.

In order to determine the highest value of the peak spatial-average SAR of the EUT, it was tested at middle frequency (cheek and tilt, for both left and right sides of the SAM phantom). After found the worst case, perform the tests at the high and low frequencies. In addition, for all other conditions where the peak spatial-average SAR value determined is within 3 dB of the applicable SAR limit, all other test frequencies shall be tested as well.

Test communication setup meet as followings:

Communication standard between mobile station and base station simulator	3GPP2 C.S0011-B
Radio configuration	RC3 ( Supporting CDMA 1X )
Spreading Rate	SR1
Data Rate	9600bps
Service Options	SO55 ( loop back mode )
Service Options	SO3 ( voice mode )
Multiplex Options	The mobile station does not support this service.

Base station Simulator: CMU200

Test Parameter setup for maximum RF output power according to section 4.4.5 of 3GPP2 C.S0011-B:

Parameter	Units	Value
$I_{or}$	dBm/1.23MHz	-104
$\frac{PilotE_c}{I_{or}}$	dB	-7
$\frac{TrafficE_c}{I_{or}}$	dB	-7.4

For SAR test, the maximum power output is very important and essential; it is identical under the measurement uncertainty. It is proper to use typical Test Mode 3 (FW RC3, RVS RC3, SO55) as the worst case for SAR test.

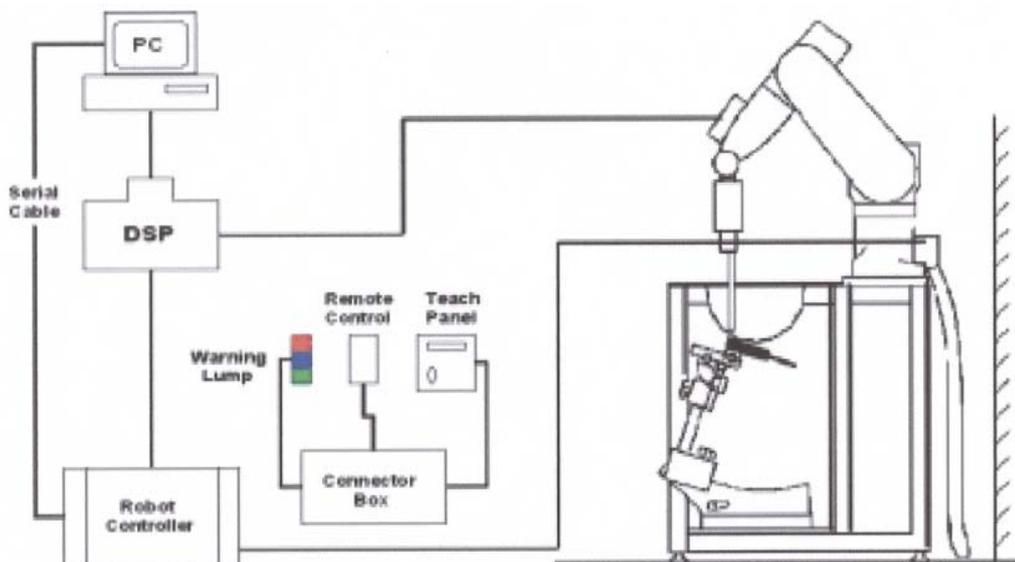
Under the loop back mode between mobile station and CMU200, the transmitter continuously emits with maximum power more strong than voice mode, so the SAR test was done with loop back mode.

To make the mobile emits maximum power; the output power of CMU200 would be adjusted to minimum power with the sensitivity of the mobile station to build steady connection with mobile station. The power level control parameter in the CMU200 is "0", it means "all up" and requires mobile station to emit with maximum power.

## 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 2: 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: $\pm 0.2$ dB (30 MHz to 4 GHz)
Directivity	$\pm 0.2$ dB in HSL (rotation around probe axis) $\pm 0.3$ dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 $\mu\text{W/g}$ to $> 100$ $\text{mW/g}$ ; Linearity: $\pm 0.2$ 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



**Picture 3: ES3DV3 E-field Probe**



**Picture4:ES3DV3 E-field probe**

## 5.4 E-field Probe Calibration

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

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

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

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

Where:  $\Delta t$  = Exposure time (30 seconds),

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

$\Delta T$  = Temperature increase due to RF exposure.

Or

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

Where:

$\sigma$  = Simulated tissue conductivity,

$\rho$  = Tissue density ( $\text{kg/m}^3$ ).



**Picture 5: 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



## 5.6 Equivalent Tissues

**Picture 6: Generic Twin Phantom**

The liquid used for the frequency range of 800-2000 MHz consisted of water, sugar, salt and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 1 and 2 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528.

**Table 1. Composition of the Head Tissue Equivalent Matter**

MIXTURE %	FREQUENCY 850MHz
Water	41.45
Sugar	56.0
Salt	1.45
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=850MHz $\epsilon=41.5$ $\sigma=0.90$
MIXTURE %	FREQUENCY 1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz $\epsilon=40.0$ $\sigma=1.40$
MIXTURE%	FREQUENCY 1800 MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1800 MHz $\epsilon=40.0$ $\sigma=1.40$

**Table 2. Composition of the Body Tissue Equivalent Matter**

MIXTURE %	FREQUENCY 850MHz
Water	52.5
Sugar	45.0
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=850MHz $\epsilon=55.2$ $\sigma=0.97$
MIXTURE %	FREQUENCY 1900MHz

<b>Water</b>	<b>69.91</b>
<b>Glycol monobutyl</b>	<b>29.96</b>
<b>Salt</b>	<b>0.13</b>
<b>Dielectric Parameters Target Value</b>	<b>f=1900MHz    <math>\epsilon=53.3</math>    <math>\sigma=1.52</math></b>
<b>MIXTURE %</b>	<b>FREQUENCY 1800 MHz</b>
<b>Water</b>	<b>69.91</b>
<b>Glycol monobutyl</b>	<b>29.96</b>
<b>Salt</b>	<b>0.13</b>
<b>Dielectric Parameters Target Value</b>	<b>f=1800 MHz    <math>\epsilon=53.3</math>    <math>\sigma=1.52</math></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 CONDUCTED OUTPUT POWER MEASUREMENT

### 6.1 Summary

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

### 6.2 Conducted Power

#### 6.2.1 Measurement Methods

The EUT was set up for the maximum output power. The channel power was measured with Agilent Spectrum Analyzer E4440A. These measurements were done at low, middle and high channels.

### 6.2.2 Measurement result

**Table 3: Conducted Power Measurement Results**

CDMA 835MHz	Conducted Power (dBm)		
	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(825MHz)
	27.01	26.85	27.55
CDMA 1900MHz	Conducted Power (dBm)		
	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
	26.82	27.50	27.35
AWS 1700MHz	Conducted Power (dBm)		
	Channel 875(1753.75MHz)	Channel 450(1732.5MHz)	Channel 25(1711.25MHz)
	27.75	27.21	27.62

### 6.2.3 Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 7 to Table 18 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

## 7 TEST RESULTS

### 7.1 Dielectric Performance

**Table 4: Dielectric Performance of Head Tissue Simulating Liquid**

Measurement is made at temperature 23.3 °C and relative humidity 49%.			
Liquid temperature during the test: 22.5°C			
Measurement Date : 835 MHz <b>Mar 25,2009</b> 1900 MHz <b>Mar 26,2009</b> 1700 MHz <b>Mar 27,2009</b>			
/	Frequency	Permittivity $\epsilon$	Conductivity $\sigma$ (S/m)
<b>Target value</b>	835 MHz	41.5	0.90
	1900 MHz	40.0	1.40
<b>Measurement value (Average of 10 tests)</b>	835 MHz	40.4	0.90
	1900 MHz	39.2	1.42
	1700 MHz	41.3	1.33

**Table 5: Dielectric Performance of Body Tissue Simulating Liquid**

Measurement is made at temperature 23.3 °C and relative humidity 49%.			
Liquid temperature during the test: 22.5°C			
Measurement Date : 835 MHz <b>Mar 25,2009</b> 1900 MHz <b>Mar 26,2009</b> 1700 MHz <b>Mar 27,2009</b>			
/	Frequency	Permittivity $\epsilon$	Conductivity $\sigma$ (S/m)
<b>Target value</b>	835 MHz	55.2	0.97
	1900 MHz	53.3	1.52
<b>Measurement value (Average of 10 tests)</b>	835 MHz	53.8	1.00
	1900 MHz	52.3	1.56
	1700 MHz	52.8	1.45

## 7.2 System Validation

**Table 6: System Validation**

Measurement is made at temperature 23.3 °C and relative humidity 49%.							
Liquid temperature during the test: 22.5°C							
Measurement Date : 835 MHz <u>Mar 25,2009</u> 1900 MHz <u>Mar 26,2009</u> 1700 MHz <u>Mar 27,2009</u>							
<b>Liquid parameters</b>	Dipole calibration Target value	<b>Frequency</b>		<b>Permittivity <math>\epsilon</math></b>		<b>Conductivity <math>\sigma</math> (S/m)</b>	
		835 MHz		39.9		0.88	
		1900 MHz		38.9		1.38	
	Actural Measurement value	1800 MHz		39.0		1.40	
		835 MHz		40.4		0.90	
		1900 MHz		39.2		1.42	
<b>Verification results</b>	<b>Frequency</b>	<b>Target value (W/kg)</b>		<b>Measured value (W/kg)</b>		<b>Deviation</b>	
		<b>10 g Average</b>	<b>1 g Average</b>	<b>10 g Average</b>	<b>1 g Average</b>	<b>10 g Average</b>	<b>1 g Average</b>
	835 MHz	1.60	2.48	1.62	2.50	1.25%	0.81%
	1900 MHz	5.09	9.73	5.27	9.91	3.54%	1.85%
	1800 MHz	5.06	9.60	5.0	9.22	-1.18%	-3.96%

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

## 7.3 Summary of Measurement Results (CDMA 835MHz)

**Table 7: SAR Values (CDMA 835MHz-Head) – Slide down**

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	
Left hand, Touch cheek, Mid frequency(See Fig.1)	0.368	0.499	-0.118
Left hand, Tilt 15 Degree, Mid frequency(See Fig.2)	0.202	0.262	0.025
Right hand, Touch cheek, Mid frequency(See Fig.3)	0.475	0.693	0.140
Right hand, Tilt 15 Degree, Mid frequency(See Fig.5)	0.236	0.307	0.162
Right hand, Touch cheek, Top frequency(See Fig.6)	0.425	0.617	-0.124
Right hand, Touch cheek, Bottom frequency(See Fig.7)	0.454	0.662	0.069

**Table 8: SAR Values (CDMA 835MHz-Head) – Slide up**

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	
Left hand, Touch cheek, Mid frequency(See Fig.8)	0.322	0.440	-0.149
Left hand, Tilt 15 Degree, Mid frequency(See Fig.9)	0.177	0.234	0.031
Right hand, Touch cheek, Mid frequency(See Fig.10)	0.346	0.472	0.123
Right hand, Tilt 15 Degree, Mid frequency(See Fig.11)	0.188	0.252	0.030
Right hand, Touch cheek, Top frequency(See Fig.12)	0.424	0.570	0.095
Right hand, Touch cheek, Bottom frequency(See Fig.13)	0.277	0.380	-0.118

**Table 9: SAR Values (CDMA 835MHz -Body) – Slide down**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.14)	0.241	0.336	-0.085
Body, Towards Phantom, Mid frequency (See Fig.15)	0.236	0.330	-0.009
Body, Towards Phantom, Bottom frequency (See Fig.16)	0.207	0.286	-0.126
Body, Towards Ground, Top frequency (See Fig.17)	0.481	0.715	-0.051
Body, Towards Ground, Mid frequency (See Fig.18)	0.482	0.717	0.034
Body, Towards Ground, Bottom frequency (See Fig.19)	0.439	0.652	0.023

**Table 10: SAR Values (CDMA 835MHz -Body) – Slide up**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.20)	0.364	0.484	-0.078

Body, Towards Phantom, Mid frequency (See Fig.21)	0.320	0.428	0.102
Body, Towards Phantom, Bottom frequency (See Fig.22)	0.291	0.388	-0.058
Body, Towards Ground, Top frequency (See Fig.23)	0.562	0.778	-0.099
Body, Towards Ground, Mid frequency (See Fig.25)	0.543	0.745	0.110
Body, Towards Ground, Bottom frequency (See Fig.26)	0.526	0.719	-0.020

#### 7.4 Summary of Measurement Results (CDMA 1900MHz)

**Table 11: SAR Values (CDMA 1900MHz-Head) – Slide down**

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	
Left hand, Touch cheek, Mid frequency(See Fig.27)	0.405	0.652	0.137
Left hand, Tilt 15 Degree, Mid frequency(See Fig.28)	0.363	0.606	0.033
Right hand, Touch cheek, Mid frequency(See Fig.29)	0.406	0.653	-0.183
Right hand, Tilt 15 Degree, Mid frequency(See Fig.30)	0.303	0.484	0.092
Right hand, Touch cheek, Top frequency(See Fig.31)	0.267	0.434	-0.193
Right hand, Touch cheek, Bottom frequency(See Fig.32)	0.344	0.534	0.028

**Table 12: SAR Values (CDMA 1900MHz-Head) – Slide up**

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	
Left hand, Touch cheek, Top frequency(See Fig.33)	0.429	0.688	-0.185
Left hand, Touch cheek, Mid frequency(See Fig.34)	0.504	0.789	0.115
Left hand, Touch cheek, Bottom frequency(See Fig.35)	0.412	0.642	-0.015
Left hand, Tilt 15 Degree, Top frequency(See Fig.36)	0.240	0.421	0.180
Left hand, Tilt 15 Degree, Mid frequency(See Fig.37)	0.250	0.434	0.103
Left hand, Tilt 15 Degree, Bottom frequency(See Fig.38)	0.208	0.359	-0.010
Right hand, Touch cheek, Top frequency(See Fig.39)	0.624	1.02	-0.032
Right hand, Touch cheek, Mid frequency(See Fig.40)	0.715	1.15	-0.137
Right hand, Touch cheek, Bottom frequency(See Fig.42)	0.652	1.04	0.040
Right hand, Tilt 15 Degree, Top frequency(See Fig.43)	0.168	0.285	-0.193
Right hand, Tilt 15 Degree, Mid frequency(See Fig.44)	0.217	0.335	0.076
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.45)	0.218	0.338	0.088

**Table 13: SAR Values (CDMA 1900MHz -Body) – Slide down**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.46)	0.125	0.204	-0.199
Body, Towards Phantom, Mid frequency (See Fig.47)	0.173	0.270	0.001
Body, Towards Phantom, Bottom frequency (See Fig.48)	0.196	0.305	0.115
Body, Towards Ground, Top frequency (See Fig.49)	0.392	0.632	-0.051
Body, Towards Ground, Mid frequency (See Fig.50)	0.560	0.872	0.086
Body, Towards Ground, Bottom frequency (See Fig.52)	0.532	0.813	-0.135

**Table 14: SAR Values (CDMA 1900MHz -Body) – Slide up**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.53)	0.177	0.271	-0.138
Body, Towards Phantom, Mid frequency (See Fig.54)	0.208	0.318	0.041
Body, Towards Phantom, Bottom frequency (See Fig.55)	0.209	0.316	-0.020
Body, Towards Ground, Top frequency (See Fig.56)	0.470	0.744	-0.144
Body, Towards Ground, Mid frequency (See Fig.57)	0.505	0.816	-0.004
Body, Towards Ground, Bottom frequency (See Fig.58)	0.456	0.714	0.005

## 7.5 Summary of Measurement Results (AWS 1700MHz)

**Table 15: SAR Values (AWS 1700MHz-Head) – Slide down**

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	
Left hand, Touch cheek, Top frequency(See Fig.59)	0.429	0.660	0.166
Left hand, Touch cheek, Mid frequency(See Fig.60)	0.436	0.706	0.130
Left hand, Touch cheek, Bottom frequency(See Fig.61)	0.463	0.693	-0.168

Left hand, Tilt 15 Degree, Top frequency(See Fig.62)	0.266	0.422	0.153
Left hand, Tilt 15 Degree, Mid frequency(See Fig.63)	0.337	0.542	-0.122
Left hand, Tilt 15 Degree, Bottom frequency(See Fig.64)	0.322	0.522	0.050
Right hand, Touch cheek, Top frequency(See Fig.65)	0.506	0.787	-0.158
Right hand, Touch cheek, Mid frequency(See Fig.66)	0.552	0.859	-0.129
Right hand, Touch cheek, Bottom frequency(See Fig.68)	0.553	0.845	-0.086
Right hand, Tilt 15 Degree, Top frequency(See Fig.69)	0.167	0.342	-0.116
Right hand, Tilt 15 Degree, Mid frequency(See Fig.70)	0.241	0.385	-0.193
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.71)	0.227	0.359	-0.009

**Table 16: SAR Values (AWS 1700MHz-Head) – Slide up**

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	
Left hand, Touch cheek, Top frequency(See Fig.72)	0.397	0.589	0.022
Left hand, Touch cheek, Mid frequency(See Fig.73)	0.344	0.513	0.148
Left hand, Touch cheek, Bottom frequency(See Fig.74)	0.355	0.532	-0.056
Left hand, Tilt 15 Degree, Top frequency(See Fig.75)	0.165	0.284	-0.020
Left hand, Tilt 15 Degree, Mid frequency(See Fig.76)	0.120	0.209	0.062
Left hand, Tilt 15 Degree, Bottom frequency(See Fig.77)	0.128	0.225	-0.1120
Right hand, Touch cheek, Top frequency(See Fig.78)	0.528	0.825	0.094
Right hand, Touch cheek, Mid frequency(See Fig.79)	0.457	0.707	-0.005
Right hand, Touch cheek, Bottom frequency(See Fig.80)	0.460	0.709	0.121
Right hand, Tilt 15 Degree, Top frequency(See Fig.81)	0.228	0.405	-0.127
Right hand, Tilt 15 Degree, Mid frequency(See Fig.82)	0.192	0.344	0.116
Right hand, Tilt 15 Degree, Bottom frequency(See Fig.83)	0.194	0.348	-0.158

**Table 17: SAR Values (AWS 1700MHz -Body) – Slide down**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.84)	0.218	0.330	0.029
Body, Towards Phantom, Mid frequency (See Fig.85)	0.186	0.280	-0.024
Body, Towards Phantom, Bottom frequency (See Fig.86)	0.192	0.287	0.083
Body, Towards Ground, Top frequency (See Fig.87)	0.714	1.14	0.138
Body, Towards Ground, Mid frequency (See Fig.88)	0.621	0.988	-0.055

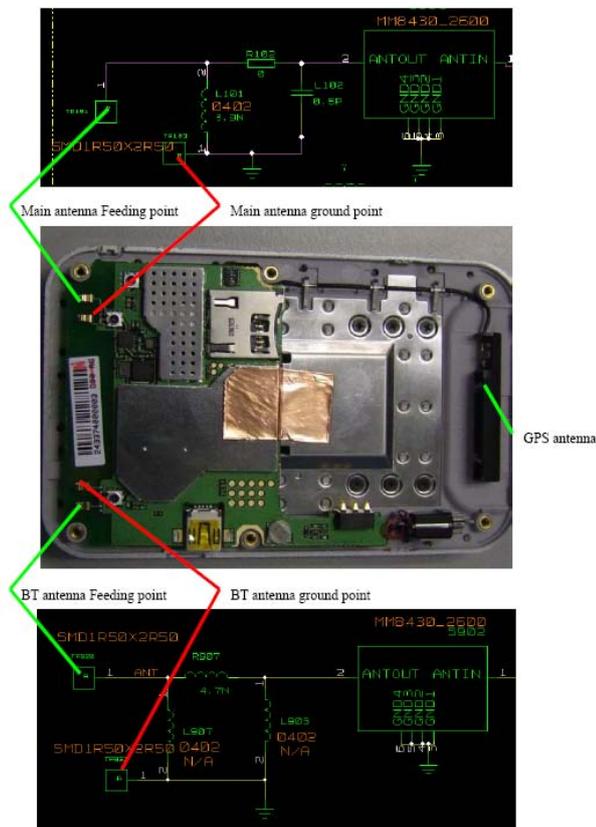
Body, Towards Ground, Bottom frequency (See Fig.89)	0.747	1.19	-0.041
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**Table 18: SAR Values (AWS 1700MHz -Body) – Slide up**

Limit of SAR (W/kg)	10 g Average	1g Average	Power Drift (dB)
	2.0	1.6	
Test Case	Measurement Result (W/kg)		Power Drift (dB)
	10 g Average	1 g Average	
Body, Towards Phantom, Top frequency (See Fig.91)	0.220	0.330	0.157
Body, Towards Phantom, Mid frequency (See Fig.92)	0.194	0.313	0.057
Body, Towards Phantom, Bottom frequency (See Fig.93)	0.206	0.324	0.044
Body, Towards Ground, Top frequency (See Fig.94)	0.426	0.649	-0.074
Body, Towards Ground, Mid frequency (See Fig.95)	0.397	0.600	0.106
Body, Towards Ground, Bottom frequency (See Fig.96)	0.419	0.629	-0.061

### 7.6 Summary of Measurement Results (Bluetooth function)

The distance between BT antenna and GSM antenna is <math><2.5\text{cm}</math>. The location of the antennas inside mobile phone is shown below:



The output power of BT antenna is as following:

Channel	Ch 0 2402 MHz	Ch 39 2441 Mhz	Ch 78 2480 MHz
Peak Conducted Output Power(dBm)	-2.55	-4.40	-6.00

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 BT transmitter, because the output power of BT transmitter is  $\leq P_{Ref}$  and The maximum SAR value  $< 1.2W/kg$ .

## 7.7 Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 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 **AWS 1700 Body, Towards Ground,Slide down, Bottom frequency (Table 17)**, and the value are: **0.747(10g), 1.19(1g)**.

## 8 Measurement Uncertainty

SN	a	Type	c	d	e = f(d,k)	f	h = c x f / e	k
	Uncertainty Component		Tol. (± %)	Prob Dist.	Div.	c <sub>i</sub> (1 g)	1 g u <sub>i</sub> (±%)	v <sub>i</sub>
1	System repetivity	A	0.5	N	1	1	0.5	9
Measurement System								
2	Probe Calibration	B	5	N	2	1	2.5	∞
3	Axial Isotropy	B	4.7	R	$\sqrt{3}$	$\frac{(1-c_p)^{1/2}}{2}$	4.3	∞
4	Hemispherical Isotropy	B	9.4	R	$\sqrt{3}$	$\sqrt{c_p}$		
5	Boundary Effect	B	0.4	R	$\sqrt{3}$	1	0.23	∞
6	Linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
7	System Detection Limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
8	Readout Electronics	B	1.0	N	1	1	1.0	∞
9	RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞
10	Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
11	Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞

12	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	$\infty$
Test sample Related								
13	Test Sample Positioning	A	4.9	N	1	1	4.9	N-1
14	Device Holder Uncertainty	A	6.1	N	1	1	6.1	N-1
15	Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	$\infty$
Phantom and Tissue Parameters								
16	Phantom Uncertainty (shape and thickness tolerances)	B	1.0	R	$\sqrt{3}$	1	0.6	$\infty$
17	Liquid Conductivity - deviation from target values	B	5.0	R	$\sqrt{3}$	0.64	1.7	$\infty$
18	Liquid Conductivity - measurement uncertainty	B	5.0	N	1	0.64	1.7	M
19	Liquid Permittivity - deviation from target values	B	5.0	R	$\sqrt{3}$	0.6	1.7	$\infty$
20	Liquid Permittivity - measurement uncertainty	B	5.0	N	1	0.6	1.7	M
Combined Standard Uncertainty				RSS		11.25		
Expanded Uncertainty (95% CONFIDENCE INTERVAL)				K=2		22.5		

## 9 MAIN TEST INSTRUMENTS

Table 19: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	HP 8753E	US38433212	August 30,2008	One year
02	Power meter	NRVD	101253	June 20, 2008	One year
03	Power sensor	NRV-Z5	100333		
04	Power sensor	NRV-Z6	100011	September 2, 2008	One year
05	Signal Generator	E4433B	US37230472	September 4, 2008	One Year
06	Amplifier	VTL5400	0505	No Calibration Requested	
07	BTS	CMU 200	105948	August 15, 2008	One year
08	E-field Probe	SPEAG ES3DV3	3149	October 1, 2008	One year
09	DAE	SPEAG DAE4	771	November 20, 2008	One year
10	Dipole Validation Kit	SPEAG D835V2	443	February 18, 2009	Two years
11	Dipole Validation Kit	SPEAG D1900V2	541	February 19, 2009	Two years
12	Dipole Validation Kit	SPEAG D1800V2	2d145	December 11, 2007	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.

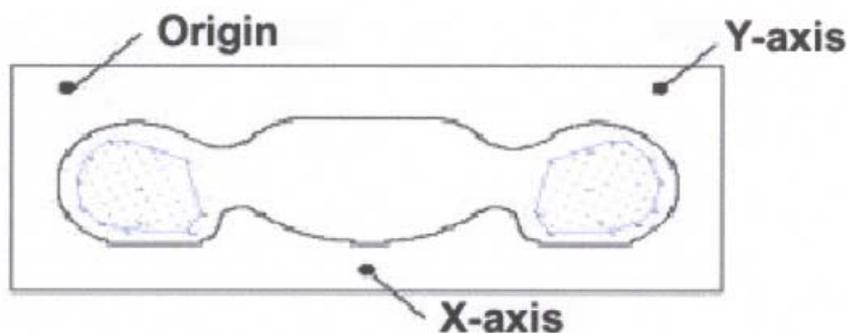
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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.

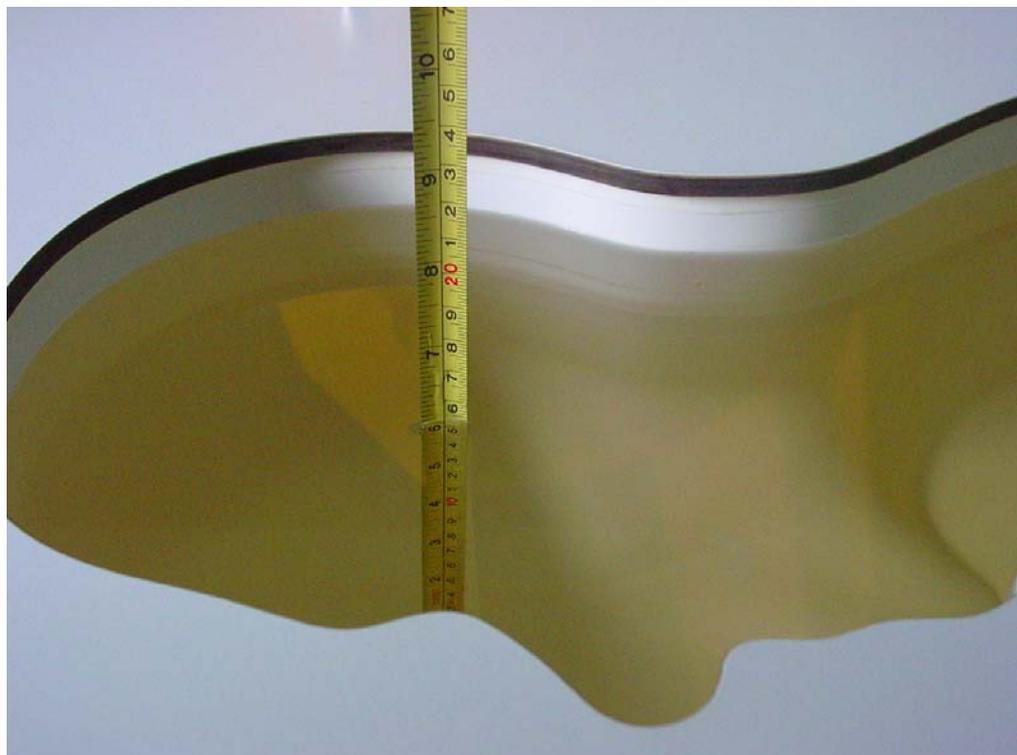


Picture A: SAR Measurement Points in Area Scan

**ANNEX B TEST LAYOUT**



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



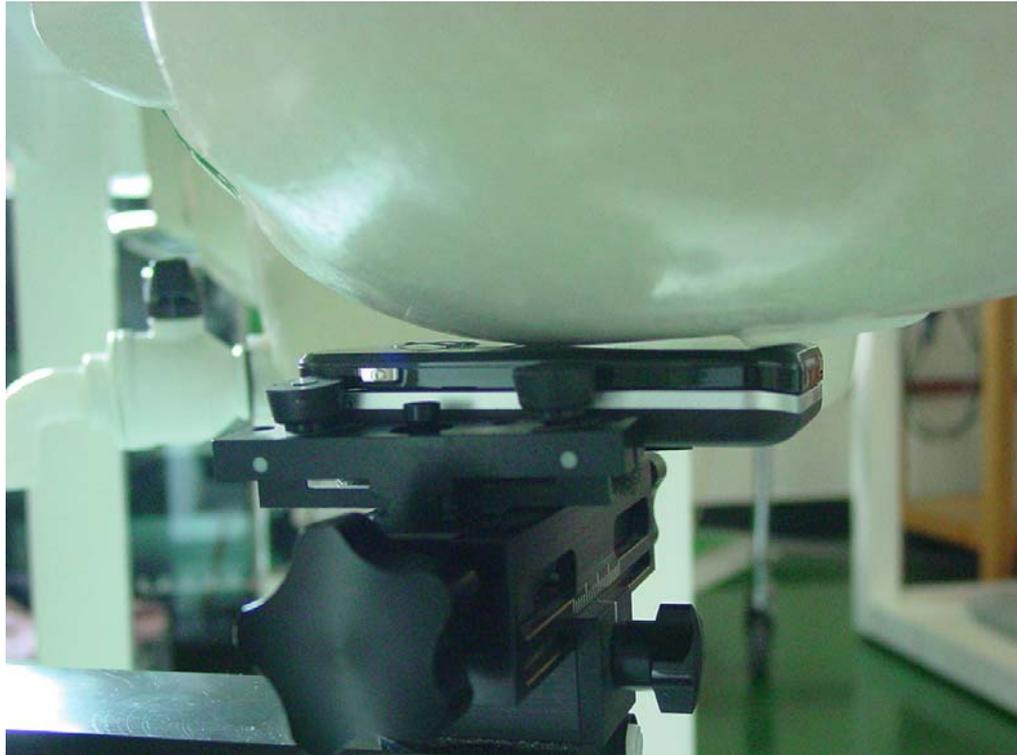
**Picture B2: Liquid depth in the Flat Phantom (850 MHz)**



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



**Picture B4 Liquid depth in the Flat Phantom (1800MHz)**



**Picture B5: Left Hand Touch Cheek Position – Slide down**



**Picture B6: Left Hand Tilt 15° Position – Slide down**



**Picture B7: Right Hand Touch Cheek Position – Slide down**



**Picture B8: Right Hand Tilt 15° Position – Slide down**



**Picture B9: Left Hand Touch Cheek Position – Slide up**



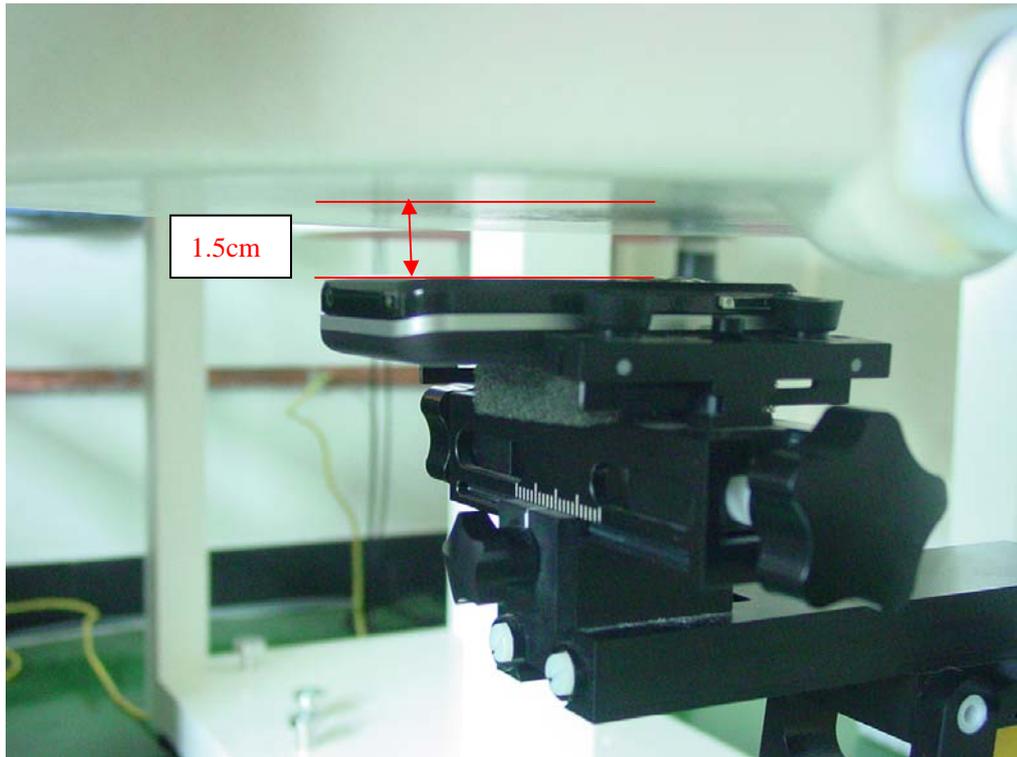
**Picture B10: Left Hand Tilt 15° Position – Slide up**



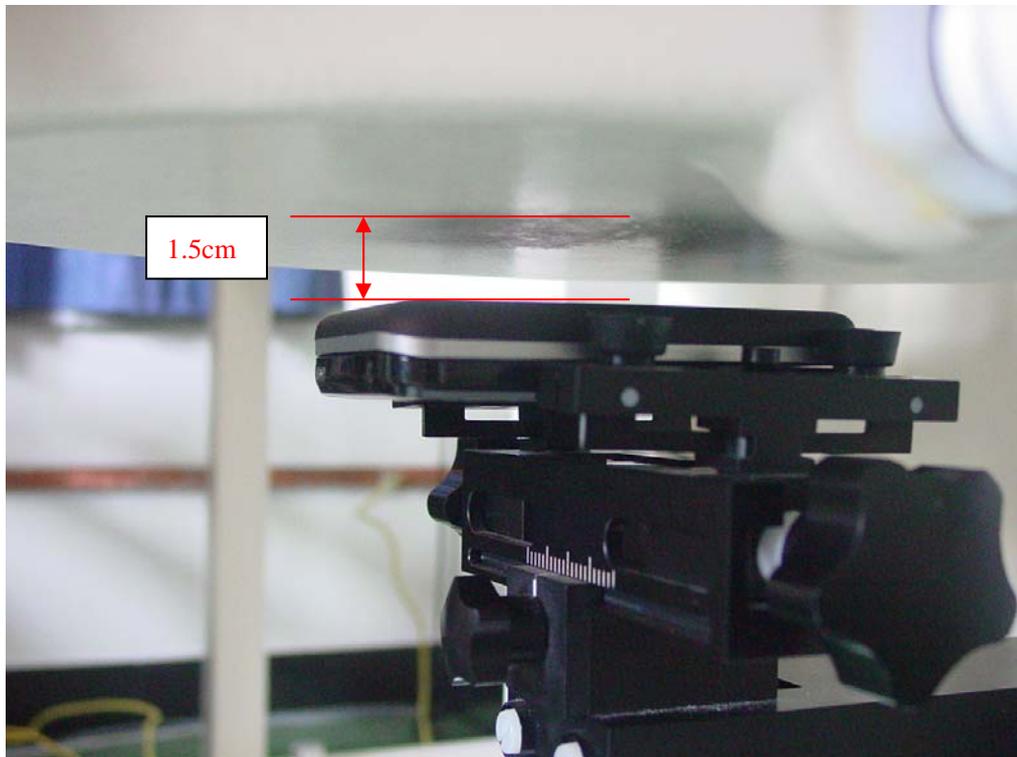
**Picture B11: Right Hand Touch Cheek Position – Slide up**



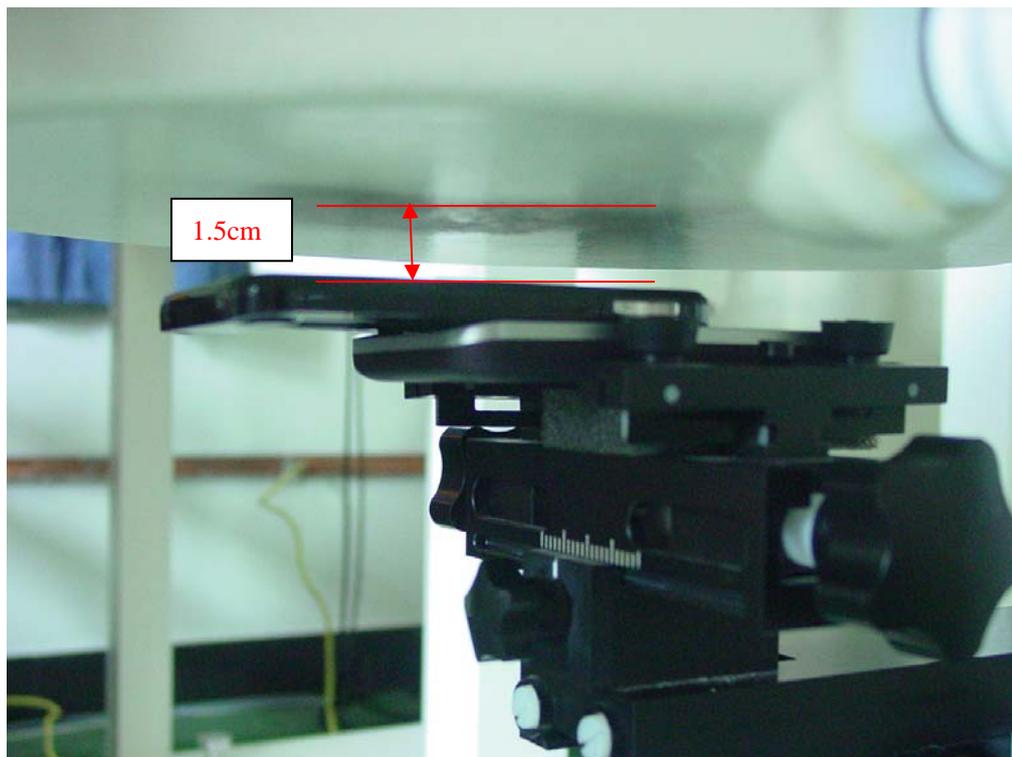
**Picture B12: Right Hand Tilt 15° Position – Slide up**



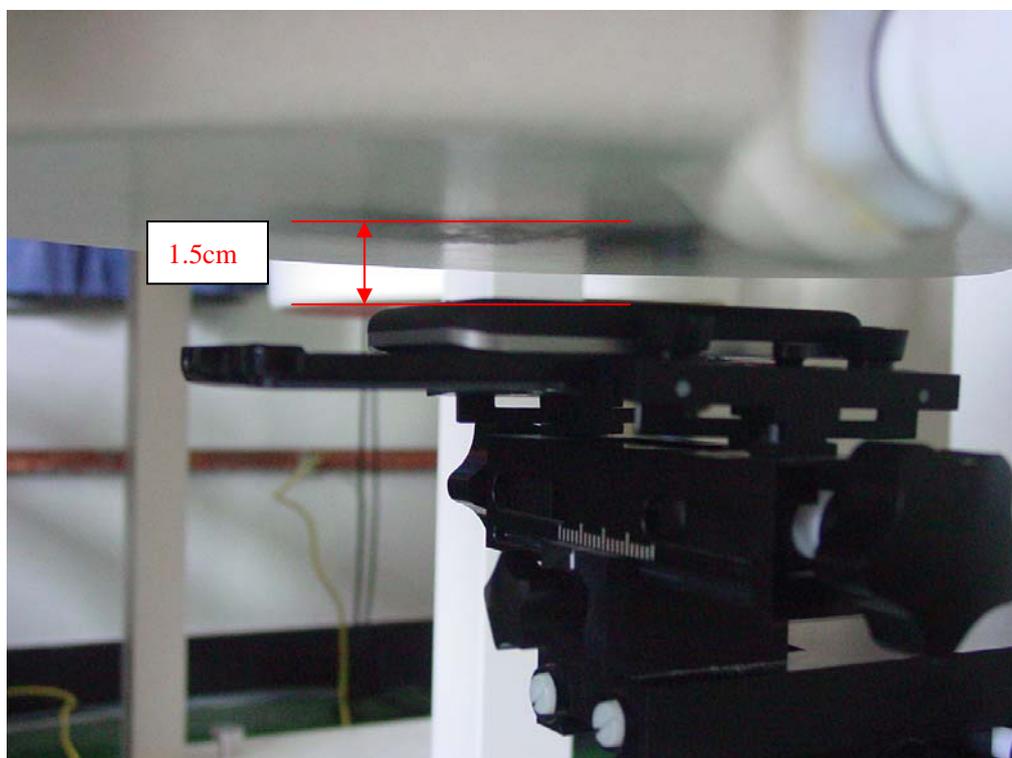
**Picture B13: Body-worn Position (towards phantom, the distance from handset to the bottom of the Phantom is 1.5cm) – Slide down**



**Picture B14: Body-worn Position (towards ground, the distance from handset to the bottom of the Phantom is 1.5cm) – Slide down**



**Picture B15: Body-worn Position (towards phantom, the distance from handset to the bottom of the Phantom is 1.5cm) – Slide up**



**Picture B16: Body-worn Position (towards ground, the distance from handset to the bottom of the Phantom is 1.5cm) – Slide up**

## ANNEX C GRAPH RESULTS

### CDMA 835 Left Cheek Middle – Slide down

Date/Time: 2009-3-25 8:13:16

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

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

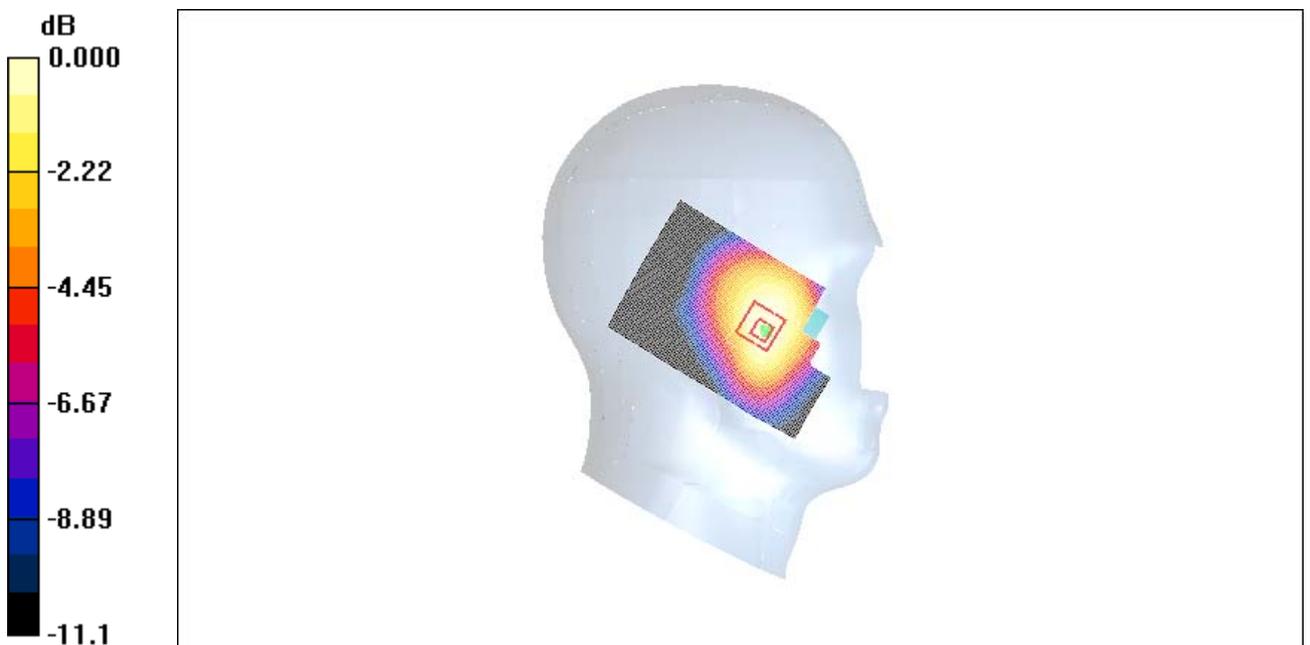
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.44 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 0.630 W/kg

**SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.368 mW/g**

Maximum value of SAR (measured) = 0.531 mW/g



0 dB = 0.531mW/g

Fig. 1 CDMA 835MHz CH384 – Slide down

**CDMA 835 Left Tilt Middle – Slide down**

Date/Time: 2009-3-25 8:27:23

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.275 mW/g

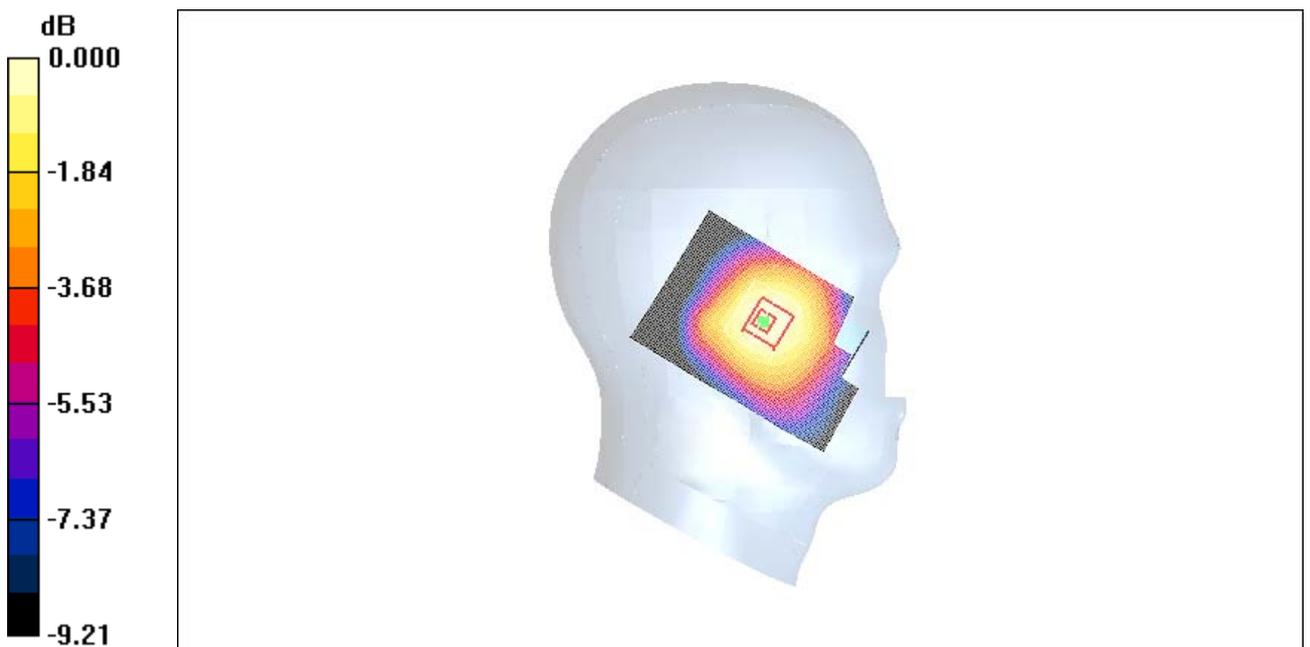
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.99 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.322 W/kg

**SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.202 mW/g**

Maximum value of SAR (measured) = 0.277 mW/g



0 dB = 0.277mW/g

**Fig. 2 CDMA 835MHz CH384 – Slide down**

**CDMA 835 Right Cheek Middle – Slide down**

Date/Time: 2009-3-25 8:41:35

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

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

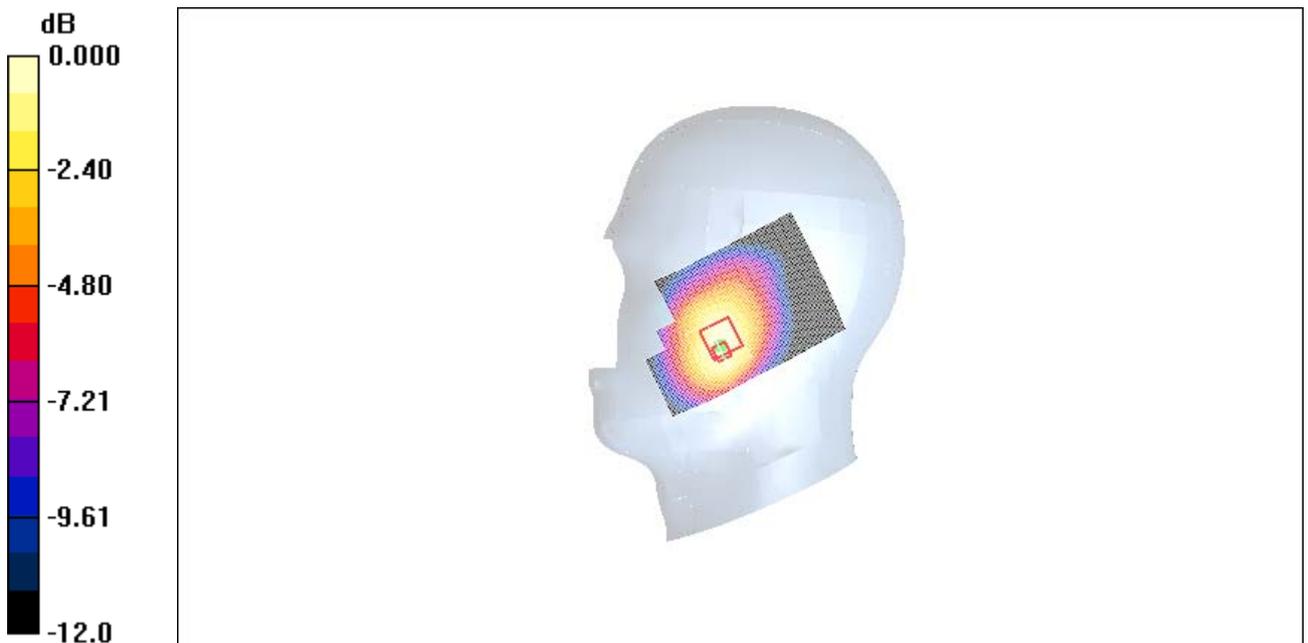
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.72 V/m; Power Drift = 0.140 dB

Peak SAR (extrapolated) = 1.02 W/kg

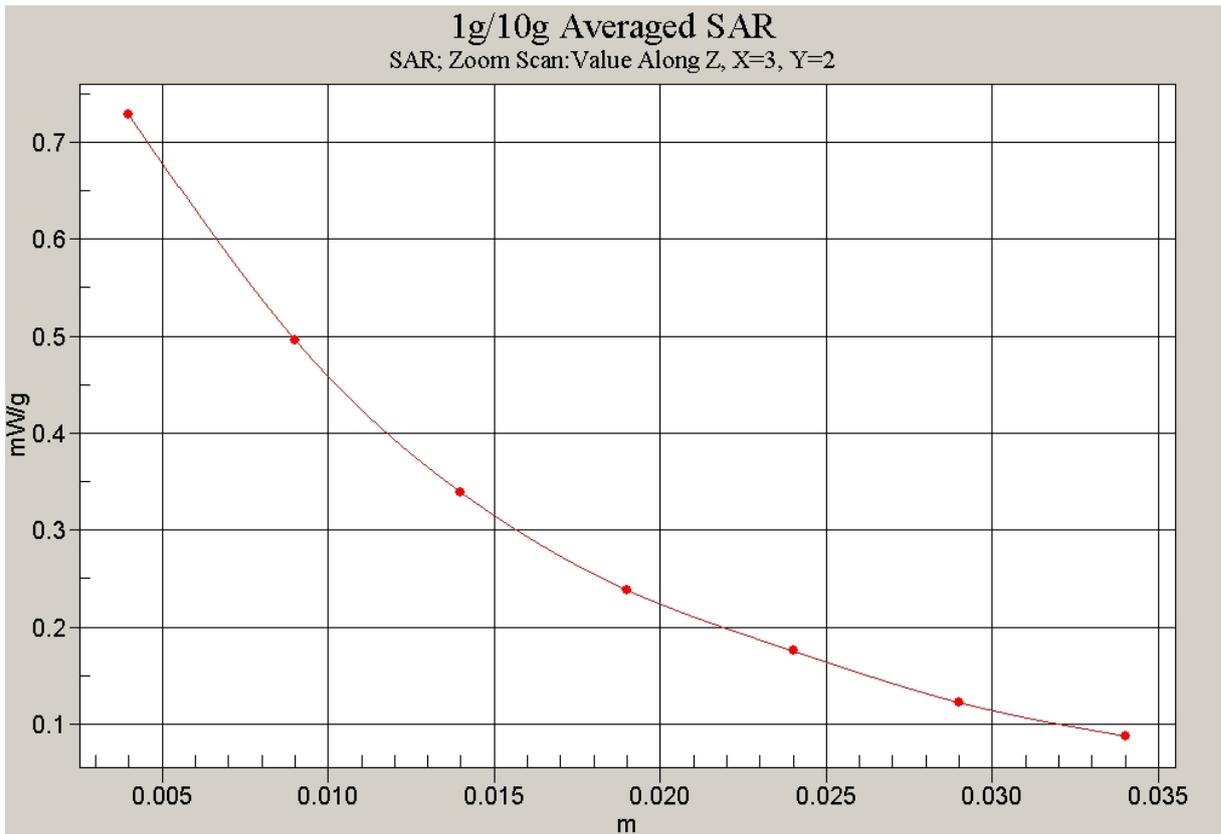
**SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.475 mW/g**

Maximum value of SAR (measured) = 0.728 mW/g



0 dB = 0.728mW/g

**Fig. 3 CDMA 835MHz CH384 – Slide down**



**Fig. 4 Z-Scan at power reference point (CDMA 835MHz CH384)**

**CDMA 835 Right Tilt Middle – Slide down**

Date/Time: 2009-3-25 8:55:26

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.318 mW/g

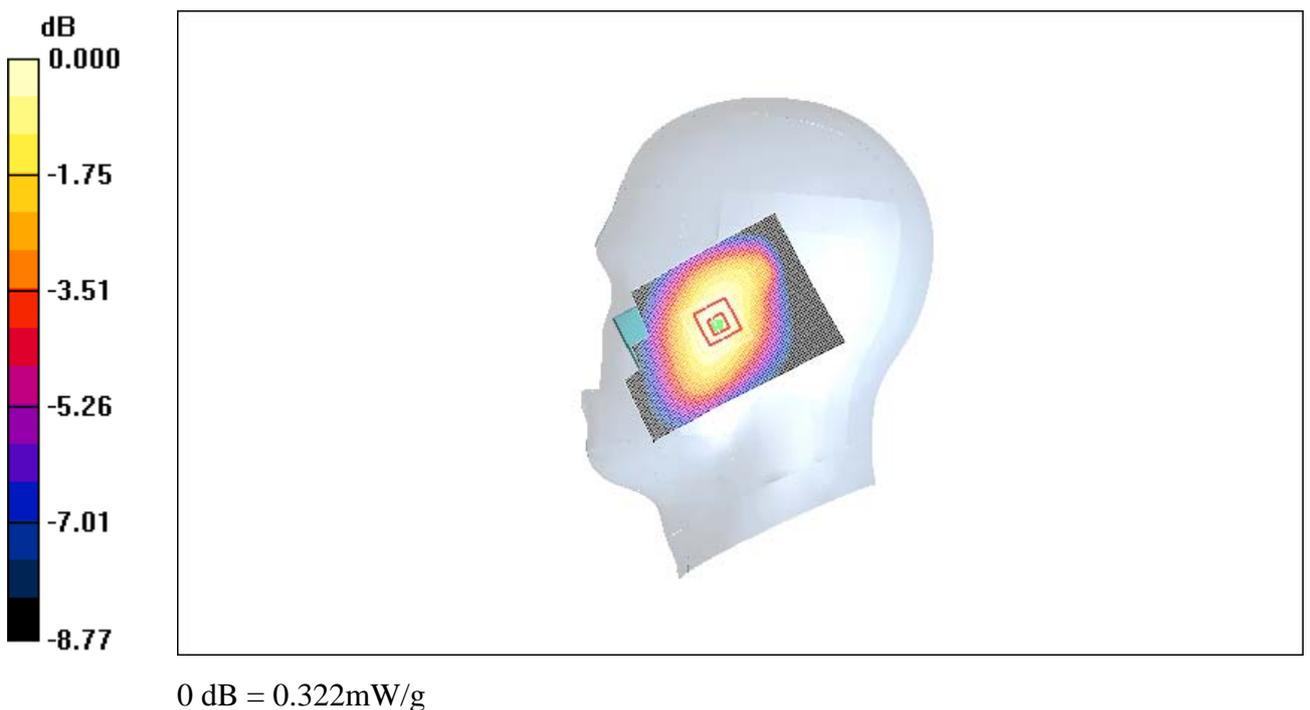
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = 0.162 dB

Peak SAR (extrapolated) = 0.366 W/kg

**SAR(1 g) = 0.307 mW/g; SAR(10 g) = 0.236 mW/g**

Maximum value of SAR (measured) = 0.322 mW/g



**Fig. 5 CDMA 835MHz CH384 – Slide down**

**CDMA 835 Right Cheek High – Slide down**

Date/Time: 2009-3-25 9:09:40

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 0.919$  mho/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.654 mW/g

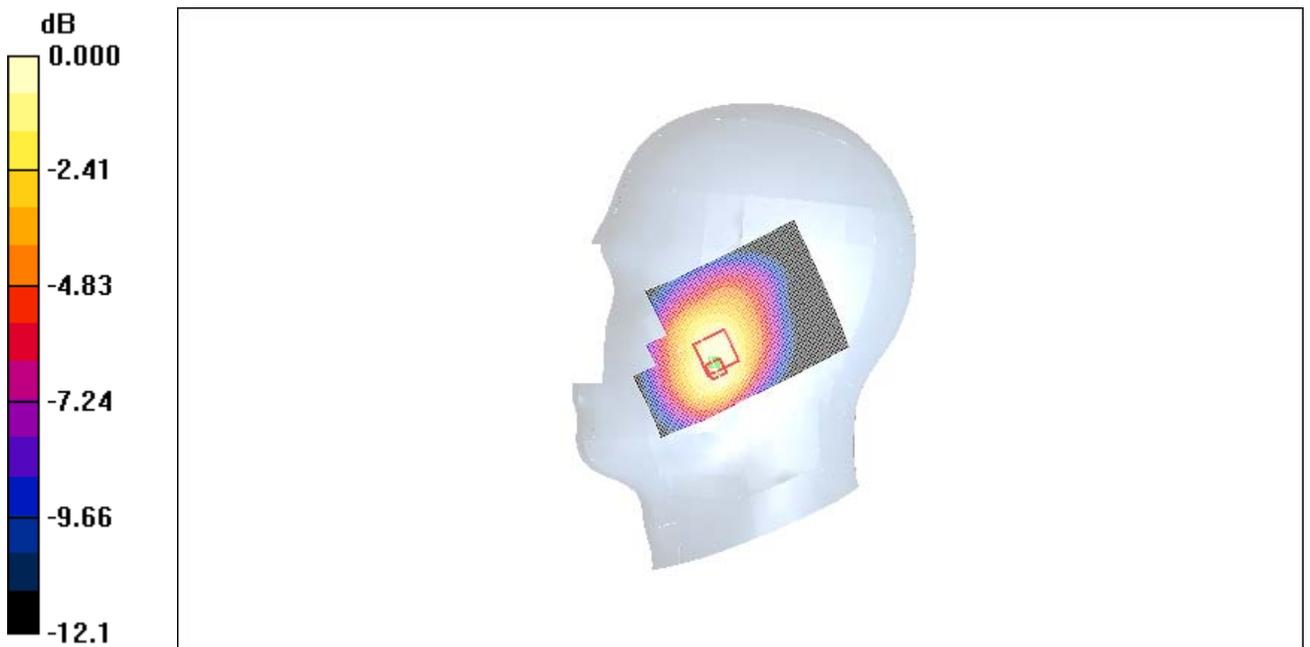
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.62 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.912 W/kg

**SAR(1 g) = 0.617 mW/g; SAR(10 g) = 0.425 mW/g**

Maximum value of SAR (measured) = 0.653 mW/g



0 dB = 0.653mW/g

**Fig. 6 CDMA 835MHz CH777 – Slide down**

**CDMA 835 Right Cheek Low – Slide down**

Date/Time: 2009-3-25 9:23:51

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.896 \text{ mho/m}$ ;  $\epsilon_r = 40.4$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Low/Area Scan (61x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.706 \text{ mW/g}$

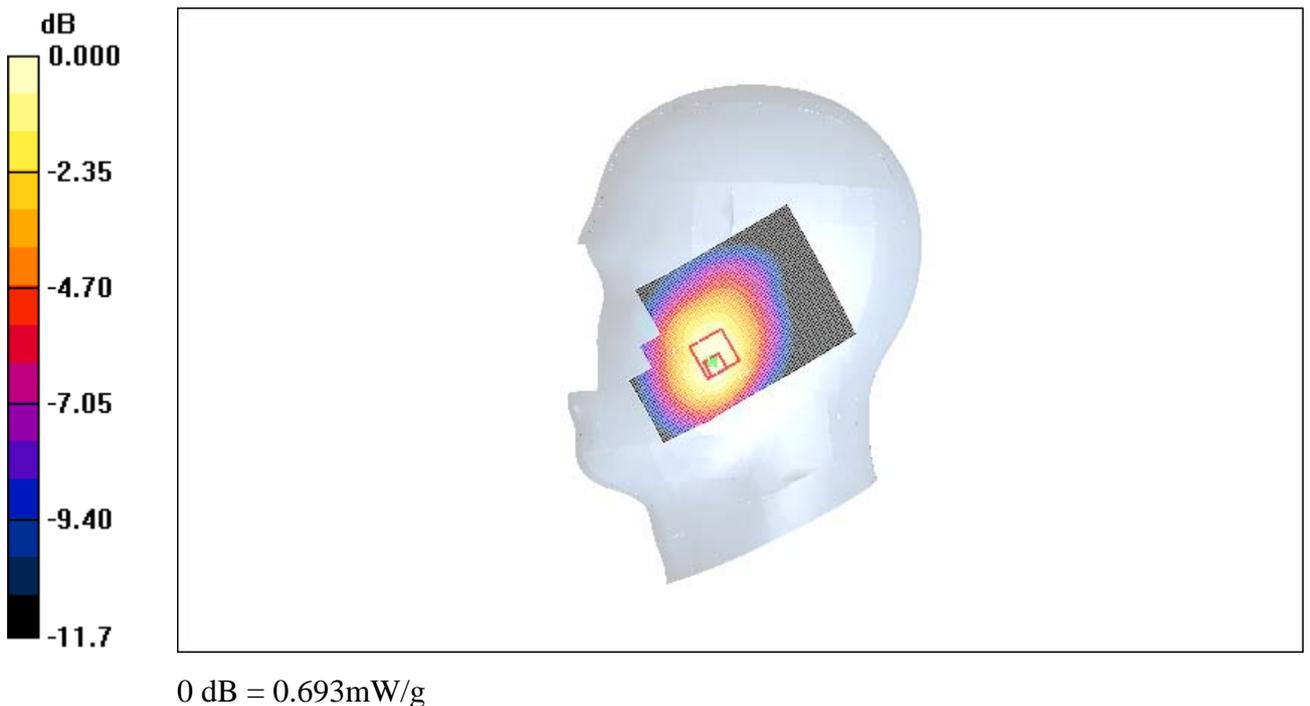
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $7.39 \text{ V/m}$ ; Power Drift =  $0.069 \text{ dB}$

Peak SAR (extrapolated) =  $0.957 \text{ W/kg}$

**SAR(1 g) =  $0.662 \text{ mW/g}$ ; SAR(10 g) =  $0.454 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.693 \text{ mW/g}$



**Fig. 7 CDMA 835MHz CH1013 – Slide down**

**CDMA 835 Left Cheek Middle – Slide up**

Date/Time: 2009-3-25 9:37:42

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.473 mW/g

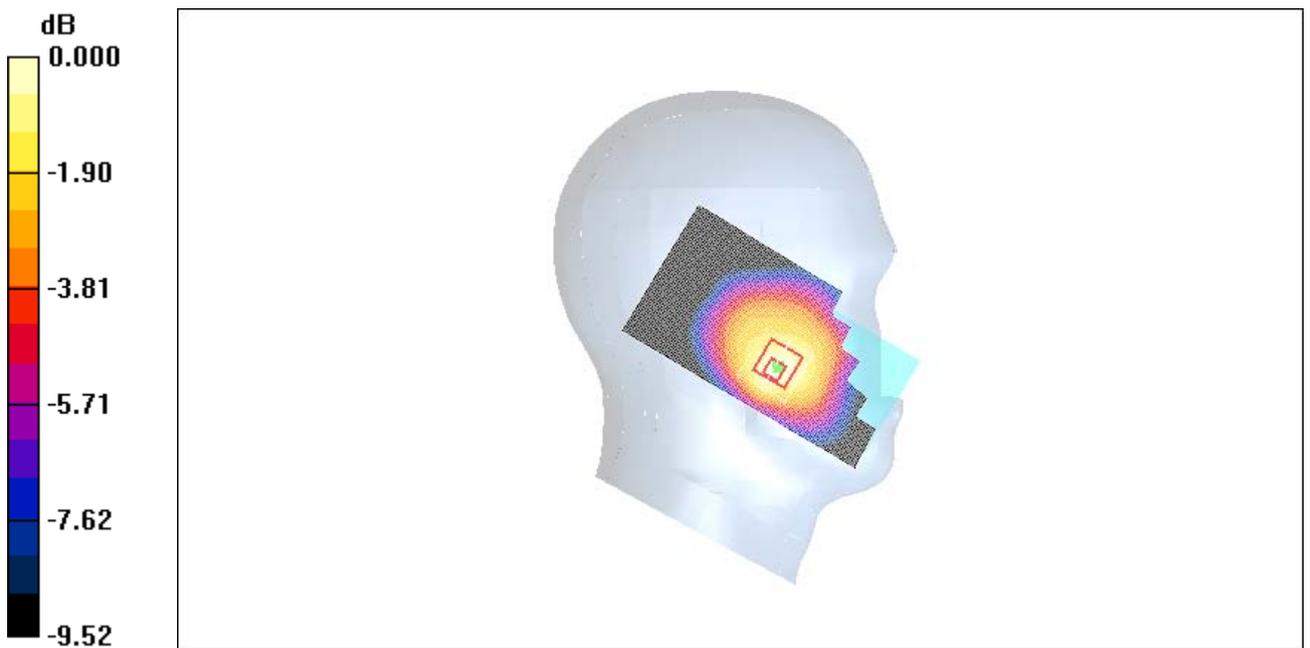
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.50 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 0.578 W/kg

**SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.322 mW/g**

Maximum value of SAR (measured) = 0.474 mW/g



0 dB = 0.474mW/g

**Fig. 8 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Left Tilt Middle – Slide up**

Date/Time: 2009-3-25 9:51:32

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.247 mW/g

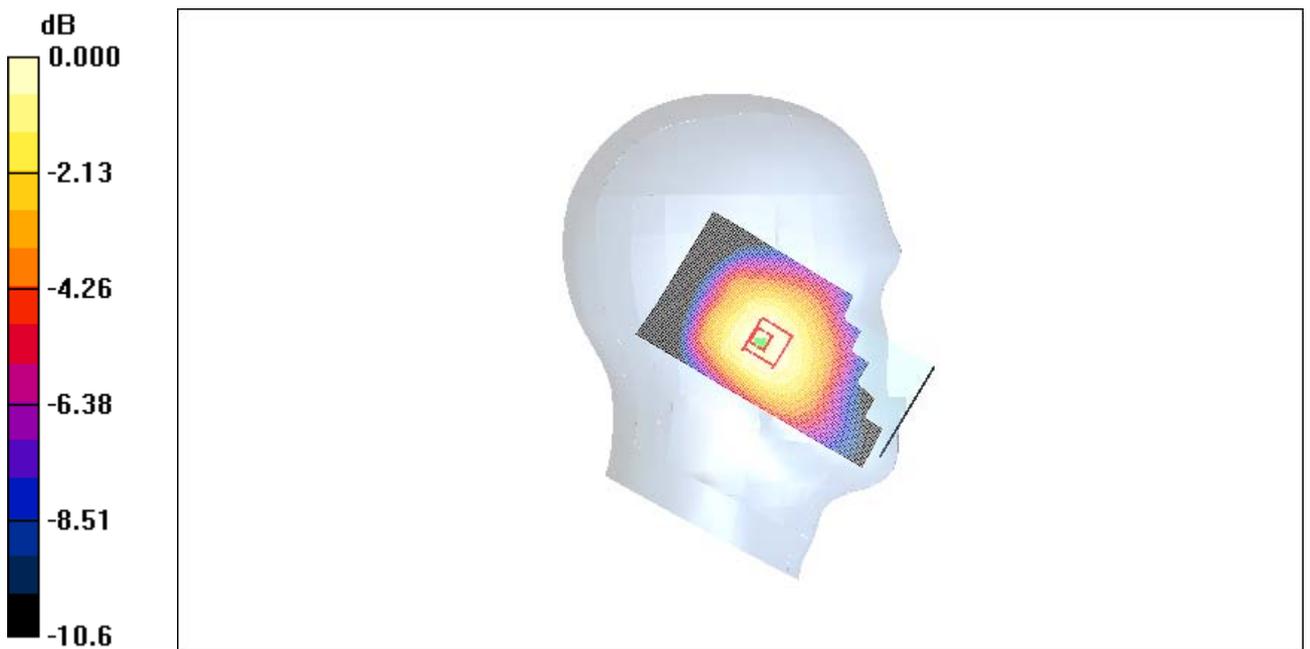
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.51 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.300 W/kg

**SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.177 mW/g**

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



0 dB = 0.245mW/g

**Fig. 9 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Right Cheek Middle – Slide up**

Date/Time: 2009-3-25 10:05:30

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.497 mW/g

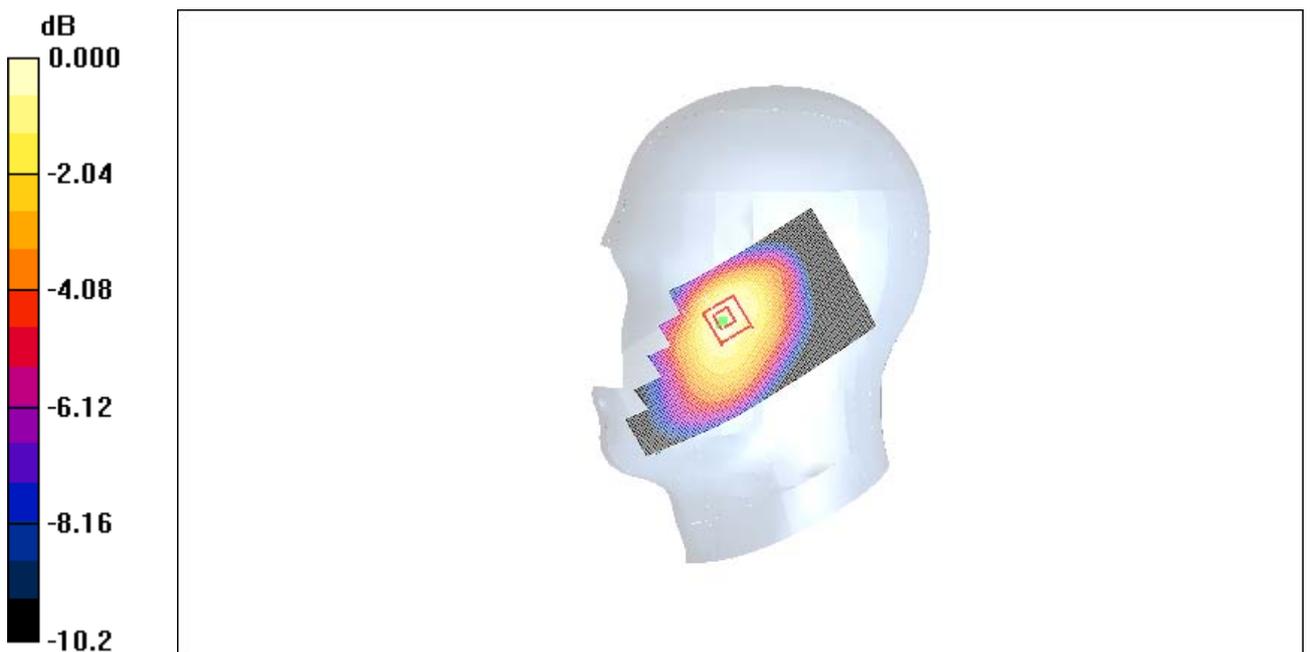
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.17 V/m; Power Drift = 0.123 dB

Peak SAR (extrapolated) = 0.617 W/kg

**SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.346 mW/g**

Maximum value of SAR (measured) = 0.501 mW/g



0 dB = 0.501mW/g

**Fig. 10 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Right Tilt Middle – Slide up**

Date/Time: 2009-3-25 10:19:28

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 0.908$  mho/m;  $\epsilon_r = 40.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.272 mW/g

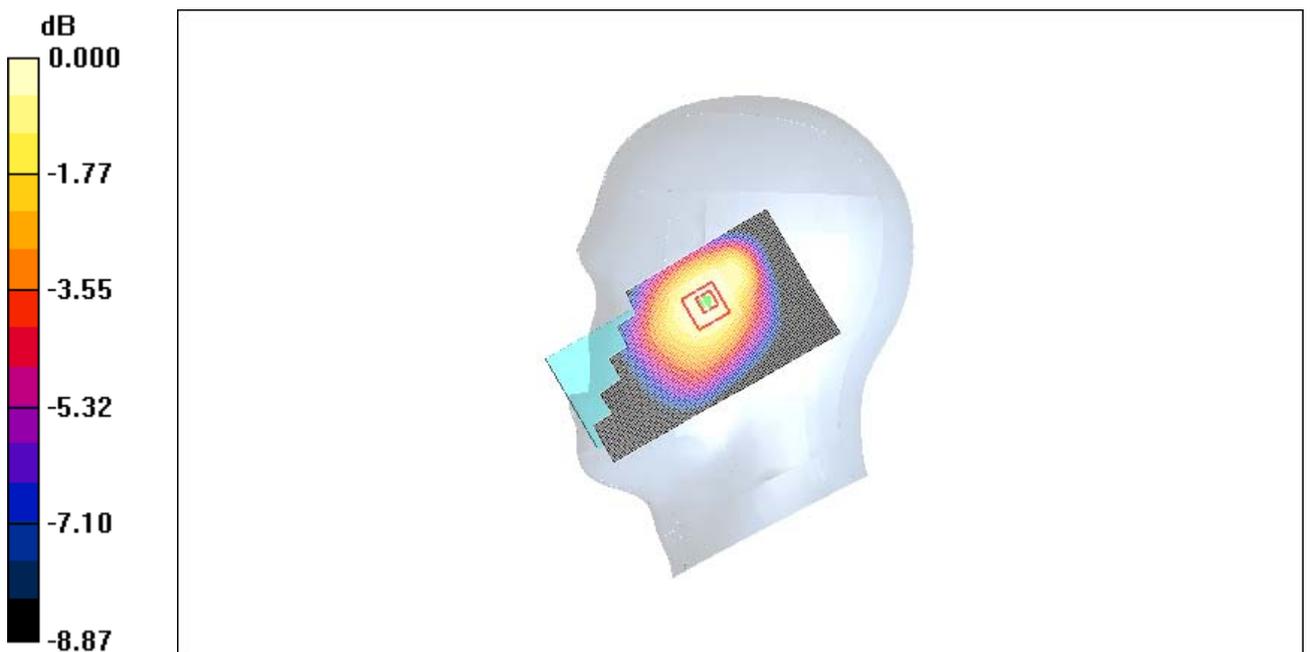
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.00 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.314 W/kg

**SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.188 mW/g**

Maximum value of SAR (measured) = 0.265 mW/g



0 dB = 0.265mW/g

**Fig. 11 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Right Cheek High – Slide up**

Date/Time: 2009-3-25 10:33:12

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 0.919$  mho/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.618 mW/g

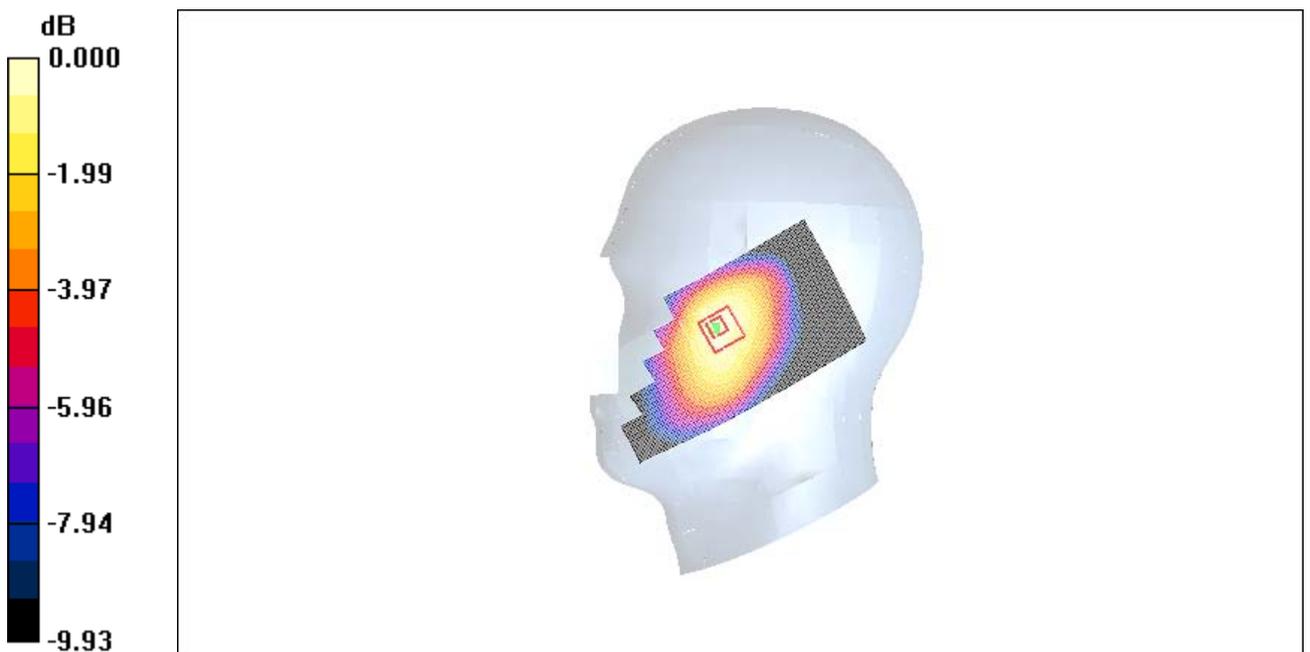
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.48 V/m; Power Drift = 0.095 dB

Peak SAR (extrapolated) = 0.730 W/kg

**SAR(1 g) = 0.570 mW/g; SAR(10 g) = 0.424 mW/g**

Maximum value of SAR (measured) = 0.609 mW/g



0 dB = 0.609mW/g

**Fig. 12 CDMA 835MHz CH777 – Slide up**

**CDMA 835 Right Cheek Low – Slide up**

Date/Time: 2009-3-25 10:47:24

Electronics: DAE4 Sn771

Medium: Head 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.896 \text{ mho/m}$ ;  $\epsilon_r = 40.4$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Low/Area Scan (61x121x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.407 \text{ mW/g}$

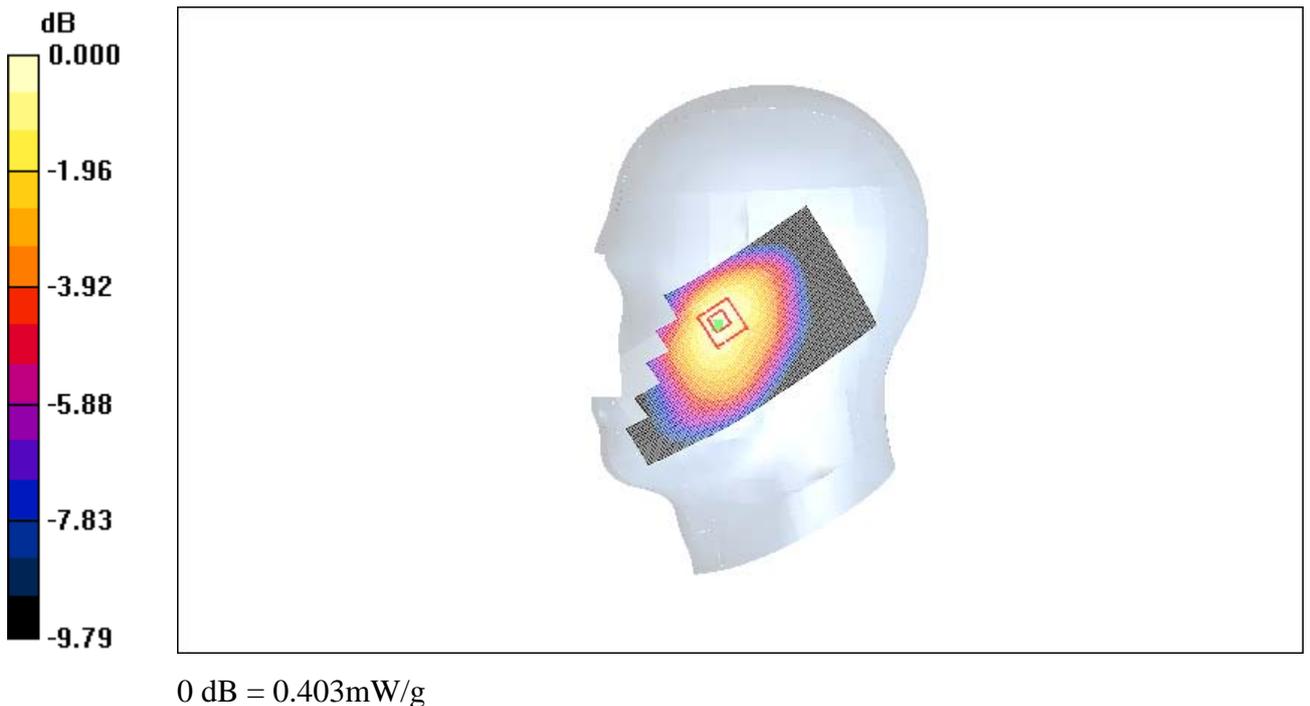
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $8.36 \text{ V/m}$ ; Power Drift =  $-0.118 \text{ dB}$

Peak SAR (extrapolated) =  $0.505 \text{ W/kg}$

**SAR(1 g) =  $0.380 \text{ mW/g}$ ; SAR(10 g) =  $0.277 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.403 \text{ mW/g}$



**Fig. 13 CDMA 835MHz CH1013 – Slide up**

**CDMA 835 Body Toward Phantom High – Slide down**

Date/Time: 2009-3-25 11:13:56

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.02$  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: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

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

**Towards Phantom High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.355 mW/g

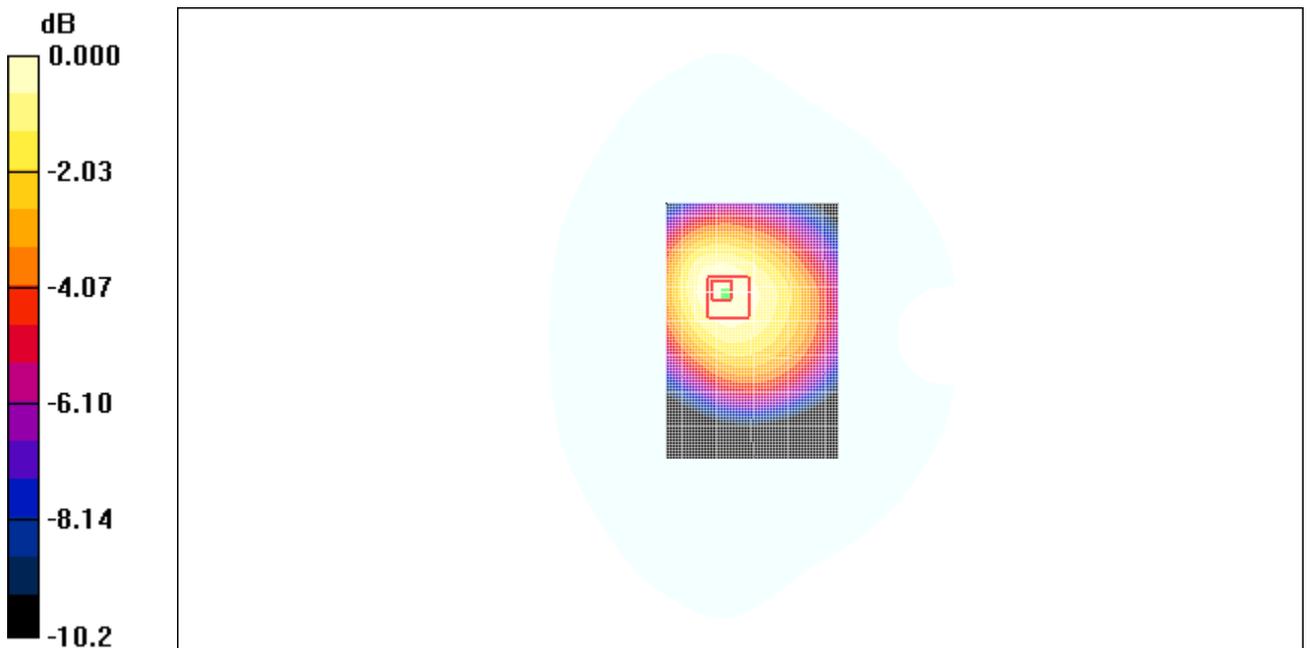
**Towards Phantom High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.7 V/m; Power Drift = -0.085 dB

Peak SAR (extrapolated) = 0.450 W/kg

**SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.241 mW/g**

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



0 dB = 0.356mW/g

**Fig. 14 CDMA 835MHz CH777 – Slide down**

**CDMA 835 Body Toward Phantom Middle – Slide down**

Date/Time: 2009-3-25 11:27:48

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 1.01$  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: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

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

**Towards Phantom Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.346 mW/g

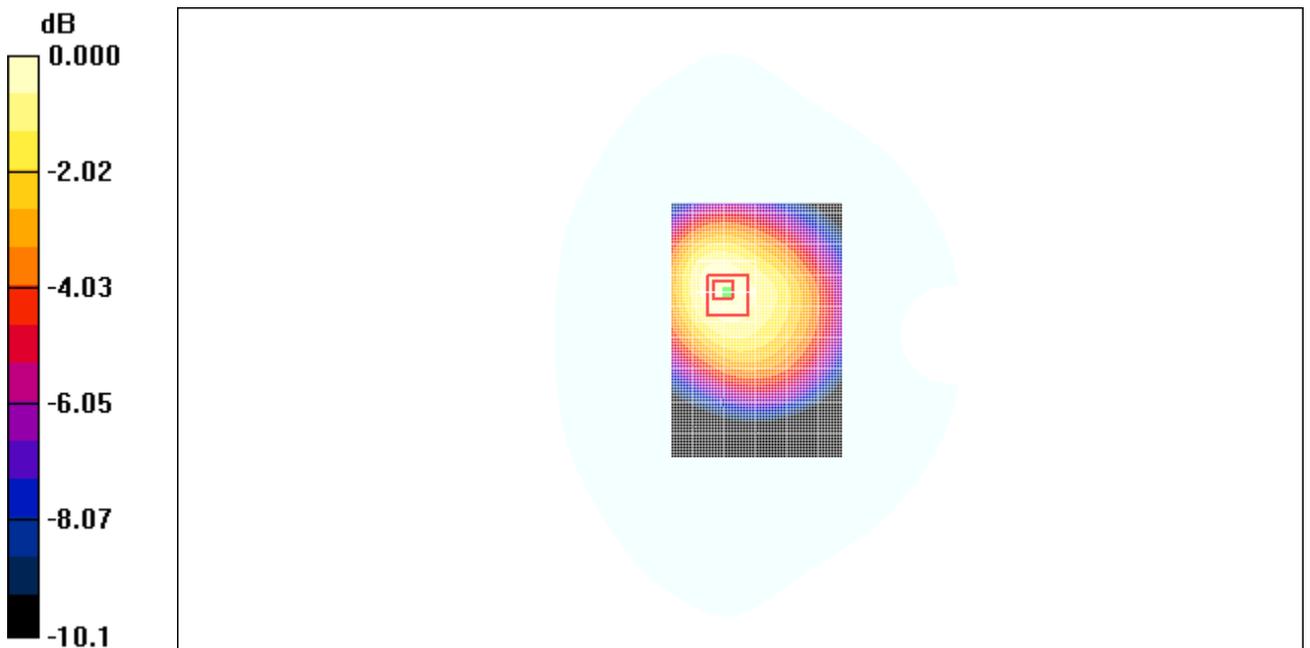
**Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.1 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.444 W/kg

**SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.236 mW/g**

Maximum value of SAR (measured) = 0.349 mW/g



0 dB = 0.349mW/g

**Fig. 15 CDMA 835MHz CH384 – Slide down**

**CDMA 835 Body Toward Phantom Low – Slide down**

Date/Time: 2009-3-25 11:41:34

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

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

**Towards Phantom Low/Area Scan (61x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.313 \text{ mW/g}$

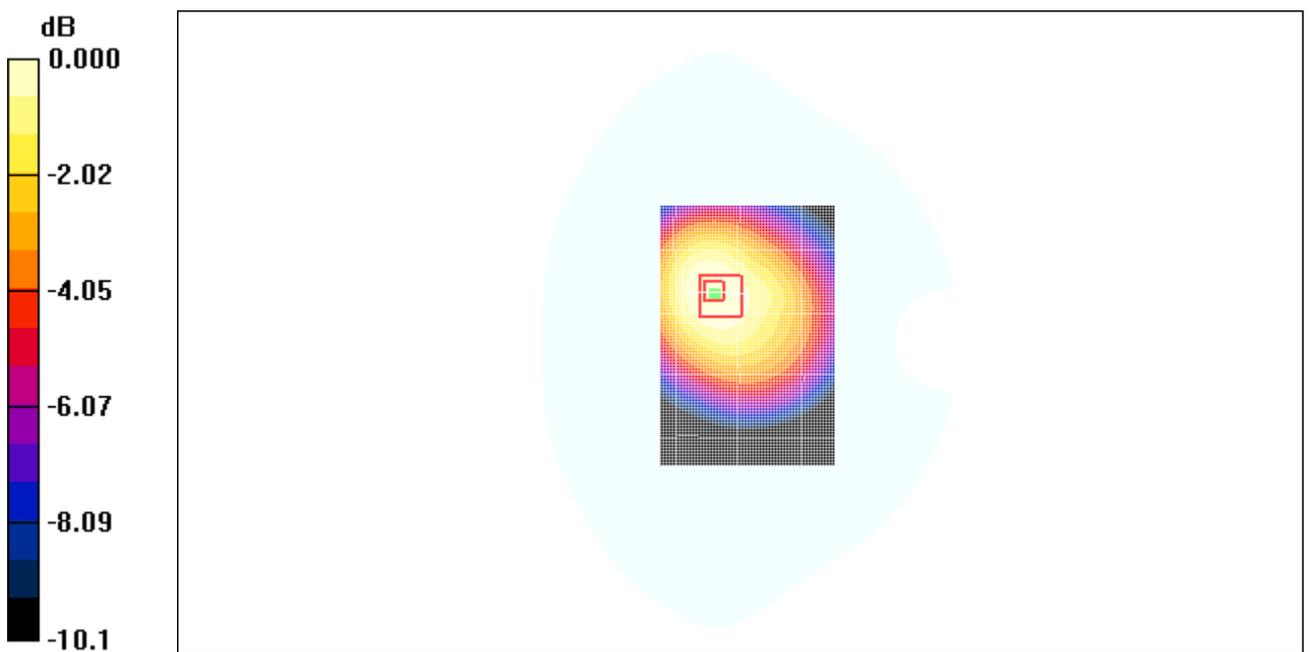
**Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.0 \text{ V/m}$ ; Power Drift =  $-0.126 \text{ dB}$

Peak SAR (extrapolated) =  $0.380 \text{ W/kg}$

**SAR(1 g) =  $0.286 \text{ mW/g}$ ; SAR(10 g) =  $0.207 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.304 \text{ mW/g}$



0 dB =  $0.304\text{mW/g}$

**Fig. 16 CDMA 835MHz CH1013 – Slide down**

**CDMA 835 Body Toward Ground High – Slide down**

Date/Time: 2009-3-25 11:55:36

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.02$  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: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

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

**Towards Ground High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.777 mW/g

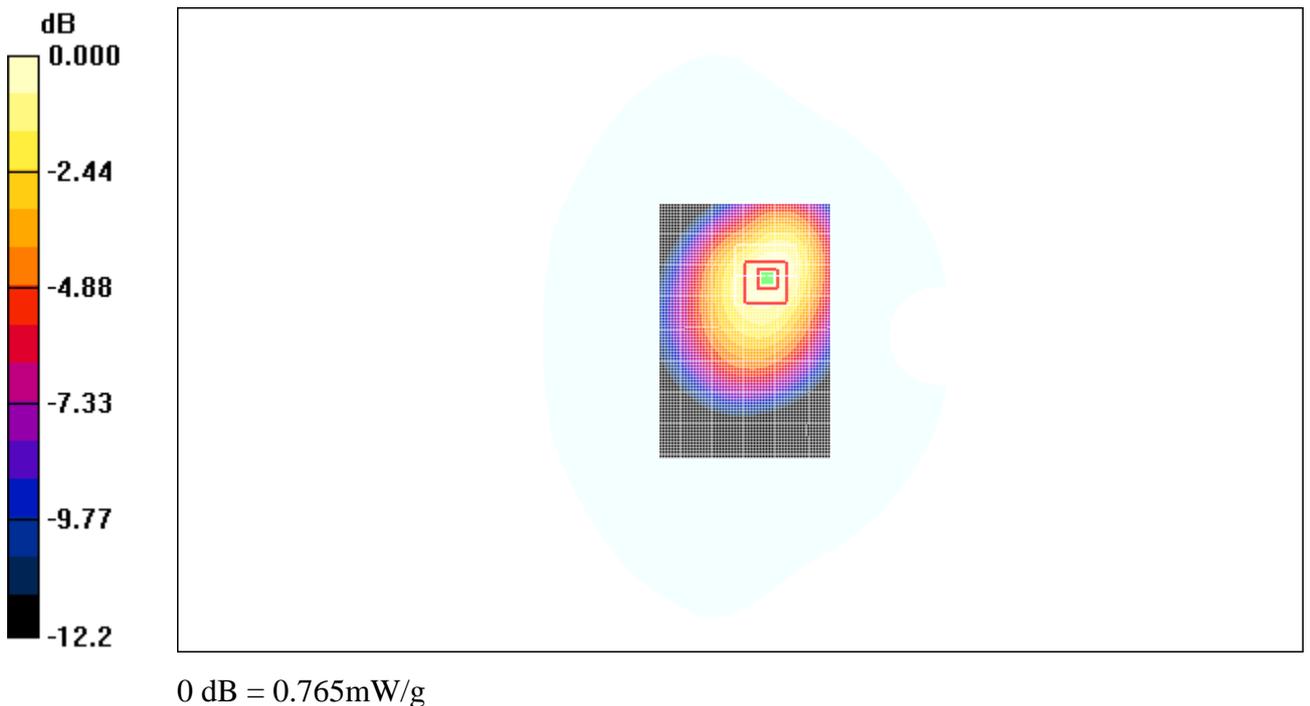
**Towards Ground High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.9 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 1.02 W/kg

**SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.481 mW/g**

Maximum value of SAR (measured) = 0.765 mW/g



**Fig. 17 CDMA 835MHz CH777 – Slide down**

**CDMA 835 Body Toward Ground Middle – Slide down**

Date/Time: 2009-3-25 12:09:21

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 1.01$  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: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

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

**Towards Ground Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.767 mW/g

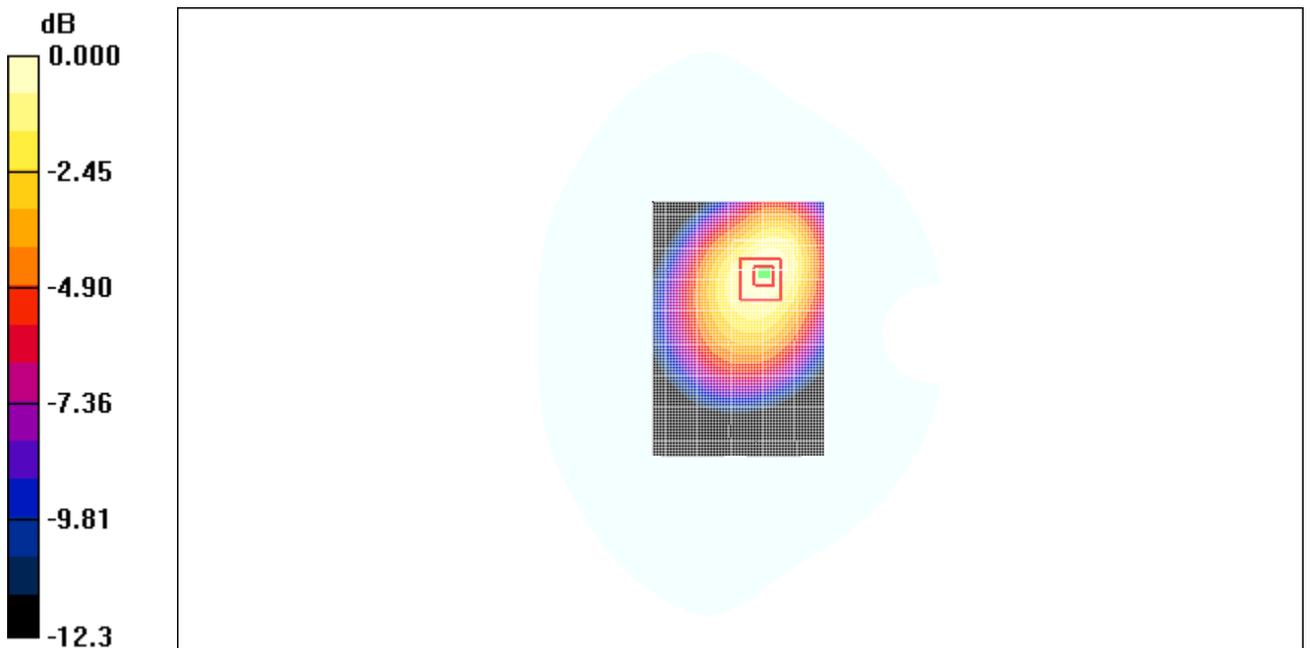
**Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.7 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.717 mW/g; SAR(10 g) = 0.482 mW/g**

Maximum value of SAR (measured) = 0.766 mW/g



0 dB = 0.766mW/g

**Fig. 18 CDMA 835MHz CH384 – Slide down**

**CDMA 835 Body Toward Ground Low – Slide down**

Date/Time: 2009-3-25 12:23:10

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

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

**Towards Ground Low/Area Scan (61x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.701 \text{ mW/g}$

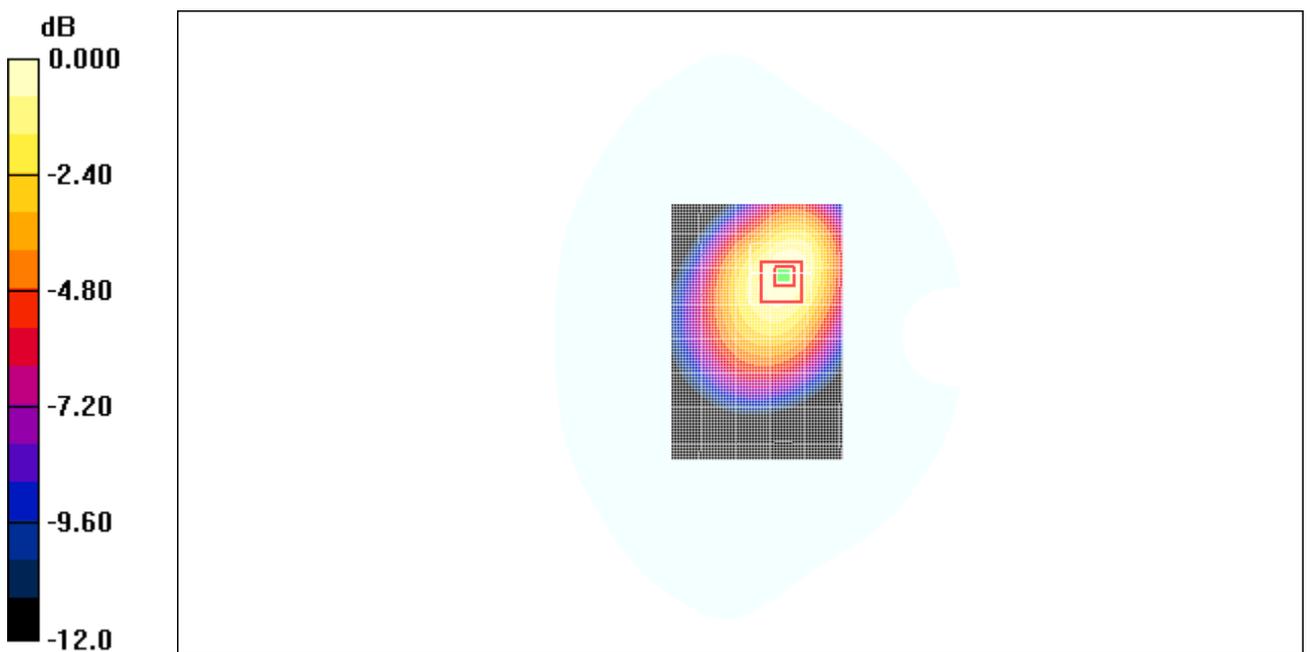
**Towards Ground Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $19.7 \text{ V/m}$ ; Power Drift =  $0.023 \text{ dB}$

Peak SAR (extrapolated) =  $0.945 \text{ W/kg}$

**SAR(1 g) =  $0.652 \text{ mW/g}$ ; SAR(10 g) =  $0.439 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.696 \text{ mW/g}$



0 dB =  $0.696\text{mW/g}$

**Fig. 19 CDMA 835MHz CH1013 – Slide down**

**CDMA 835 Body Toward Phantom High – Slide up**

Date/Time: 2009-3-25 12:37:41

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.02$  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: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

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

**Towards Phantom High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.502 mW/g

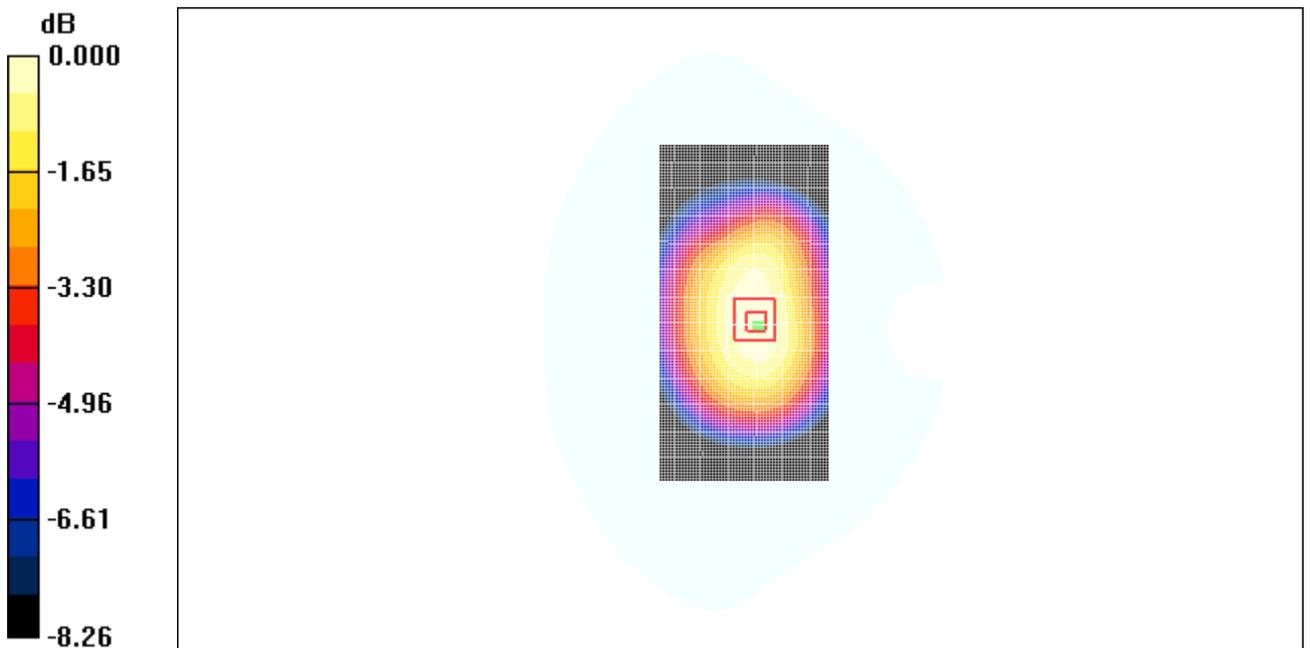
**Towards Phantom High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.5 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.605 W/kg

**SAR(1 g) = 0.484 mW/g; SAR(10 g) = 0.364 mW/g**

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



0 dB = 0.509mW/g

**Fig. 20 CDMA 835MHz CH777 – Slide up**

**CDMA 835 Body Toward Phantom Middle – Slide up**

Date/Time: 2009-3-25 12:51:08

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 1.01$  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: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

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

**Towards Phantom Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.441 mW/g

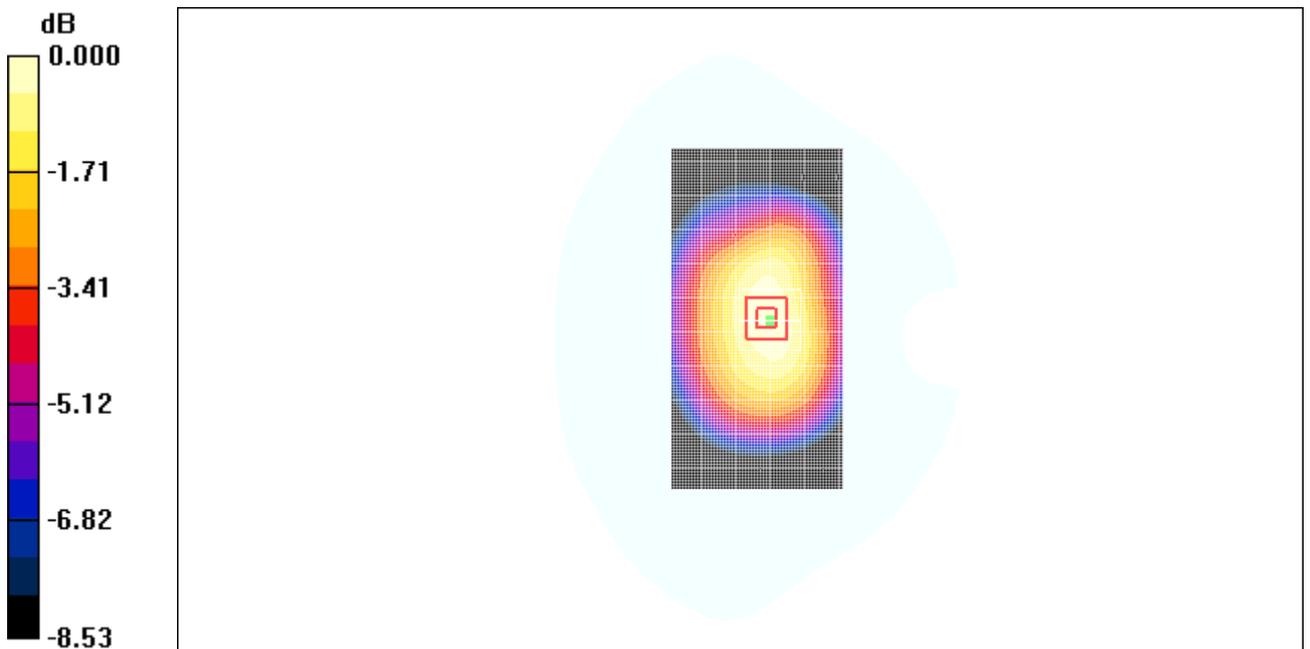
**Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.7 V/m; Power Drift = 0.102 dB

Peak SAR (extrapolated) = 0.536 W/kg

**SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.320 mW/g**

Maximum value of SAR (measured) = 0.457 mW/g



0 dB = 0.457mW/g

**Fig. 21 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Body Toward Phantom Low – Slide up**

Date/Time: 2009-3-25 13:06:01

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

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

**Towards Phantom Low/Area Scan (61x121x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.409 \text{ mW/g}$

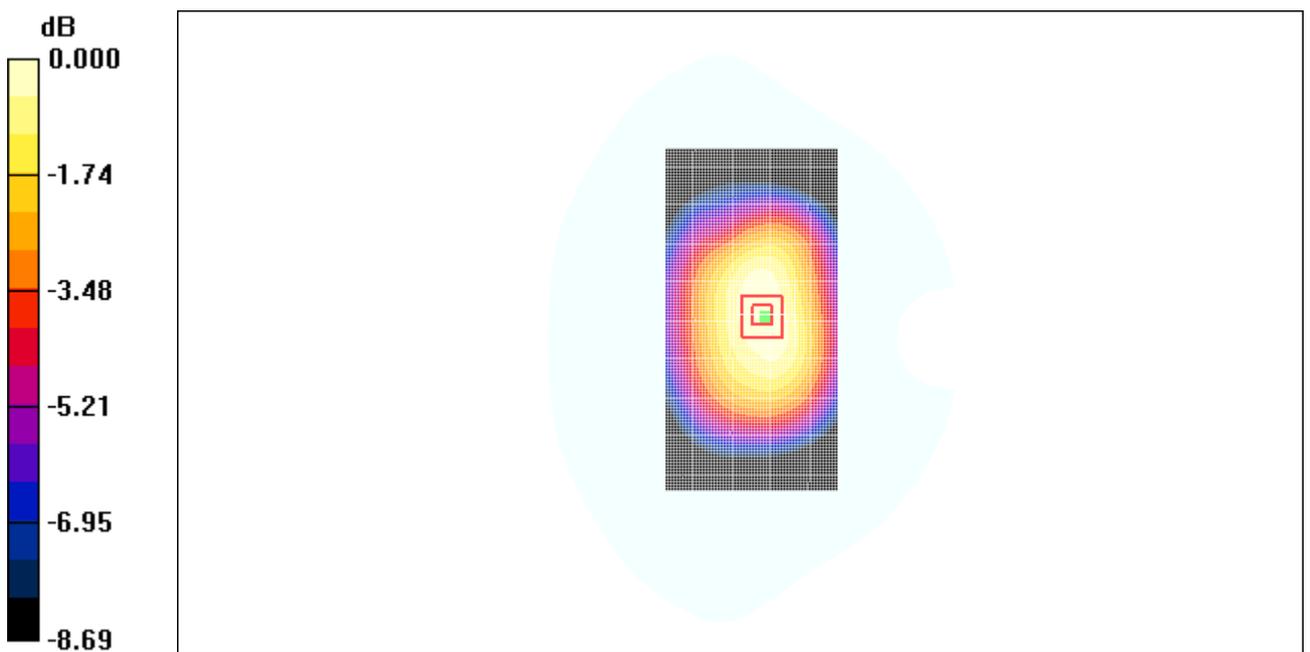
**Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $19.9 \text{ V/m}$ ; Power Drift =  $-0.058 \text{ dB}$

Peak SAR (extrapolated) =  $0.485 \text{ W/kg}$

**SAR(1 g) =  $0.388 \text{ mW/g}$ ; SAR(10 g) =  $0.291 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.410 \text{ mW/g}$



0 dB =  $0.410\text{mW/g}$

**Fig. 22 CDMA 835MHz CH1013 – Slide up**

**CDMA 835 Body Toward Ground High – Slide up**

Date/Time: 2009-3-25 13:20:35

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 848.31$  MHz;  $\sigma = 1.02$  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: CDMA 1X-new Frequency: 848.31 MHz Duty Cycle: 1:1

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

**Towards Ground High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.824 mW/g

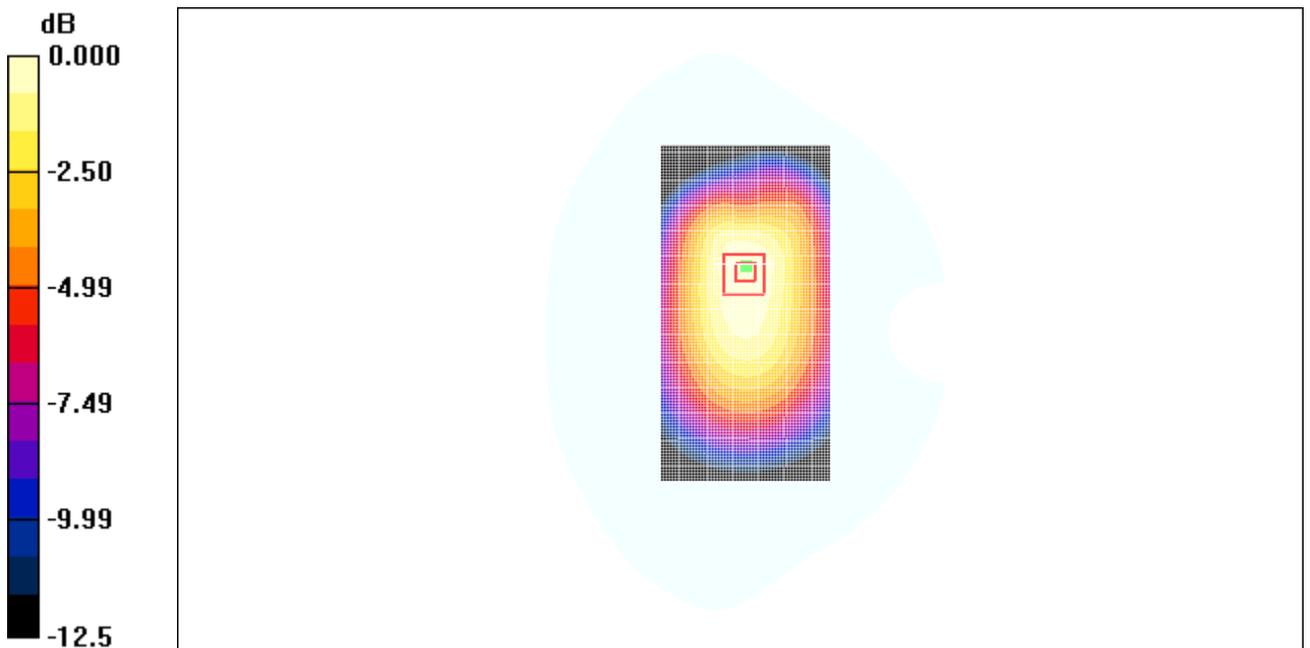
**Towards Ground High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.1 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 1.04 W/kg

**SAR(1 g) = 0.778 mW/g; SAR(10 g) = 0.562 mW/g**

Maximum value of SAR (measured) = 0.822 mW/g



0 dB = 0.822mW/g

**Fig. 23 CDMA 835MHz CH777 – Slide up**

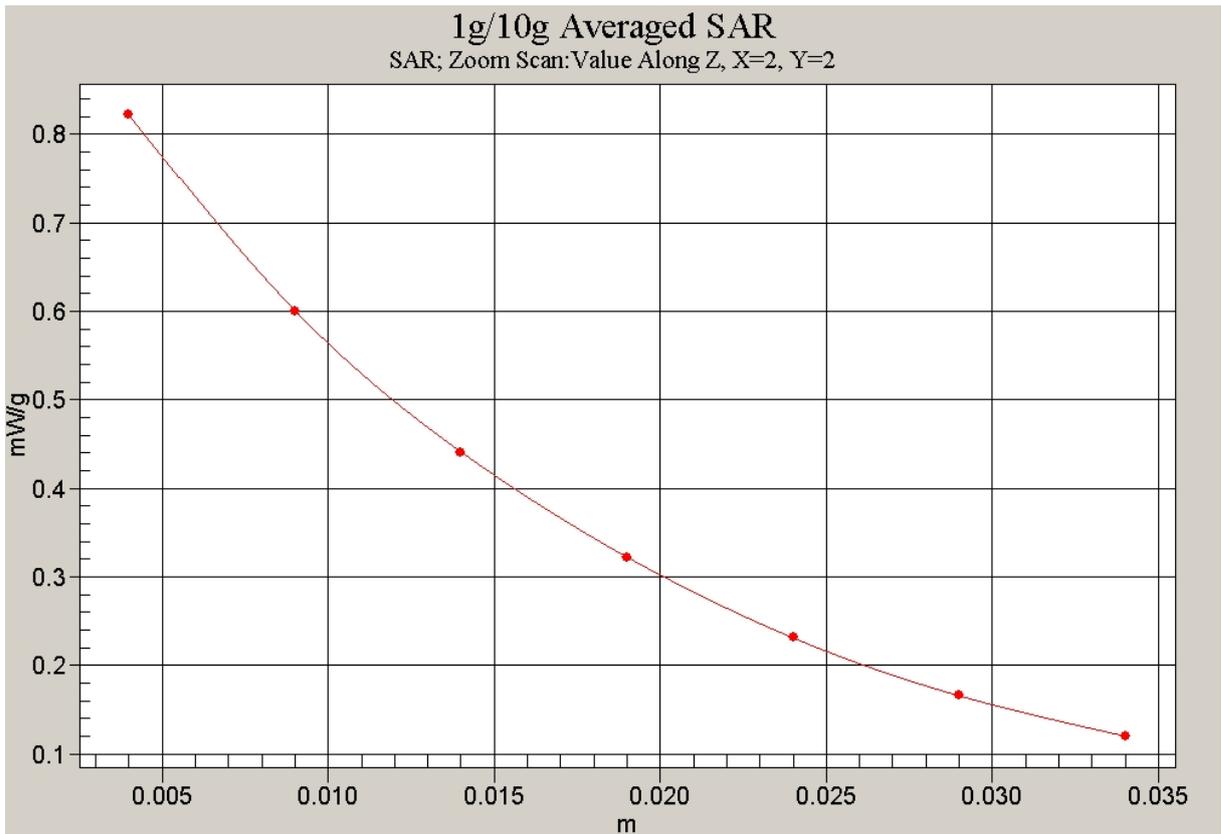


Fig. 24 Z-Scan at power reference point (CDMA 835MHz, Body, Towards Ground, CH777)

**CDMA 835 Body Toward Ground Middle – Slide up**

Date/Time: 2009-3-25 13:34:17

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used (interpolated):  $f = 836.52$  MHz;  $\sigma = 1.01$  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: CDMA 1X-new Frequency: 836.52 MHz Duty Cycle: 1:1

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

**Towards Ground Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.783 mW/g

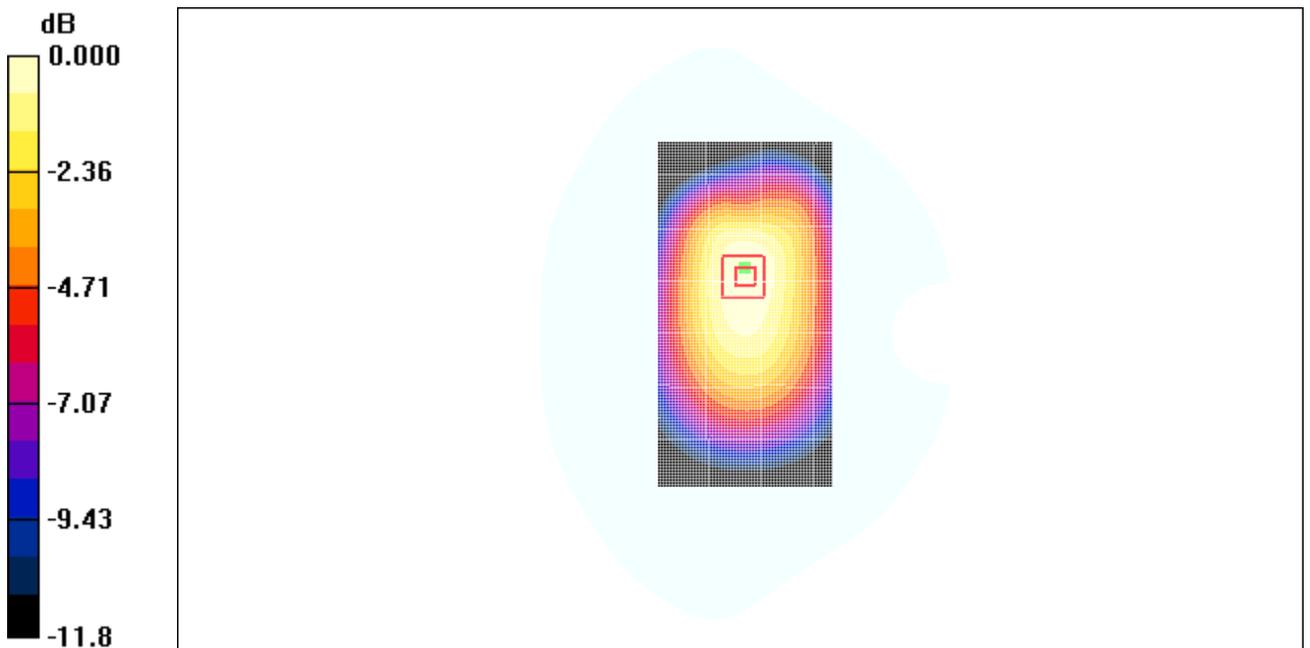
**Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.1 V/m; Power Drift = 0.110 dB

Peak SAR (extrapolated) = 0.975 W/kg

**SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.543 mW/g**

Maximum value of SAR (measured) = 0.787 mW/g



0 dB = 0.787mW/g

**Fig. 25 CDMA 835MHz CH384 – Slide up**

**CDMA 835 Body Toward Ground Low – Slide up**

Date/Time: 2009-3-25 13:48:43

Electronics: DAE4 Sn771

Medium: Body 835

Medium parameters used:  $f = 825 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CDMA 1X-new Frequency:  $824.7 \text{ MHz}$  Duty Cycle: 1:1

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

**Towards Ground Low/Area Scan (61x121x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (interpolated) =  $0.769 \text{ mW/g}$

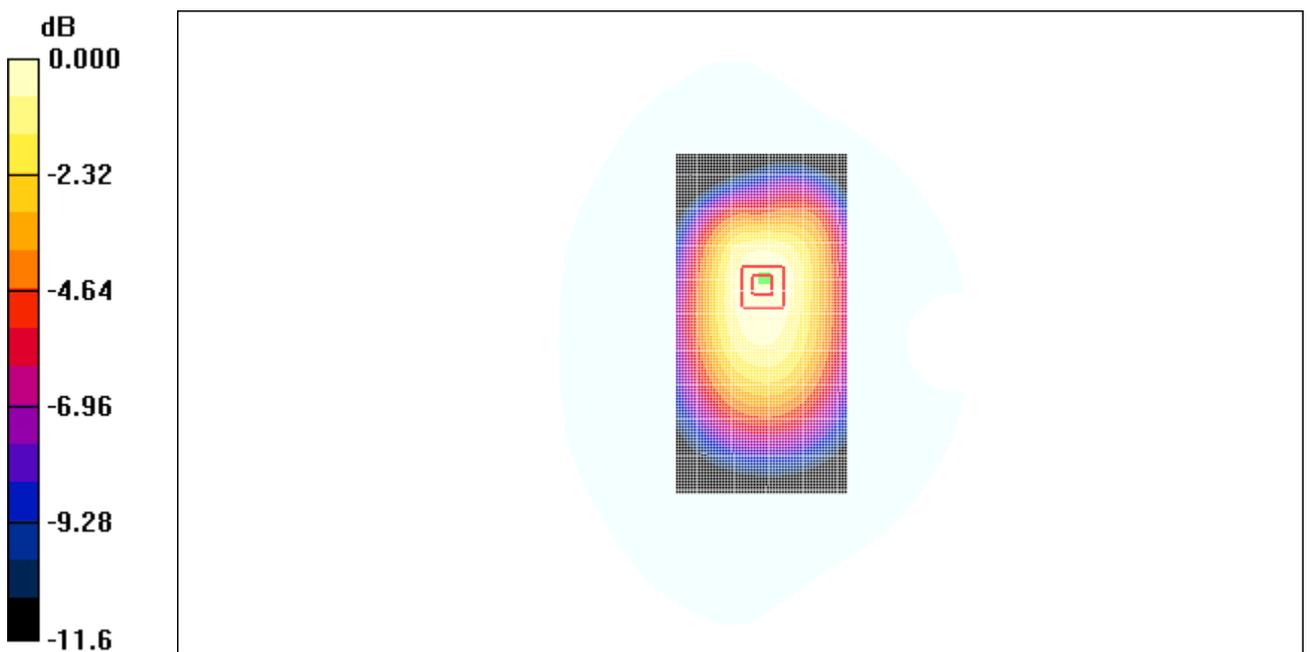
**Towards Ground Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $25.9 \text{ V/m}$ ; Power Drift =  $-0.020 \text{ dB}$

Peak SAR (extrapolated) =  $0.936 \text{ W/kg}$

**SAR(1 g) =  $0.719 \text{ mW/g}$ ; SAR(10 g) =  $0.526 \text{ mW/g}$**

Maximum value of SAR (measured) =  $0.754 \text{ mW/g}$



0 dB =  $0.754\text{mW/g}$

**Fig. 26 CDMA 835MHz CH1013 – Slide up**

**CDMA 1900 Left Cheek Middle – Slide down**

Date/Time: 2009-3-26 8:04:15

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.721 mW/g

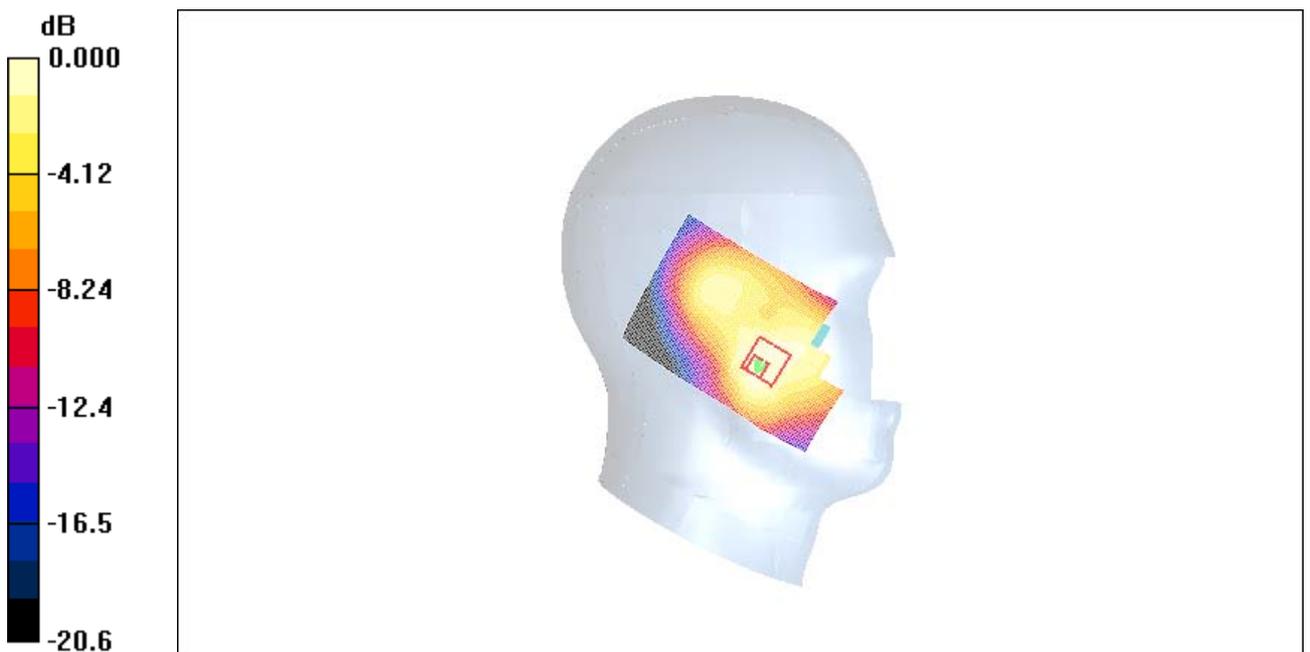
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.8 V/m; Power Drift = 0.137 dB

Peak SAR (extrapolated) = 1.02 W/kg

**SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.405 mW/g**

Maximum value of SAR (measured) = 0.704 mW/g



0 dB = 0.704mW/g

**Fig. 27 CDMA 1900 MHz CH600 – Slide down**

**CDMA 1900 Left Tilt Middle – Slide down**

Date/Time: 2009-3-26 8:18:19

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.702 mW/g

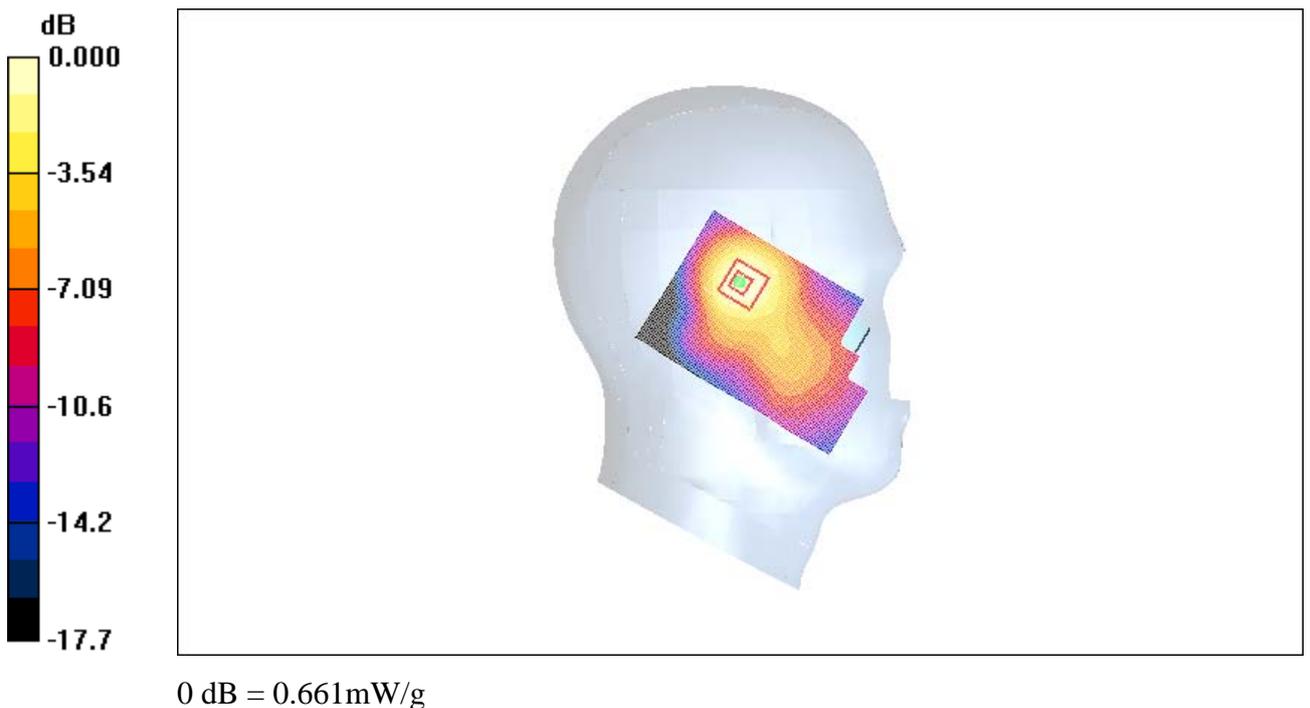
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.5 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.923 W/kg

**SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.363 mW/g**

Maximum value of SAR (measured) = 0.661 mW/g



**Fig. 28 CDMA 1900 MHz CH600 – Slide down**

**CDMA 1900 Right Cheek Middle – Slide down**

Date/Time: 2009-3-26 8:32:09

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.694 mW/g

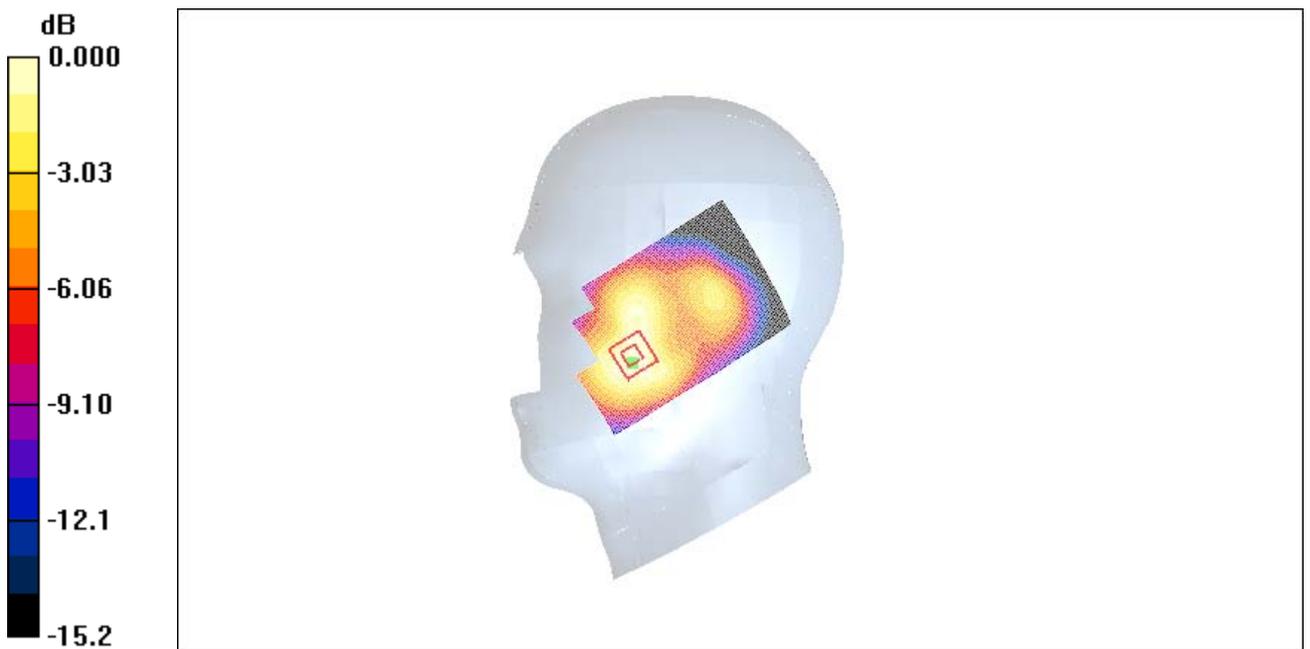
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.9 V/m; Power Drift = -0.183 dB

Peak SAR (extrapolated) = 0.949 W/kg

**SAR(1 g) = 0.653 mW/g; SAR(10 g) = 0.406 mW/g**

Maximum value of SAR (measured) = 0.700 mW/g



0 dB = 0.700mW/g

**Fig. 29 CDMA 1900 MHz CH600 – Slide down**

**CDMA 1900 Right Tilt Middle – Slide down**

Date/Time: 2009-3-26 8:46:21

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=15mm, dy=15mm

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

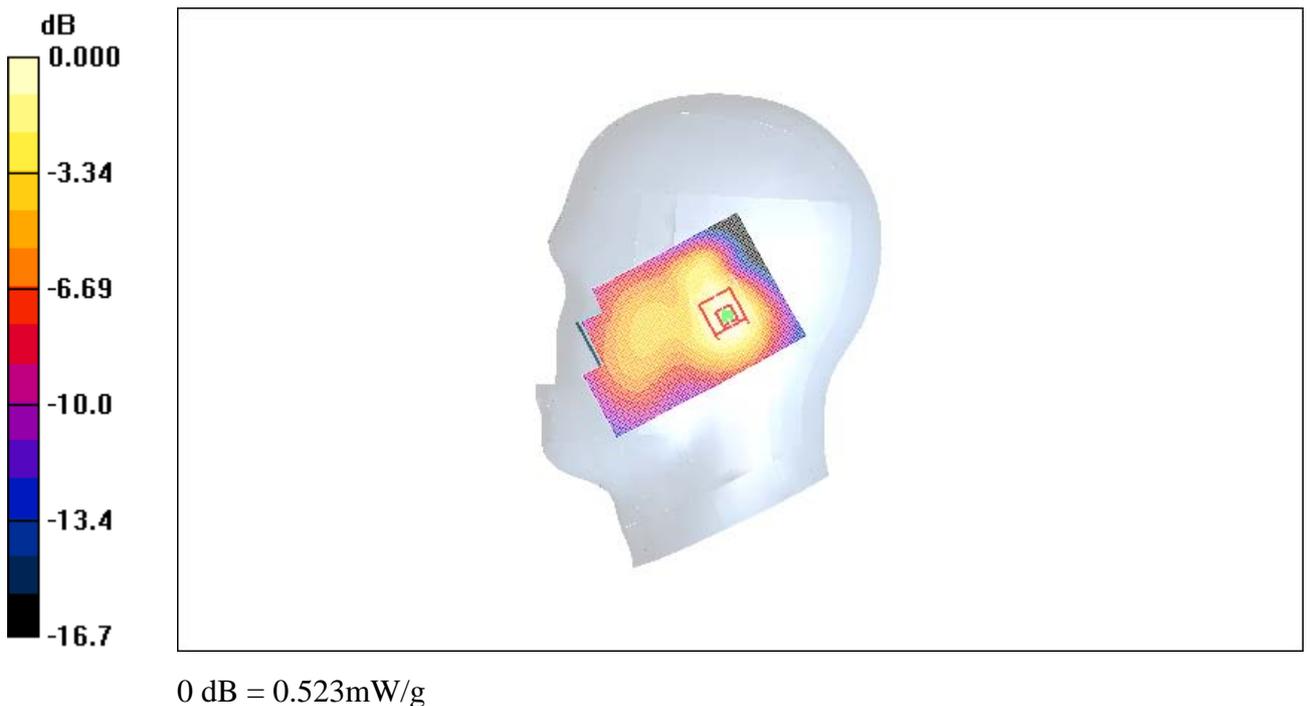
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.7 V/m; Power Drift = 0.092 dB

Peak SAR (extrapolated) = 0.727 W/kg

**SAR(1 g) = 0.484 mW/g; SAR(10 g) = 0.303 mW/g**

Maximum value of SAR (measured) = 0.523 mW/g



**Fig. 30 CDMA 1900 MHz CH600 – Slide down**

**CDMA 1900 Right Cheek High – Slide down**

Date/Time: 2009-3-26 9:00:48

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.560 mW/g

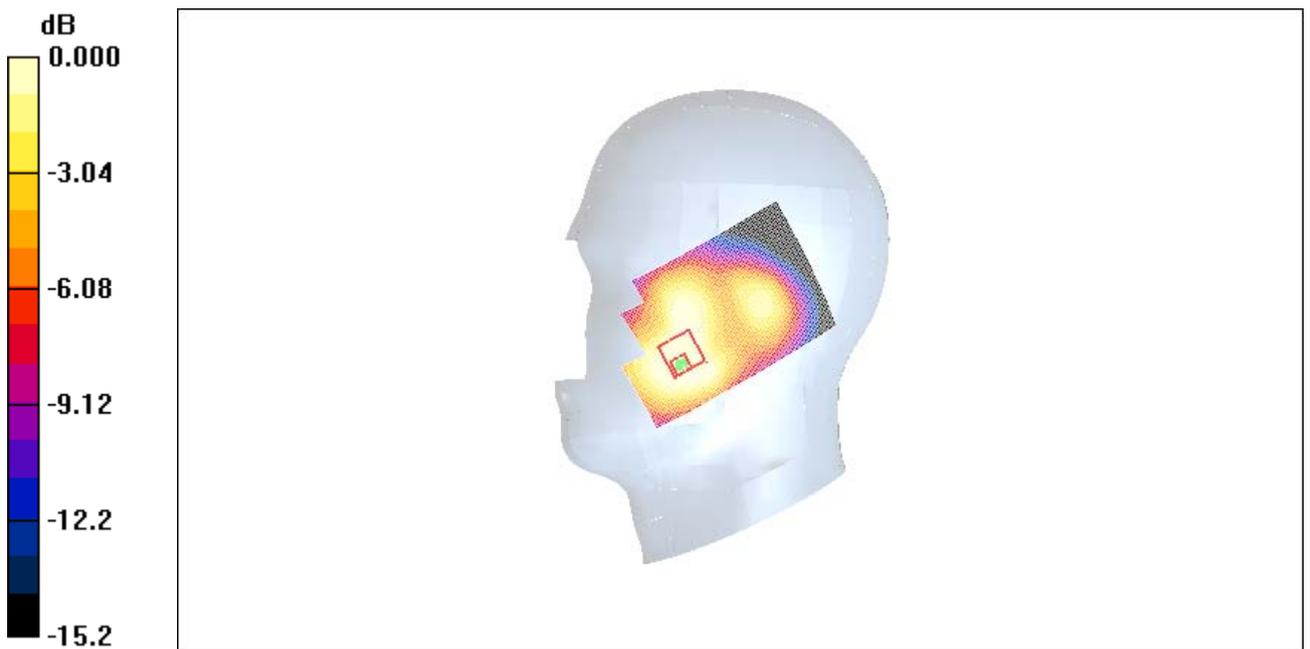
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.689 W/kg

**SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.267 mW/g**

Maximum value of SAR (measured) = 0.479 mW/g



0 dB = 0.479mW/g

**Fig. 31 CDMA 1900 MHz CH1175 – Slide down**

**CDMA 1900 Right Cheek Low – Slide down**

Date/Time: 2009-3-26 9:14:32

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

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

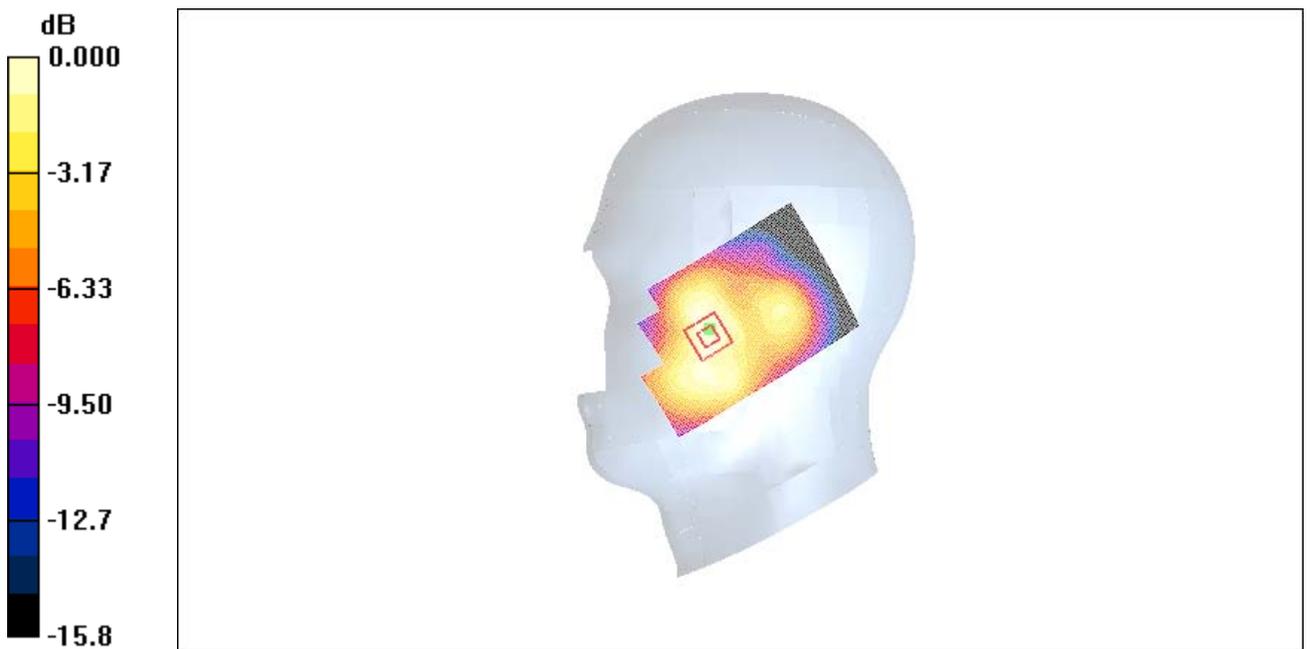
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.6 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 0.775 W/kg

**SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.344 mW/g**

Maximum value of SAR (measured) = 0.583 mW/g



0 dB = 0.583mW/g

**Fig. 32 CDMA 1900 MHz CH25 – Slide down**

**CDMA 1900 Left Cheek High – Slide up**

Date/Time: 2009-3-26 9:28:50

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek High/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.792 mW/g

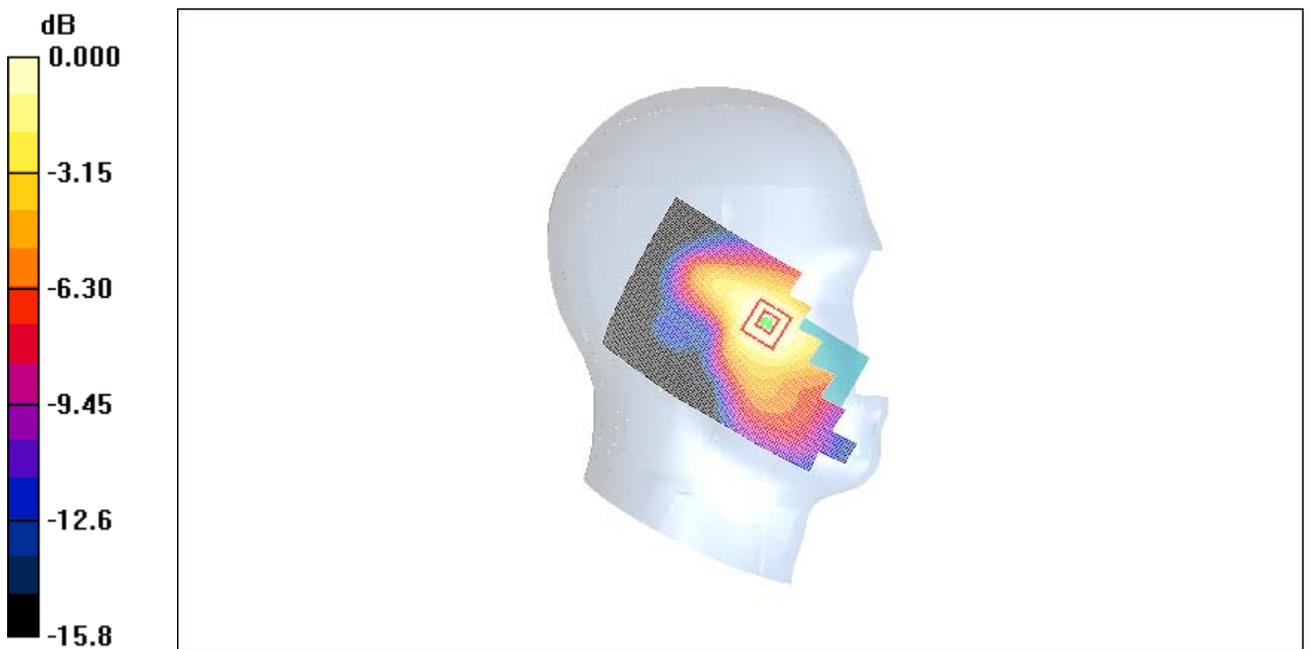
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.62 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 1.04 W/kg

**SAR(1 g) = 0.688 mW/g; SAR(10 g) = 0.429 mW/g**

Maximum value of SAR (measured) = 0.741 mW/g



0 dB = 0.741mW/g

**Fig. 33 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 Left Cheek Middle – Slide up**

Date/Time: 2009-3-26 9:42:18

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.872 mW/g

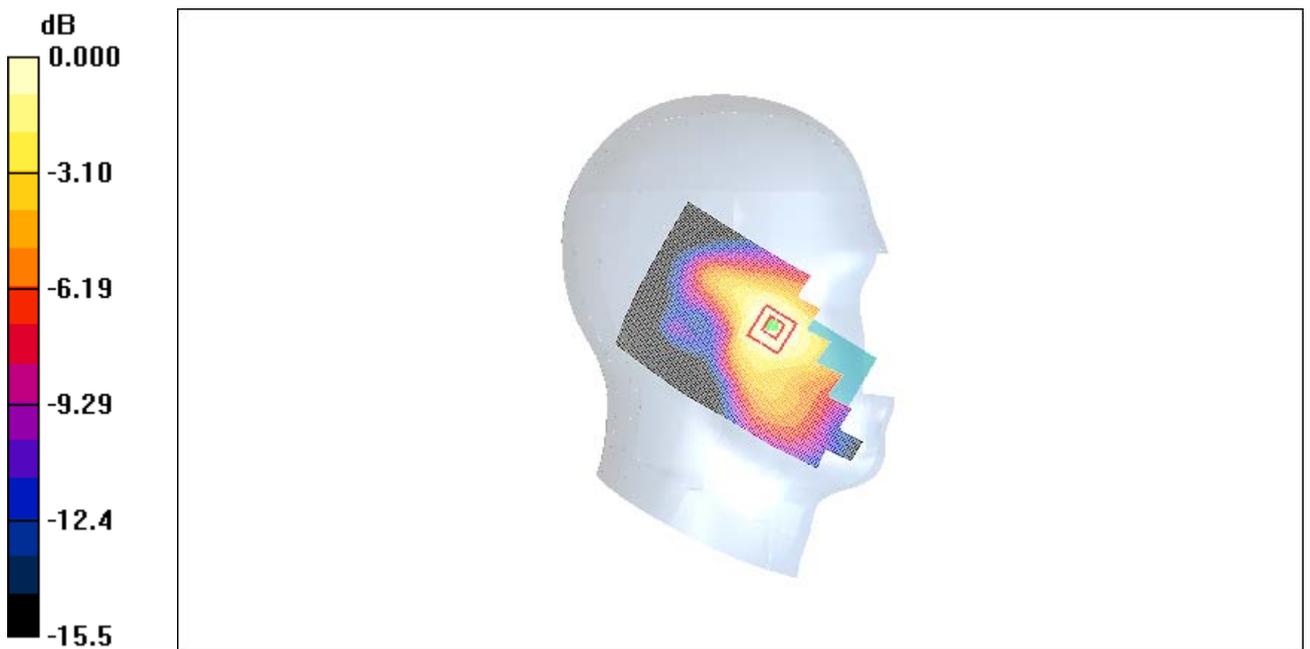
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.46 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 1.15 W/kg

**SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.504 mW/g**

Maximum value of SAR (measured) = 0.848 mW/g



0 dB = 0.848mW/g

**Fig. 34 CDMA 1900 MHz CH600 – Slide up**

**CDMA 1900 Left Cheek Low – Slide up**

Date/Time: 2009-3-26 9:56:39

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Low/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.709 mW/g

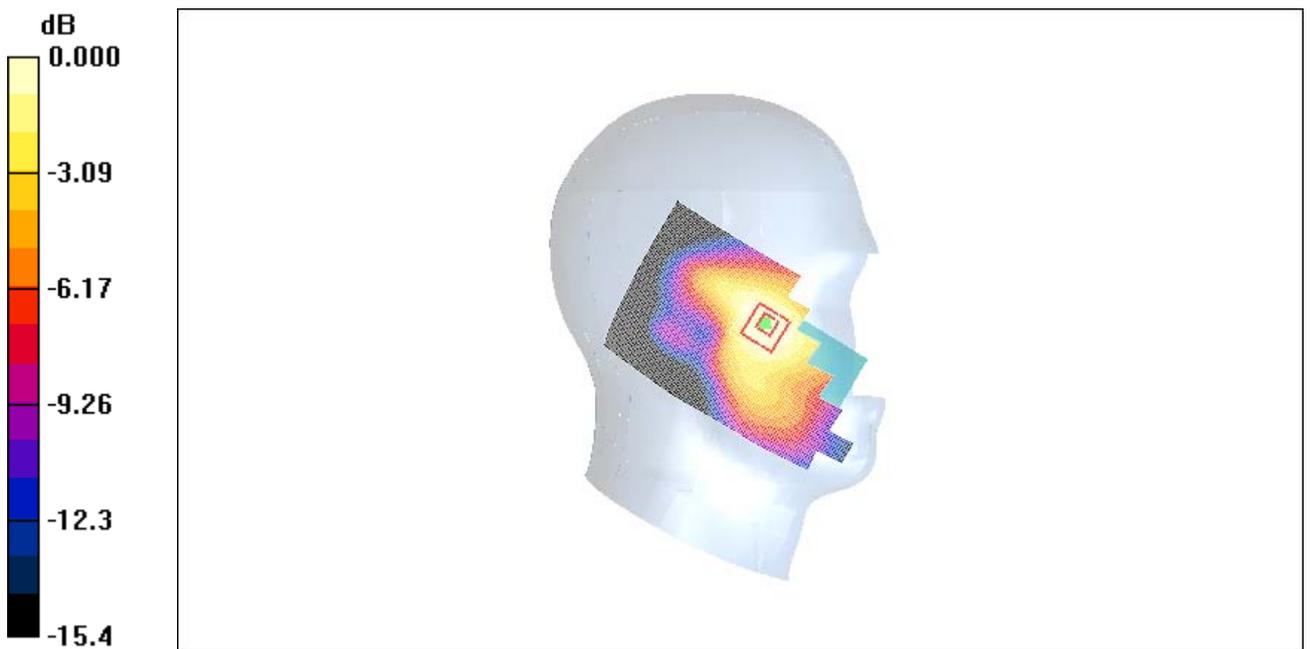
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.73 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.943 W/kg

**SAR(1 g) = 0.642 mW/g; SAR(10 g) = 0.412 mW/g**

Maximum value of SAR (measured) = 0.689 mW/g



0 dB = 0.689mW/g

**Fig. 35 CDMA 1900 MHz CH25 – Slide up**

**CDMA 1900 Left Tilt High – Slide up**

Date/Time: 2009-3-26 10:10:41

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt High/Area Scan (71x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.502 mW/g

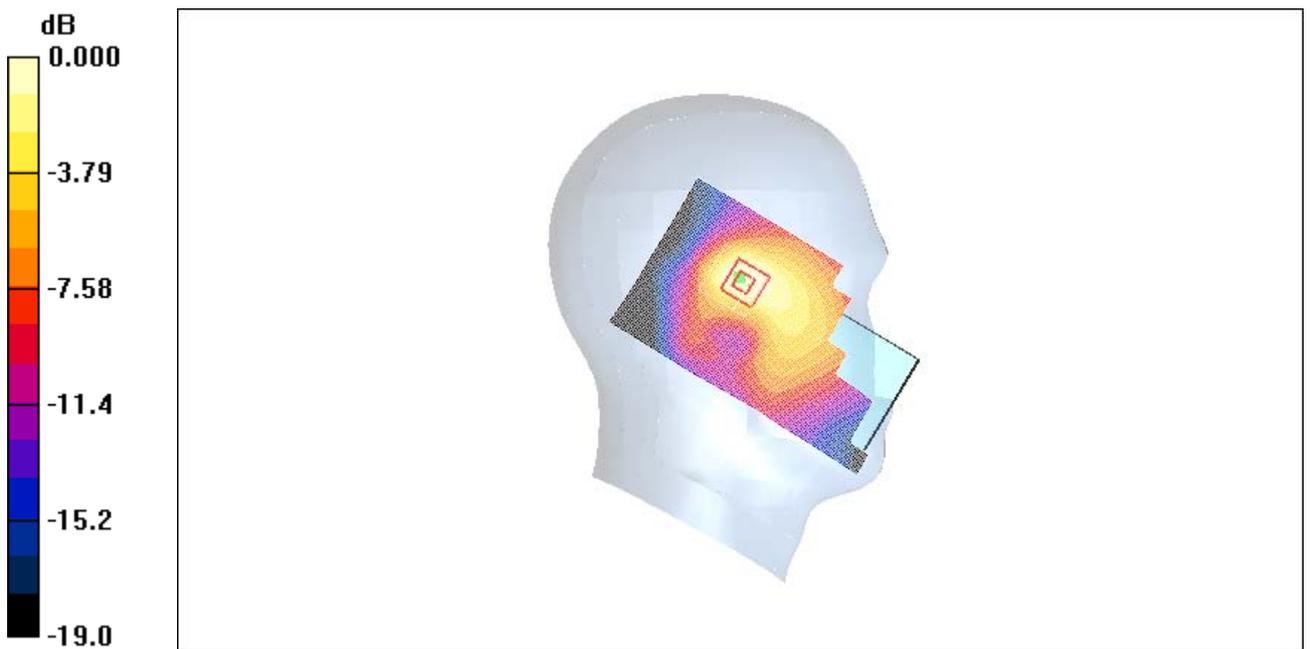
**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.98 V/m; Power Drift = 0.180 dB

Peak SAR (extrapolated) = 0.686 W/kg

**SAR(1 g) = 0.421 mW/g; SAR(10 g) = 0.240 mW/g**

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



0 dB = 0.459mW/g

**Fig. 36 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 Left Tilt Middle – Slide up**

Date/Time: 2009-3-26 10:24:52

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.506 mW/g

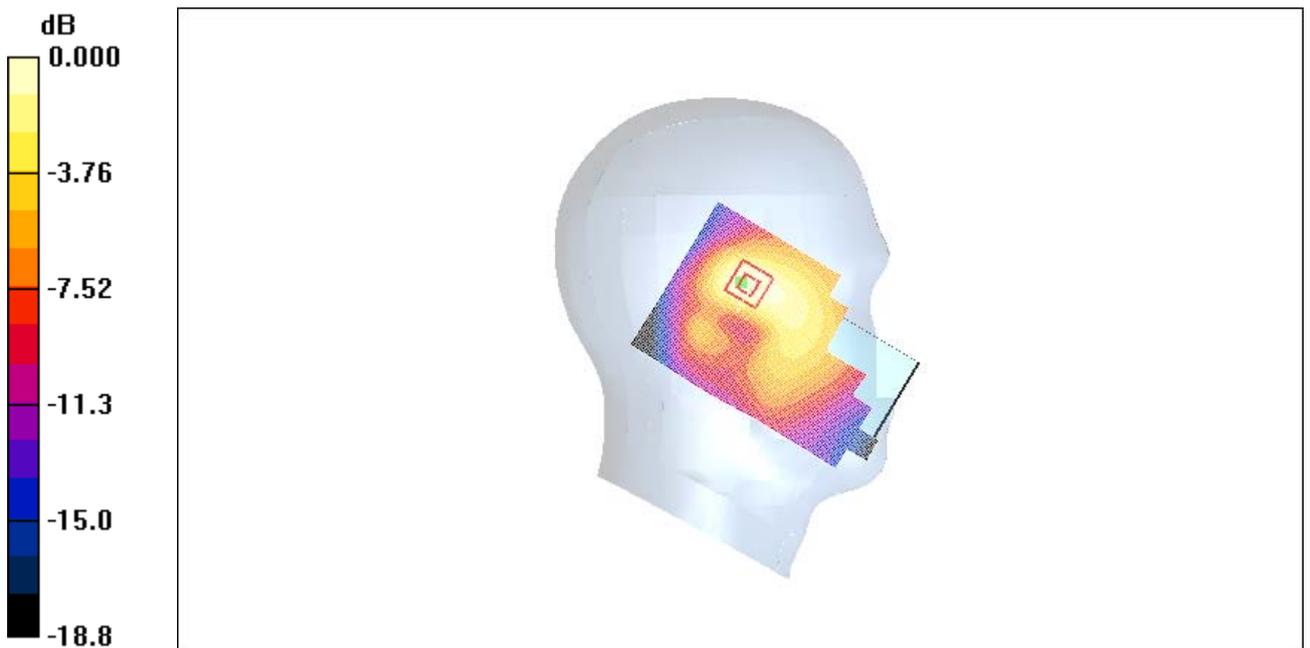
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.33 V/m; Power Drift = 0.103 dB

Peak SAR (extrapolated) = 0.708 W/kg

**SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.250 mW/g**

Maximum value of SAR (measured) = 0.465 mW/g



0 dB = 0.465mW/g

**Fig. 37 CDMA 1900 MHz CH600 – Slide up**

**CDMA 1900 Left Tilt Low – Slide up**

Date/Time: 2009-3-26 10:38:22

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Low/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.399 mW/g

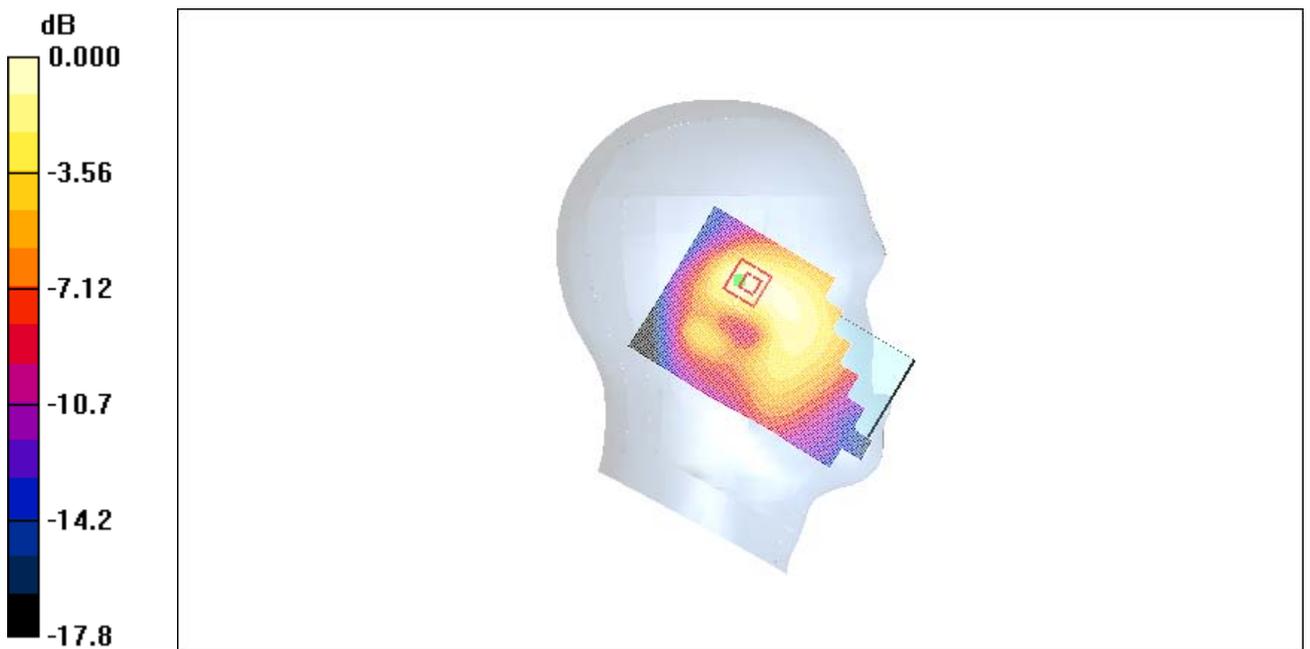
**Tilt Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.31 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.576 W/kg

**SAR(1 g) = 0.359 mW/g; SAR(10 g) = 0.208 mW/g**

Maximum value of SAR (measured) = 0.395 mW/g



0 dB = 0.395mW/g

**Fig. 38 CDMA 1900 MHz CH25 – Slide up**

**CDMA 1900 Right Cheek High – Slide up**

Date/Time: 2009-3-26 10:52:35

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek High/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.17 mW/g

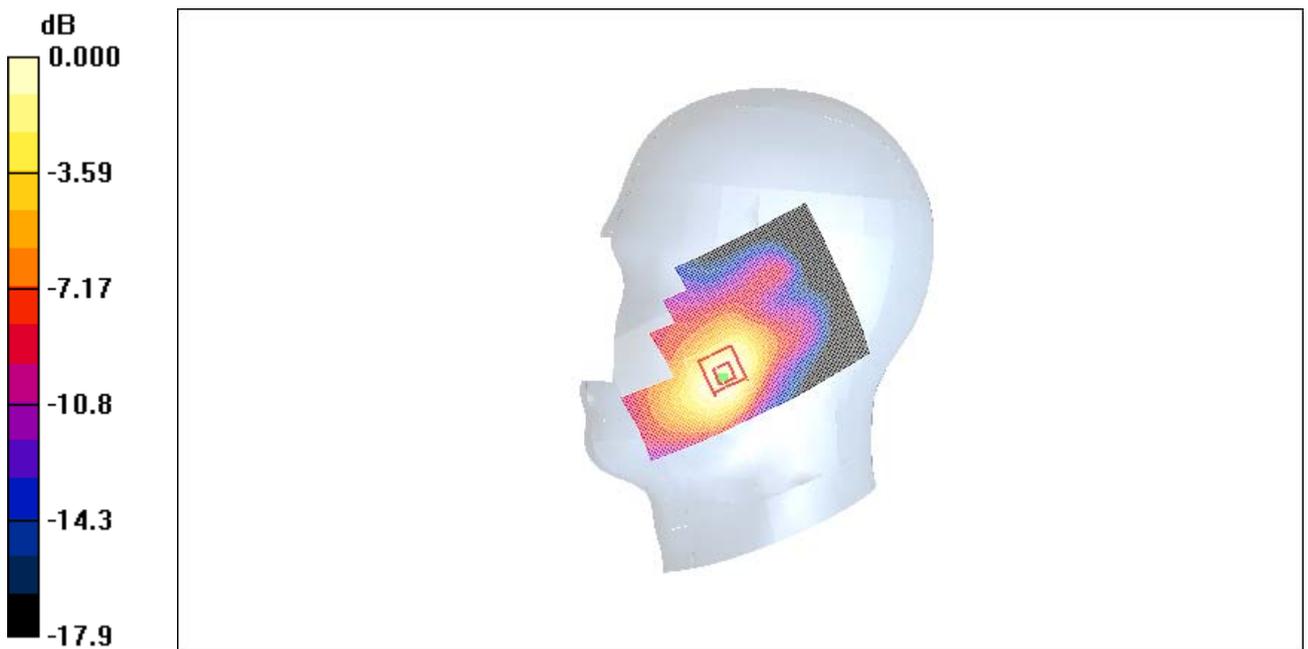
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.41 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.51 W/kg

**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.624 mW/g**

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



0 dB = 1.10mW/g

**Fig. 39 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 Right Cheek Middle – Slide up**

Date/Time: 2009-3-26 11:06:21

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.31 mW/g

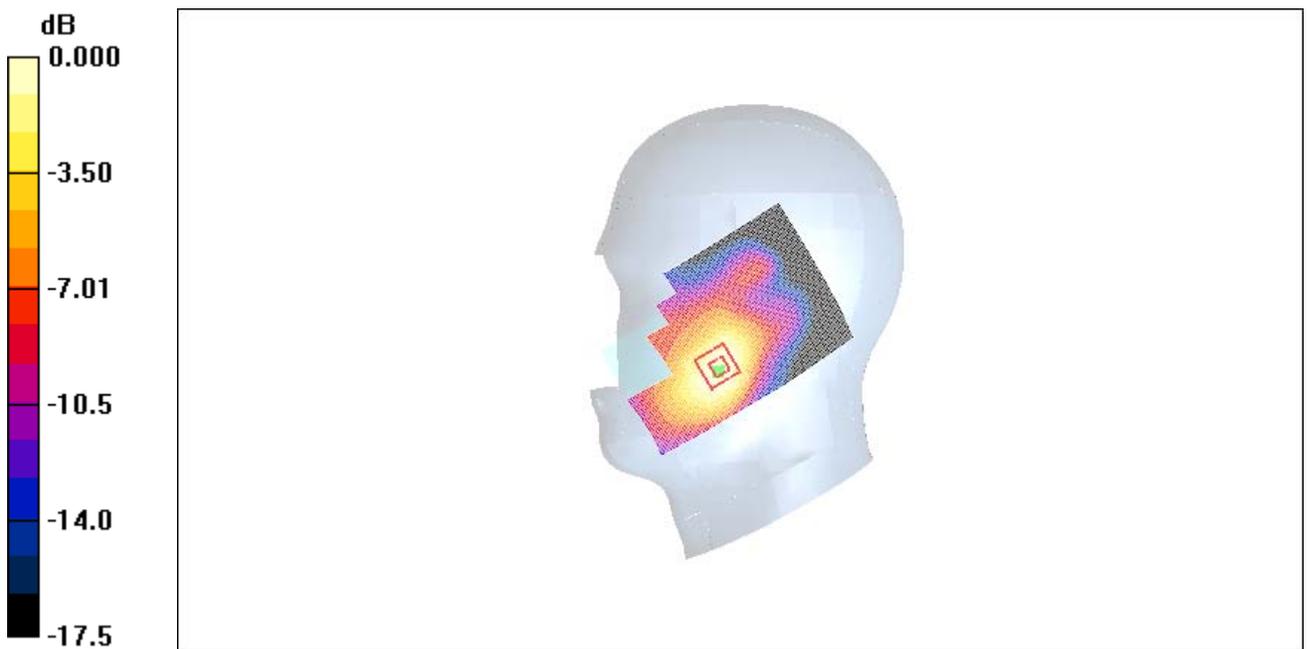
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.85 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 1.71 W/kg

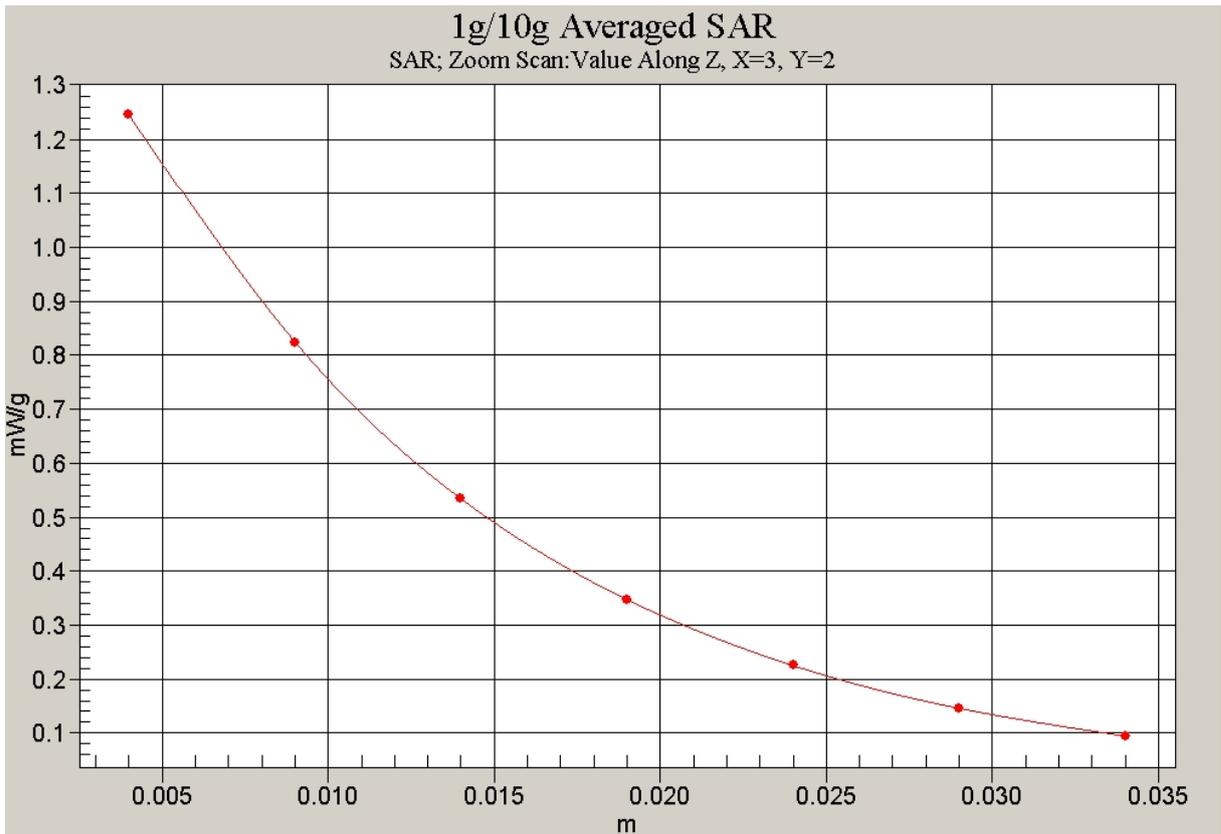
**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.715 mW/g**

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



0 dB = 1.25mW/g

**Fig. 40 CDMA 1900 MHz CH600 – Slide up**



**Fig. 41 Z-Scan at power reference point (CDMA 1900MHz, CH600)**

**CDMA 1900 Right Cheek Low – Slide up**

Date/Time: 2009-3-26 11:20:46

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Low/Area Scan (71x111x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.16 mW/g

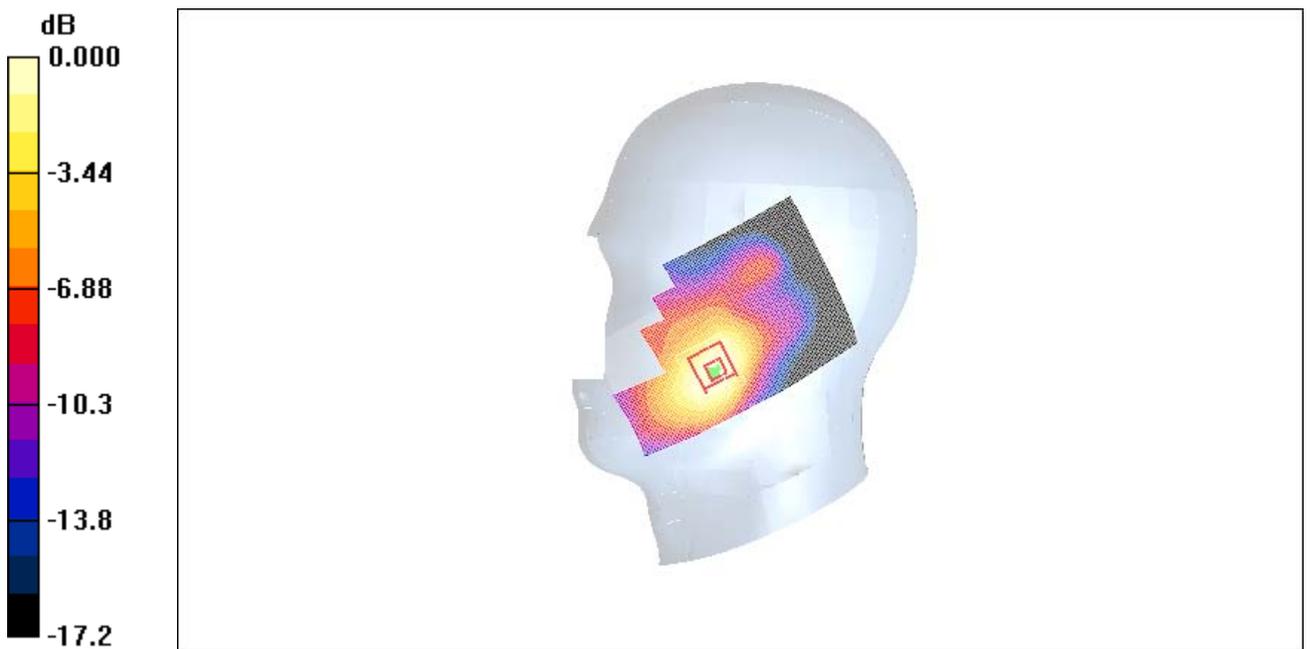
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.81 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.652 mW/g**

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



0 dB = 1.12mW/g

**Fig. 42 CDMA 1900 MHz CH25 – Slide up**

**CDMA 1900 Right Tilt High – Slide up**

Date/Time: 2009-3-26 11:34:02

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt High/Area Scan (71x121x1):** Measurement grid: dx=10mm, dy=10mm

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

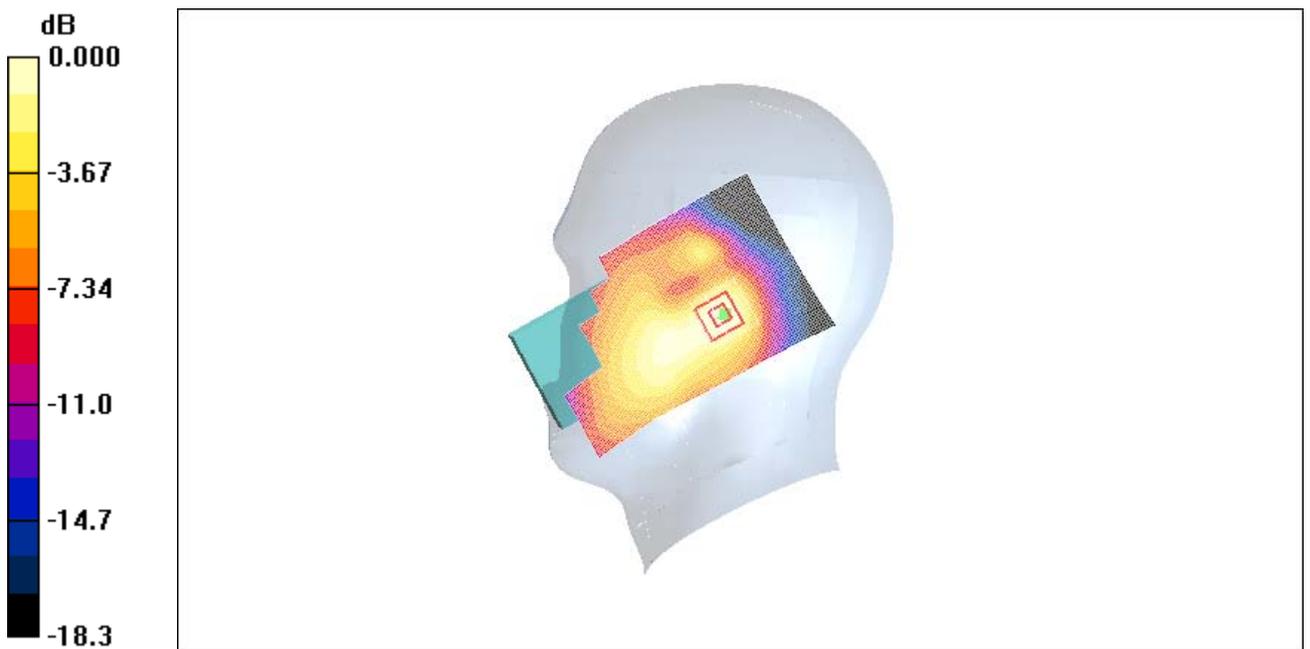
**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.84 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.445 W/kg

**SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.168 mW/g**

Maximum value of SAR (measured) = 0.310 mW/g



0 dB = 0.310mW/g

**Fig. 43 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 Right Tilt Middle – Slide up**

Date/Time: 2009-3-26 11:48:11

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (71x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.363 mW/g

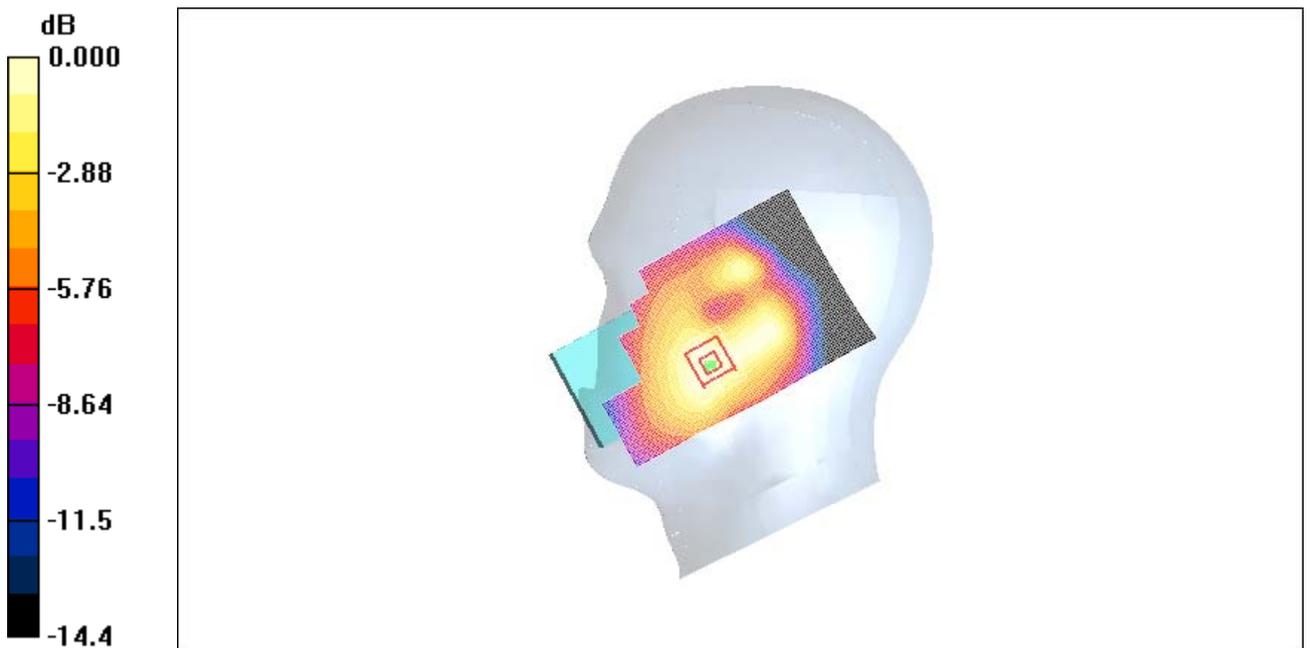
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.19 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 0.474 W/kg

**SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.217 mW/g**

Maximum value of SAR (measured) = 0.359 mW/g



0 dB = 0.359mW/g

**Fig. 44 CDMA 1900 MHz CH600 – Slide up**

**CDMA 1900 Right Tilt Low – Slide up**

Date/Time: 2009-3-26 12:02:36

Electronics: DAE4 Sn771

Medium: Head 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Low/Area Scan (71x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.365 mW/g

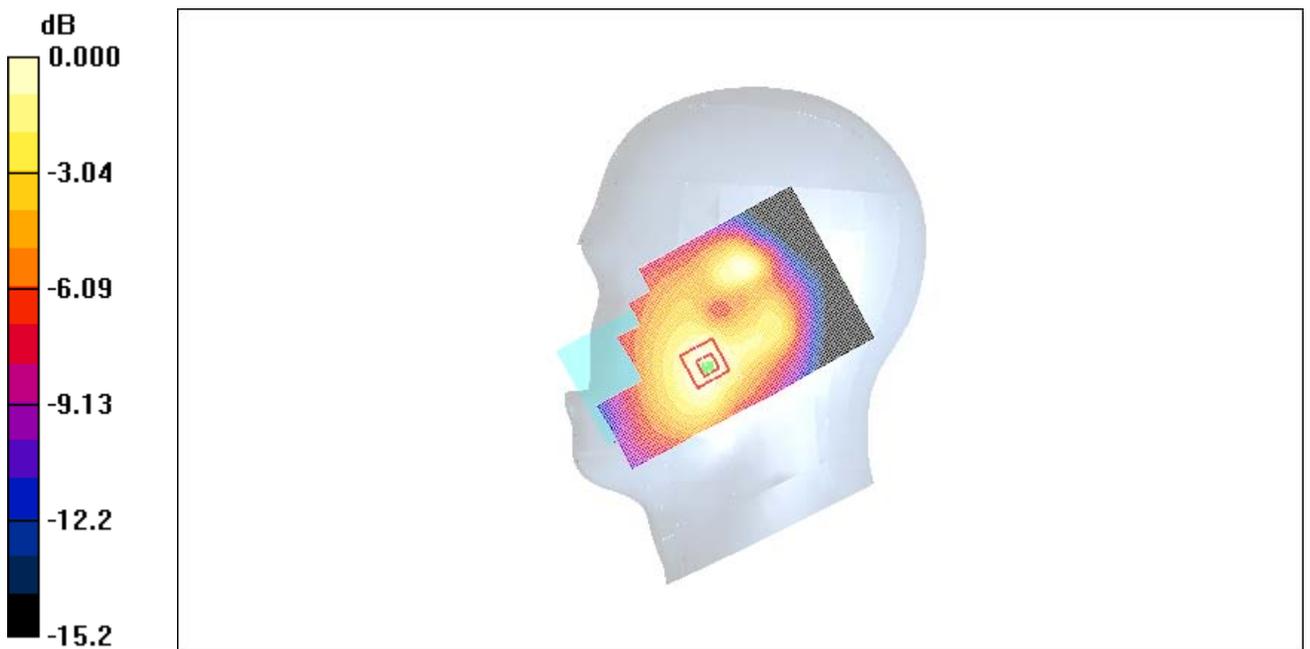
**Tilt Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.03 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 0.480 W/kg

**SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.218 mW/g**

Maximum value of SAR (measured) = 0.367 mW/g



0 dB = 0.367mW/g

**Fig. 45 CDMA 1900 MHz CH25 – Slide up**

**CDMA 1900 MHz Body Toward Phantom High – Slide down**

Date/Time: 2009-3-26 12:23:53

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.227 mW/g

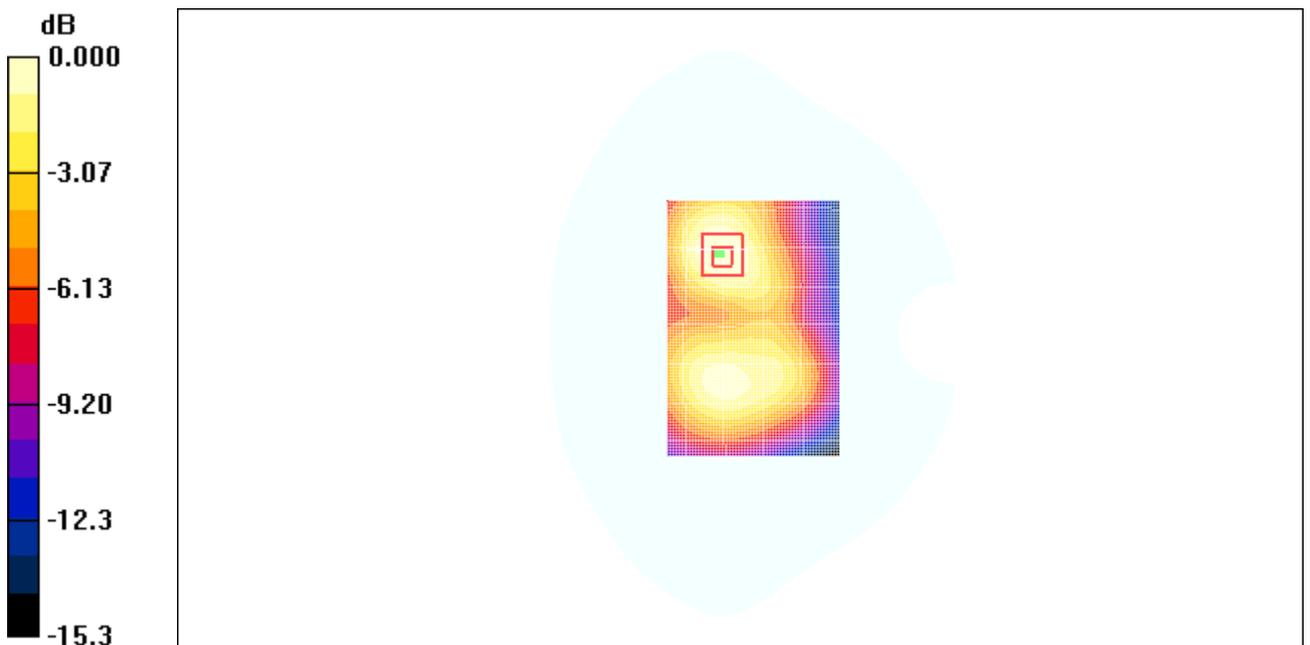
**Towards Phantom High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.14 V/m; Power Drift = -0.199 dB

Peak SAR (extrapolated) = 0.324 W/kg

**SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.125 mW/g**

Maximum value of SAR (measured) = 0.215 mW/g



0 dB = 0.215mW/g

**Fig. 46 CDMA 1900 MHz CH1175 – Slide down**

**CDMA 1900 MHz Body Toward Phantom Middle – Slide down**

Date/Time: 2009-3-26 12:37:41

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.288 mW/g

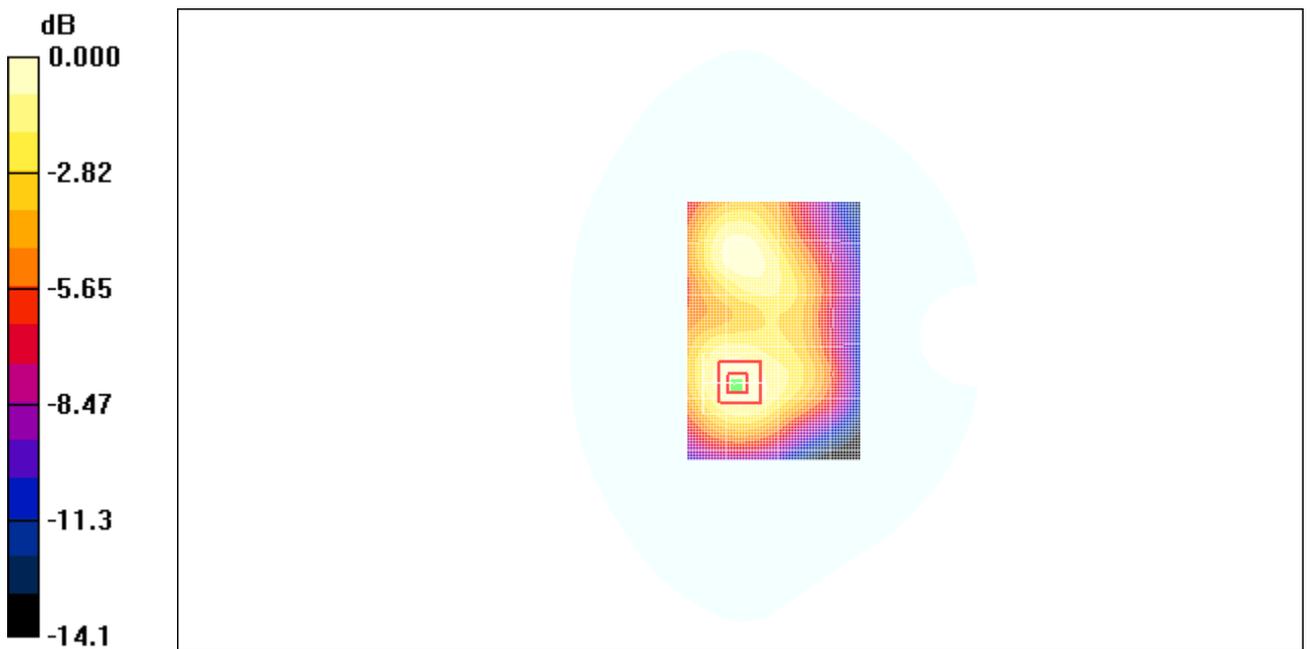
**Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.2 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 0.411 W/kg

**SAR(1 g) = 0.270 mW/g; SAR(10 g) = 0.173 mW/g**

Maximum value of SAR (measured) = 0.289 mW/g



0 dB = 0.289mW/g

**Fig. 47 CDMA 1900 MHz CH600 – Slide down**

**CDMA 1900 MHz Body Toward Phantom Low – Slide down**

Date/Time: 2009-3-26 12:51:26

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.330 mW/g

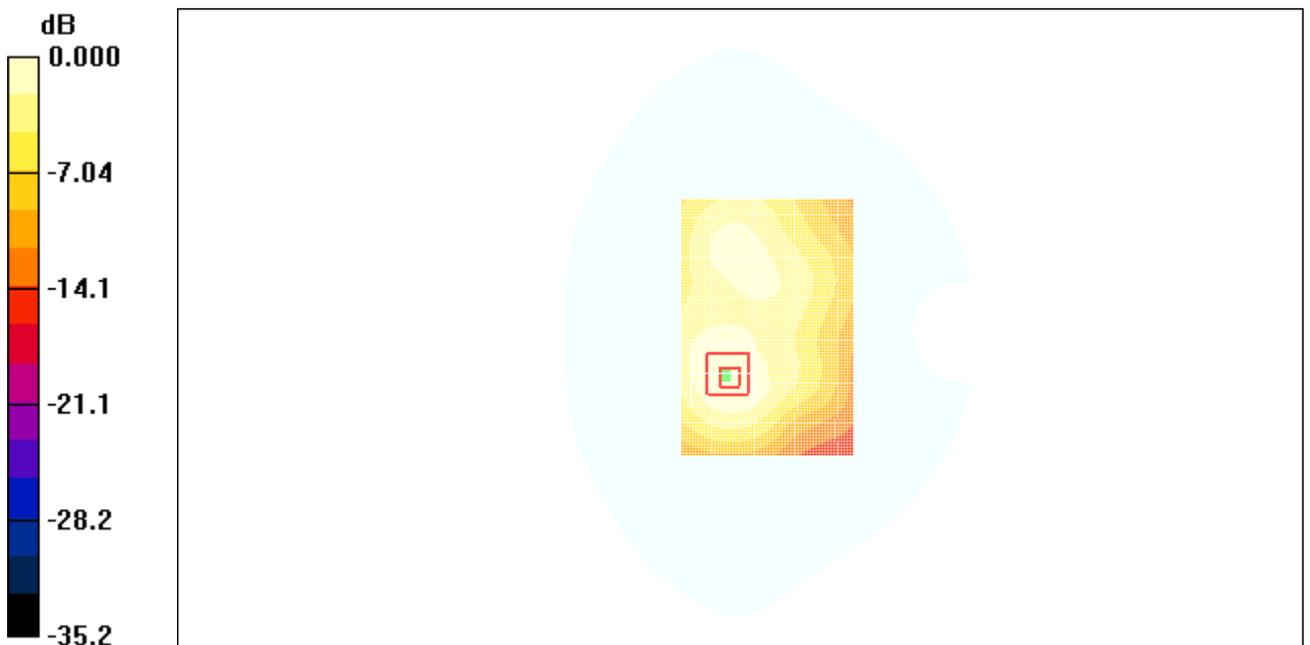
**Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.461 W/kg

**SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.196 mW/g**

Maximum value of SAR (measured) = 0.327 mW/g



0 dB = 0.327mW/g

**Fig. 48 CDMA 1900 MHz CH25 – Slide down**

**CDMA 1900 MHz Body Toward Ground High – Slide down**

Date/Time: 2009-3-26 13:05:30

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.712 mW/g

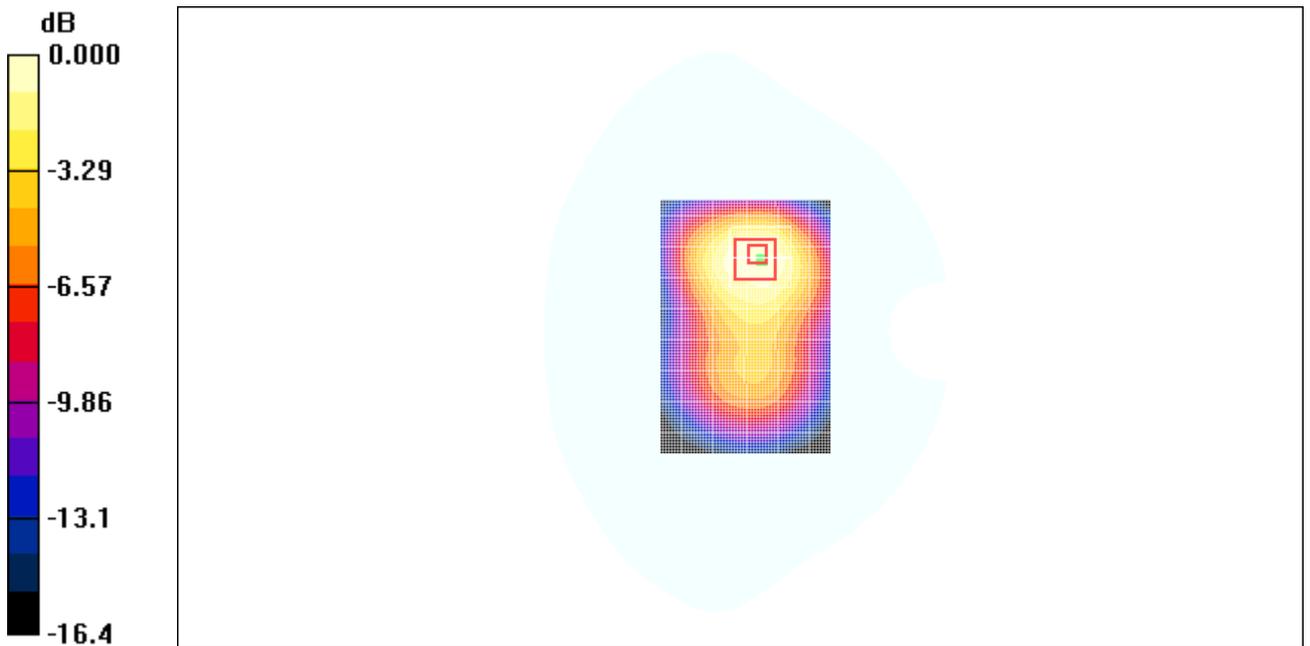
**Towards Ground High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.997 W/kg

**SAR(1 g) = 0.632 mW/g; SAR(10 g) = 0.392 mW/g**

Maximum value of SAR (measured) = 0.677 mW/g



0 dB = 0.677mW/g

**Fig. 49 CDMA 1900 MHz CH1175 – Slide down**

**CDMA 1900 MHz Body Toward Ground Middle – Slide down**

Date/Time: 2009-3-26 13:19:07

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.986 mW/g

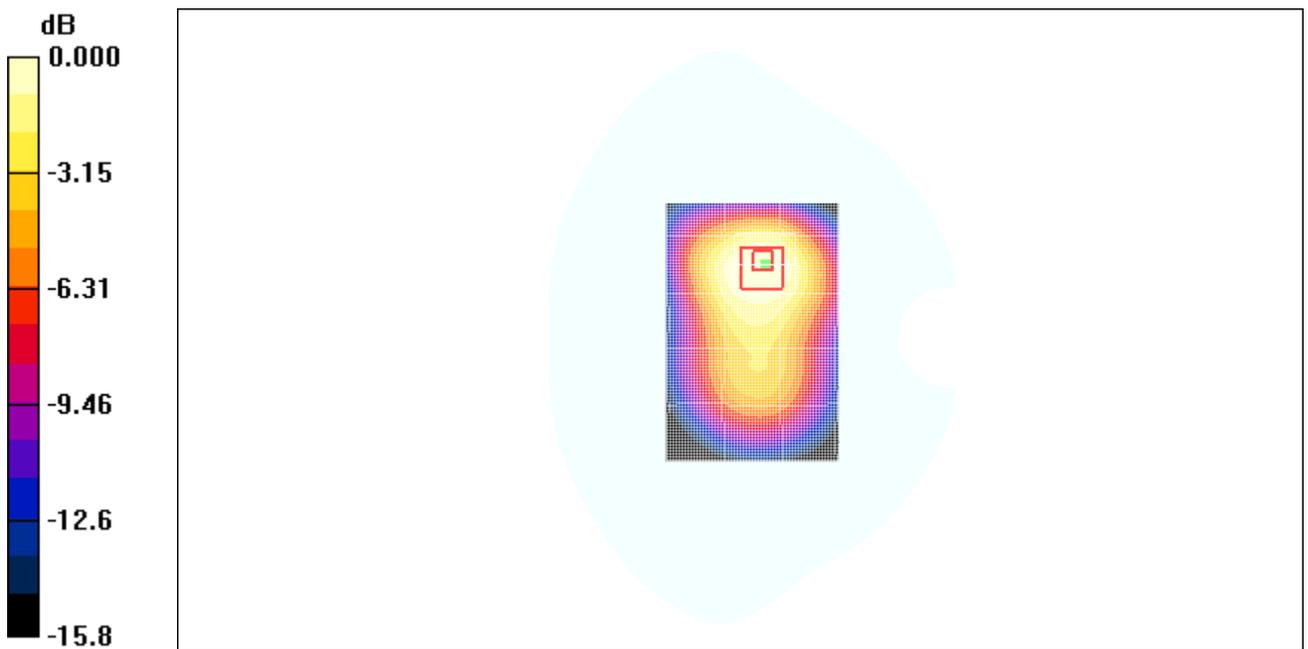
**Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.1 V/m; Power Drift = 0.086 dB

Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 0.872 mW/g; SAR(10 g) = 0.560 mW/g**

Maximum value of SAR (measured) = 0.919 mW/g



0 dB = 0.919mW/g

**Fig. 50 CDMA 1900 MHz CH600 – Slide down**

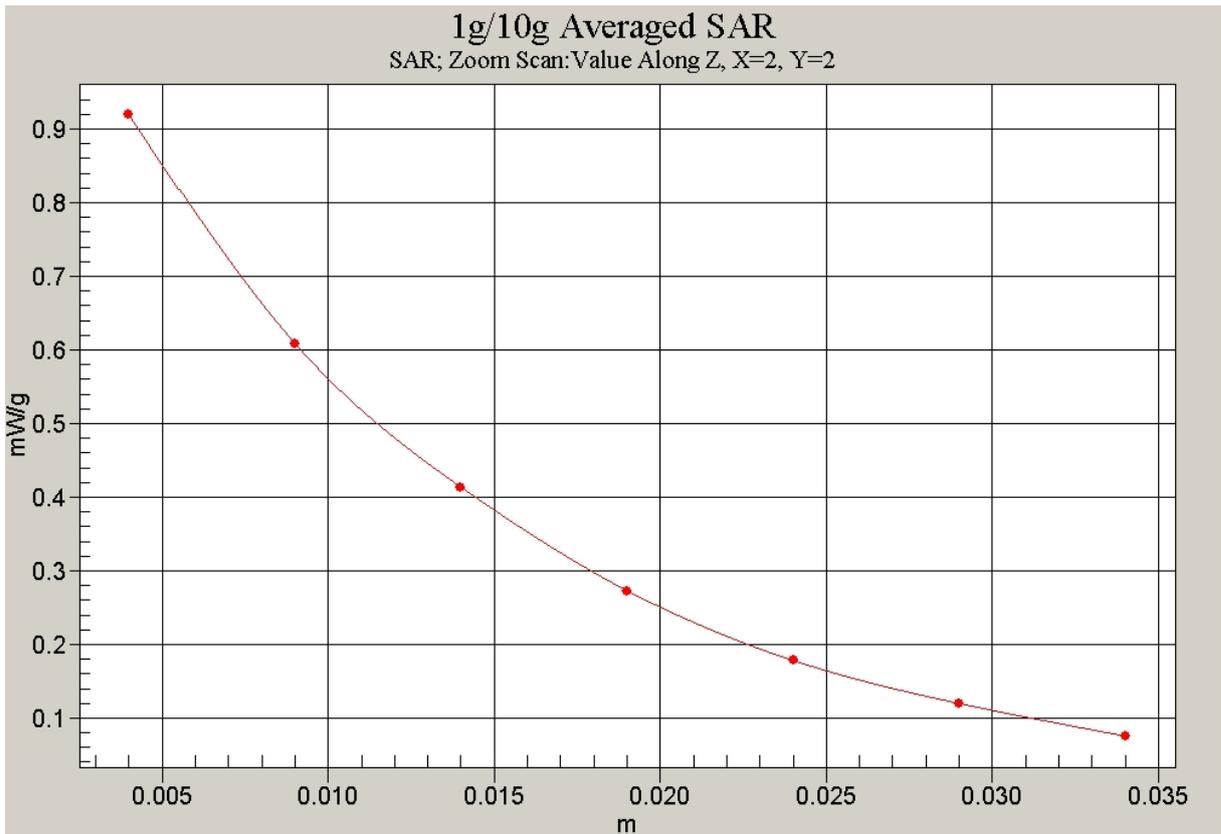


Fig. 51 Z-Scan at power reference point (CDMA 1900MHz, Body, Towards Ground, CH600)

**CDMA 1900 MHz Body Toward Ground Low – Slide down**

Date/Time: 2009-3-26 13:33:18

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.943 mW/g

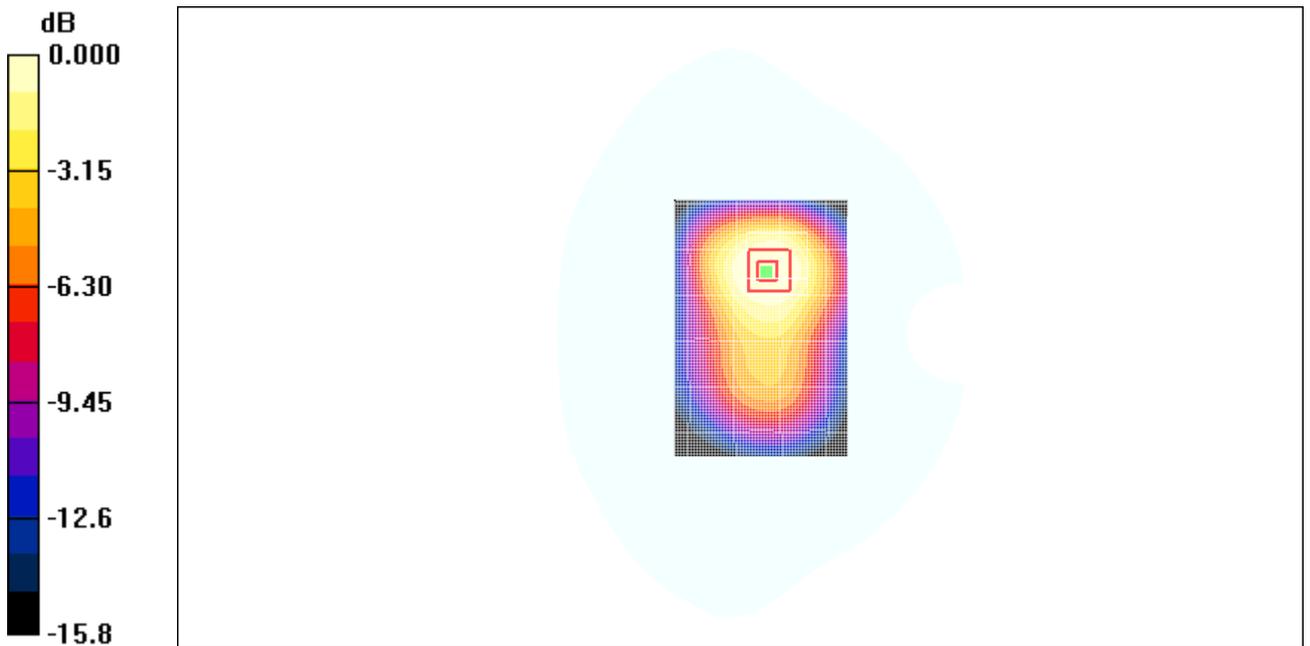
**Towards Ground Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.4 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.532 mW/g**

Maximum value of SAR (measured) = 0.856 mW/g



0 dB = 0.856mW/g

**Fig. 52 CDMA 1900 MHz CH25 – Slide down**

**CDMA 1900 MHz Body Toward Phantom High – Slide up**

Date/Time: 2009-3-26 13:47:23

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

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

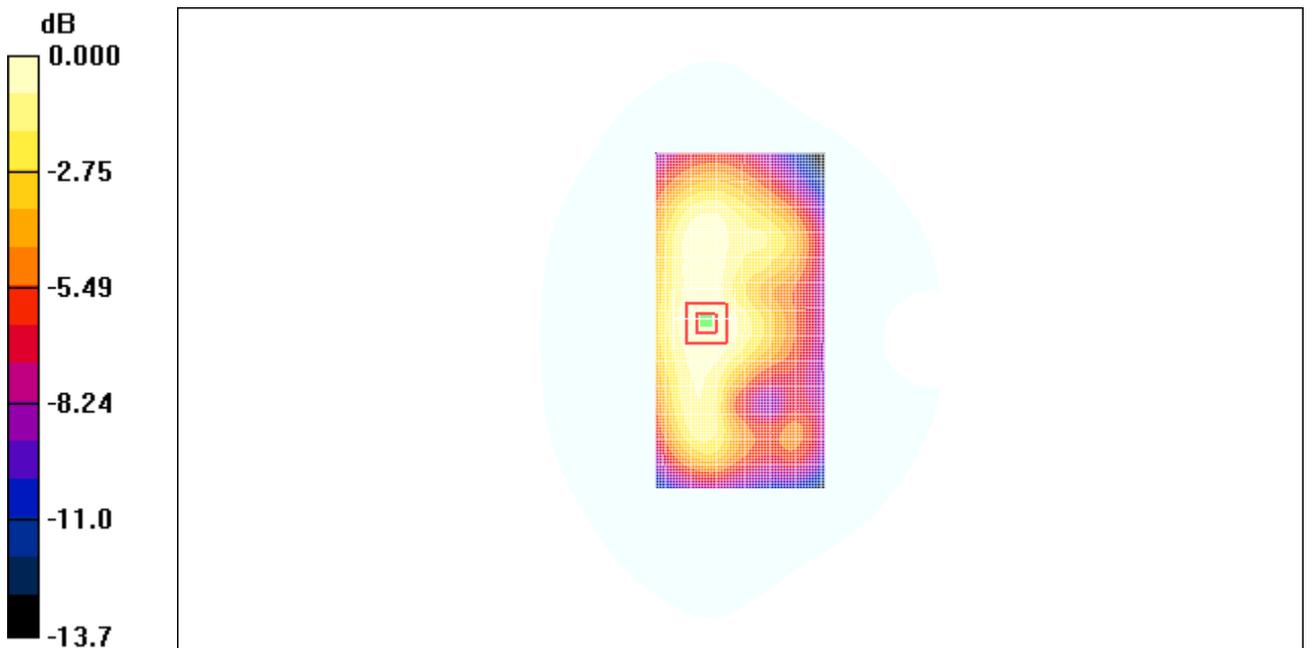
**Towards Phantom High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.138 dB

Peak SAR (extrapolated) = 0.413 W/kg

**SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.177 mW/g**

Maximum value of SAR (measured) = 0.289 mW/g



0 dB = 0.289mW/g

**Fig. 53 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 MHz Body Toward Phantom Middle – Slide up**

Date/Time: 2009-3-26 14:01:46

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.338 mW/g

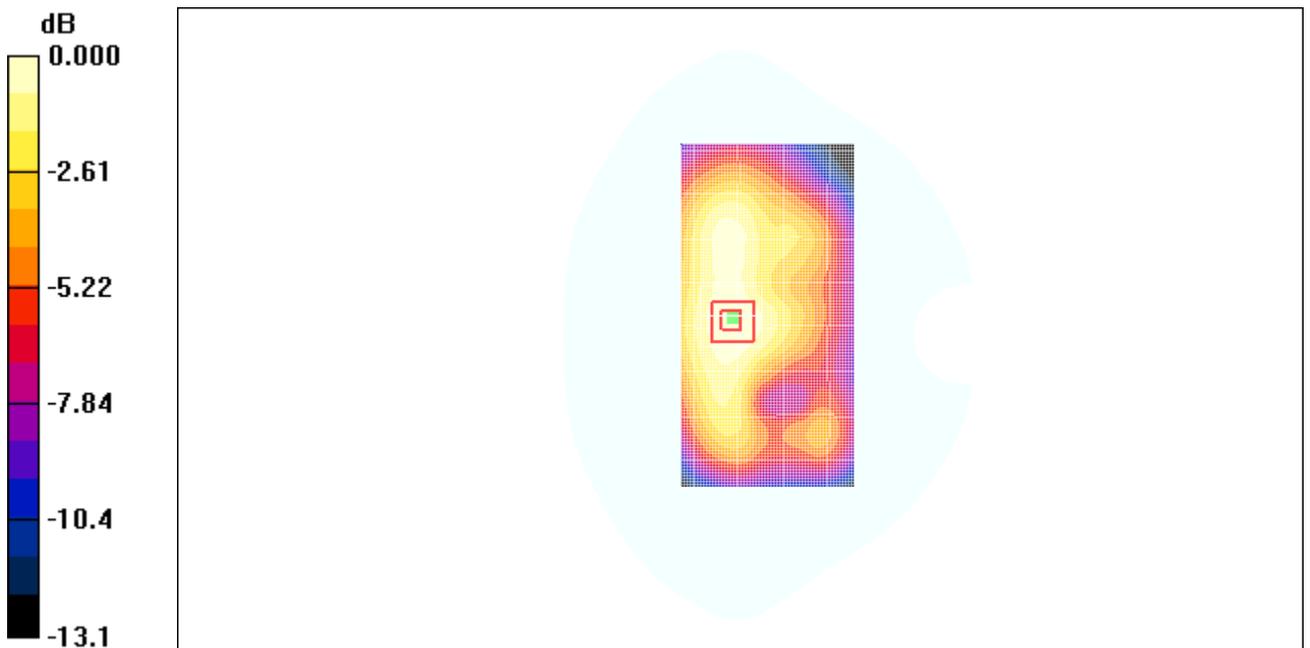
**Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 0.479 W/kg

**SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.208 mW/g**

Maximum value of SAR (measured) = 0.340 mW/g



0 dB = 0.340mW/g

**Fig. 54 CDMA 1900 MHz CH600 – Slide up**

**CDMA 1900 MHz Body Toward Phantom Low – Slide up**

Date/Time: 2009-3-26 14:15:41

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Phantom Low/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

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

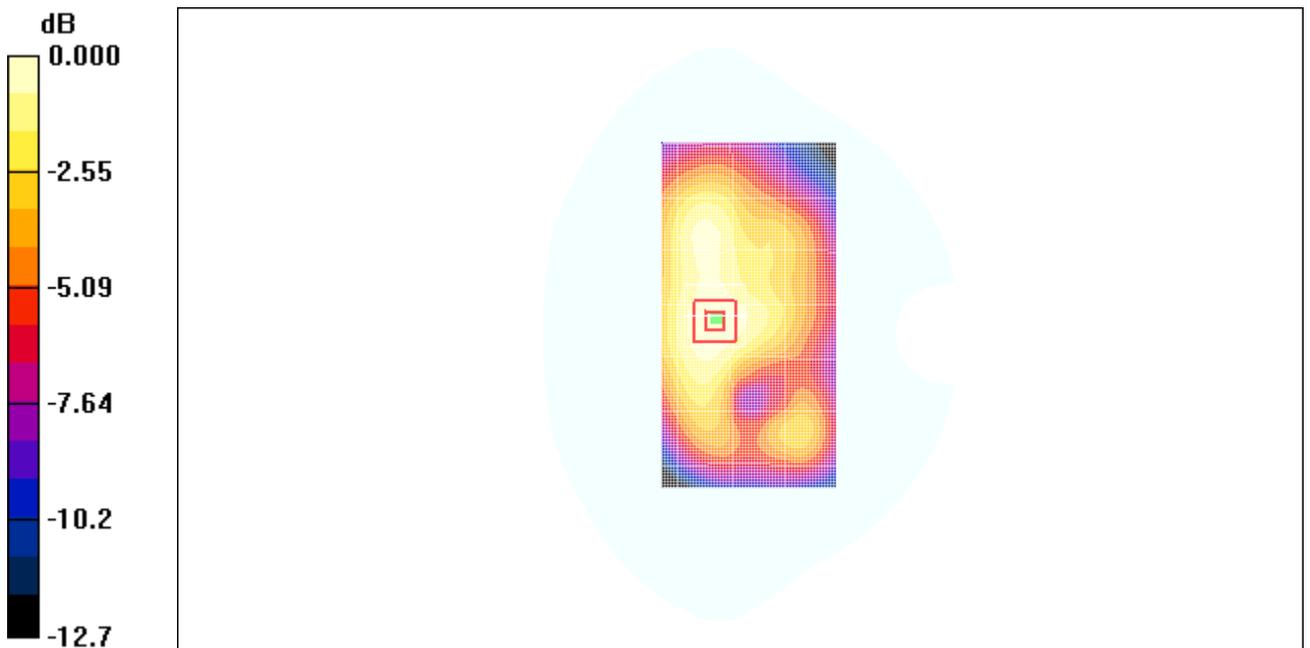
**Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.472 W/kg

**SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.209 mW/g**

Maximum value of SAR (measured) = 0.338 mW/g



0 dB = 0.338mW/g

**Fig. 55 CDMA 1900 MHz CH25 – Slide up**

**CDMA 1900 MHz Body Toward Ground High – Slide up**

Date/Time: 2009-3-26 14:29:36

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground High/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.922 mW/g

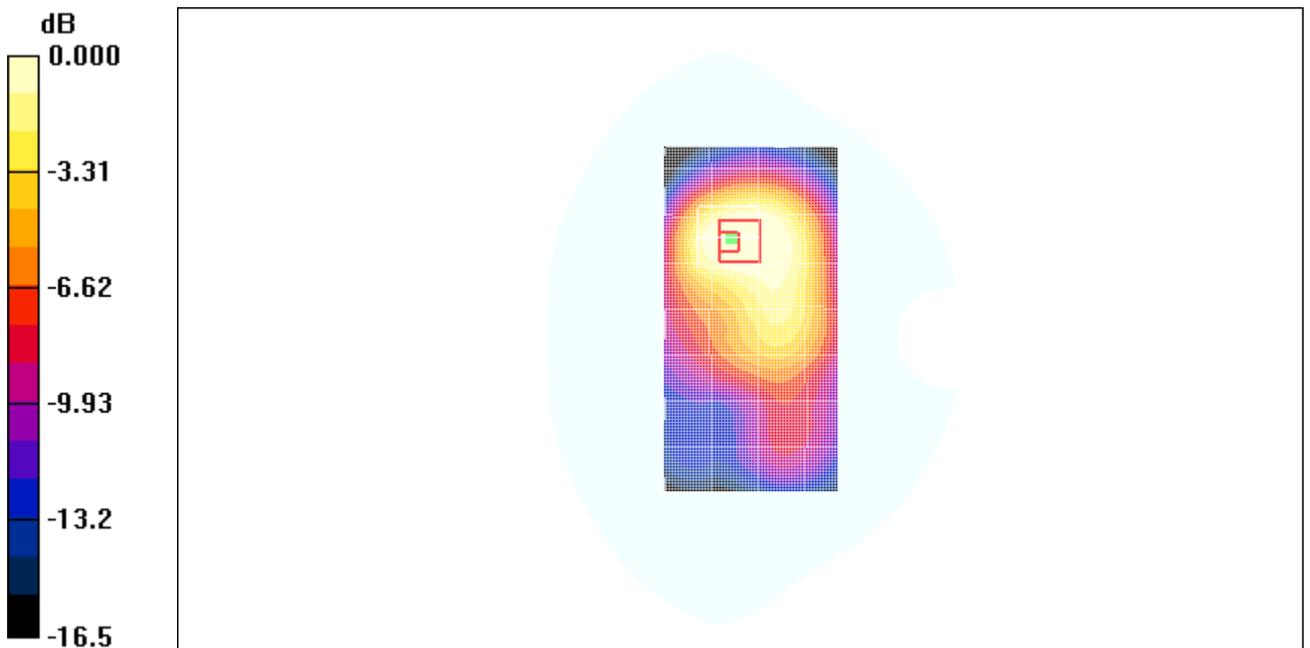
**Towards Ground High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.144 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.744 mW/g; SAR(10 g) = 0.470 mW/g**

Maximum value of SAR (measured) = 0.792 mW/g



0 dB = 0.792mW/g

**Fig. 56 CDMA 1900 MHz CH1175 – Slide up**

**CDMA 1900 MHz Body Toward Ground Middle – Slide up**

Date/Time: 2009-3-26 14:43:20

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground Middle/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.937 mW/g

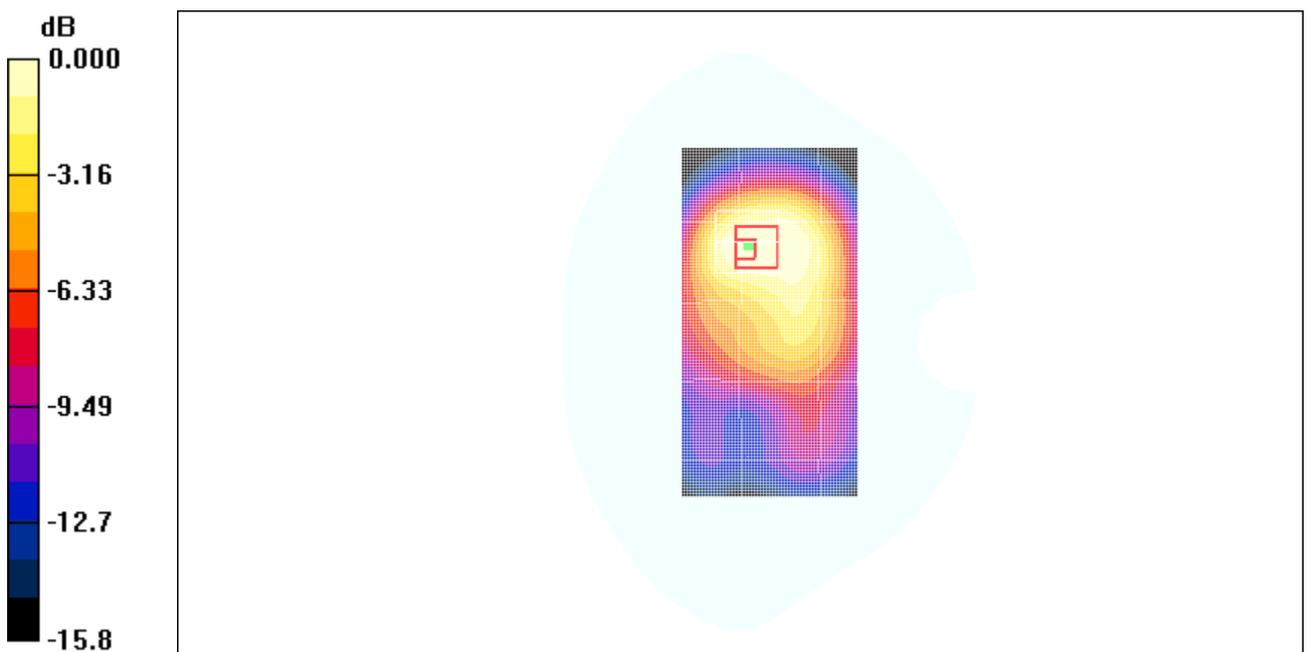
**Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 1.34 W/kg

**SAR(1 g) = 0.816 mW/g; SAR(10 g) = 0.505 mW/g**

Maximum value of SAR (measured) = 0.863 mW/g



0 dB = 0.863mW/g

**Fig. 57 CDMA 1900 MHz CH600 – Slide up**

**CDMA 1900 MHz Body Toward Ground Low – Slide up**

Date/Time: 2009-3-26 14:57:24

Electronics: DAE4 Sn771

Medium: Body 1900

Medium parameters used (interpolated):  $f = 1851.25$  MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

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

**Towards Ground Low/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.847 mW/g

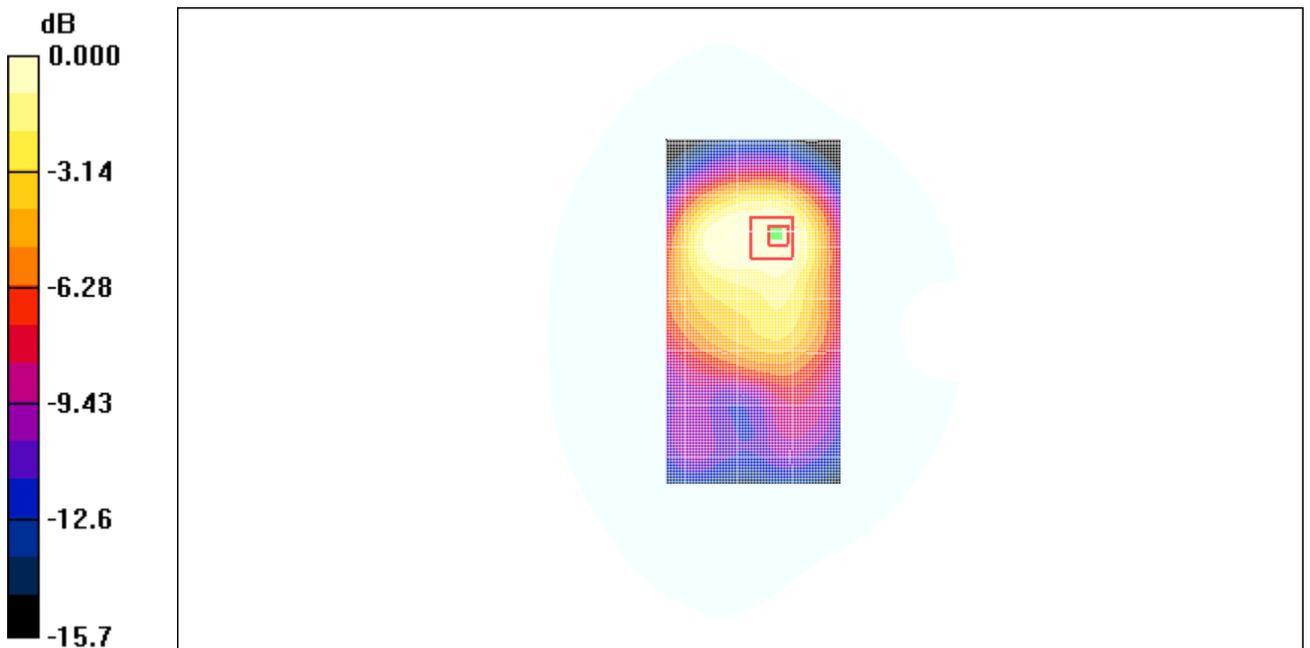
**Towards Ground Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.9 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 1.14 W/kg

**SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.456 mW/g**

Maximum value of SAR (measured) = 0.759 mW/g



0 dB = 0.759mW/g

**Fig. 58 CDMA 1900 MHz CH25 – Slide up**

**AWS 1700 Left Cheek High – Slide down**

Date/Time: 2009-3-27 7:54:10

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1753.75$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1753.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.771 mW/g

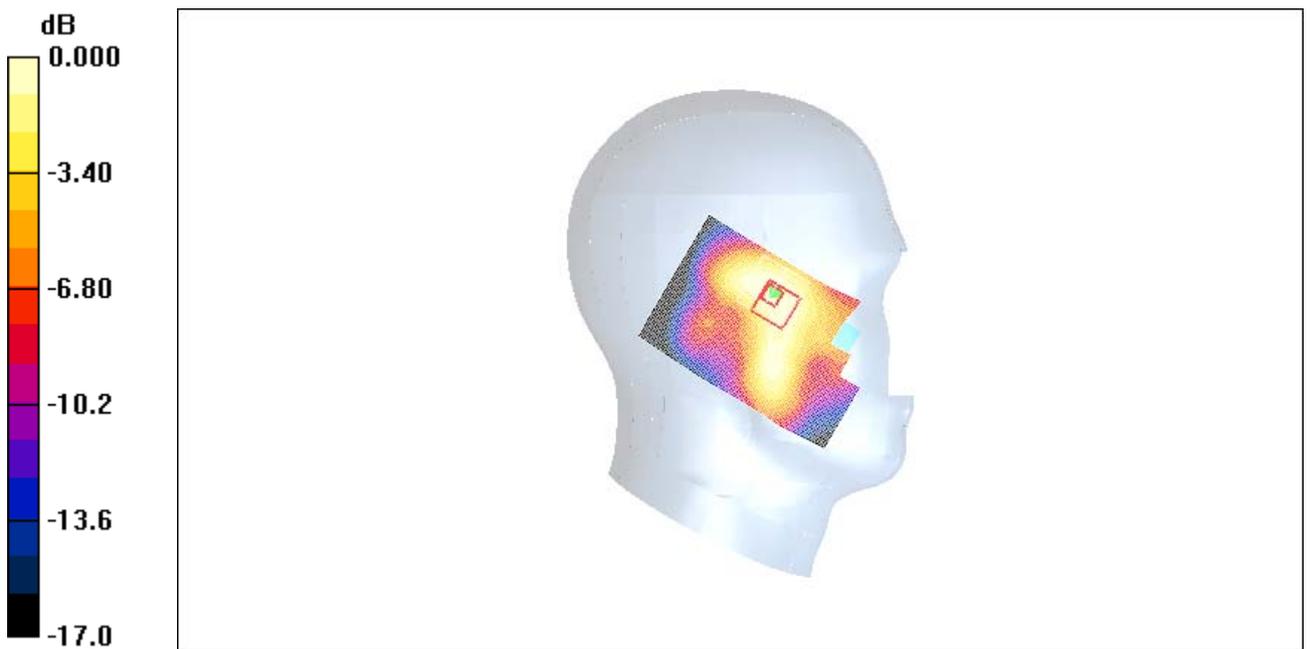
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.91 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 0.977 W/kg

**SAR(1 g) = 0.660 mW/g; SAR(10 g) = 0.429 mW/g**

Maximum value of SAR (measured) = 0.719 mW/g



0 dB = 0.719mW/g

**Fig. 59 AWS 1700 MHz CH875 – Slide down**

**AWS 1700 Left Cheek Middle – Slide down**

Date/Time: 2009-3-27 8:08:21

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1732.5 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.753 mW/g

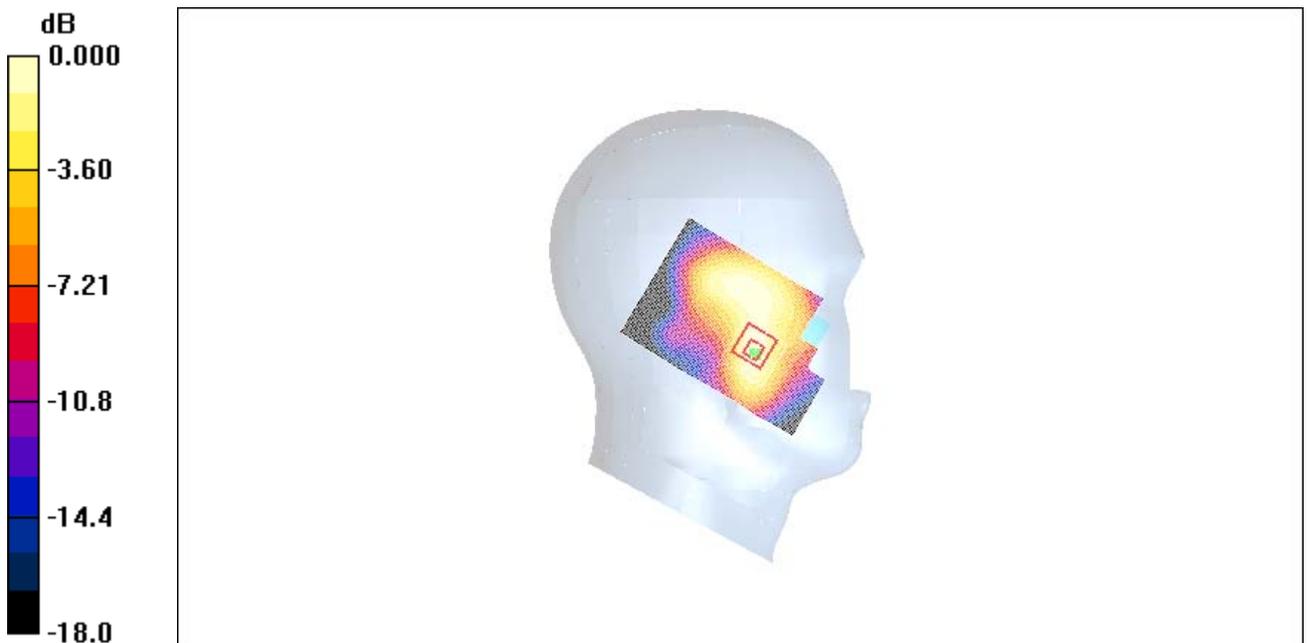
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.81 V/m; Power Drift = 0.130 dB

Peak SAR (extrapolated) = 1.05 W/kg

**SAR(1 g) = 0.706 mW/g; SAR(10 g) = 0.436 mW/g**

Maximum value of SAR (measured) = 0.776 mW/g



0 dB = 0.776mW/g

**Fig. 60 AWS 1700 MHz CH450 – Slide down**

**AWS 1700 Left Cheek Low – Slide down**

Date/Time: 2009-3-27 8:22:43

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1711.25$  MHz;  $\sigma = 1.34$  mho/m;  $\epsilon_r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1711.25 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.790 mW/g

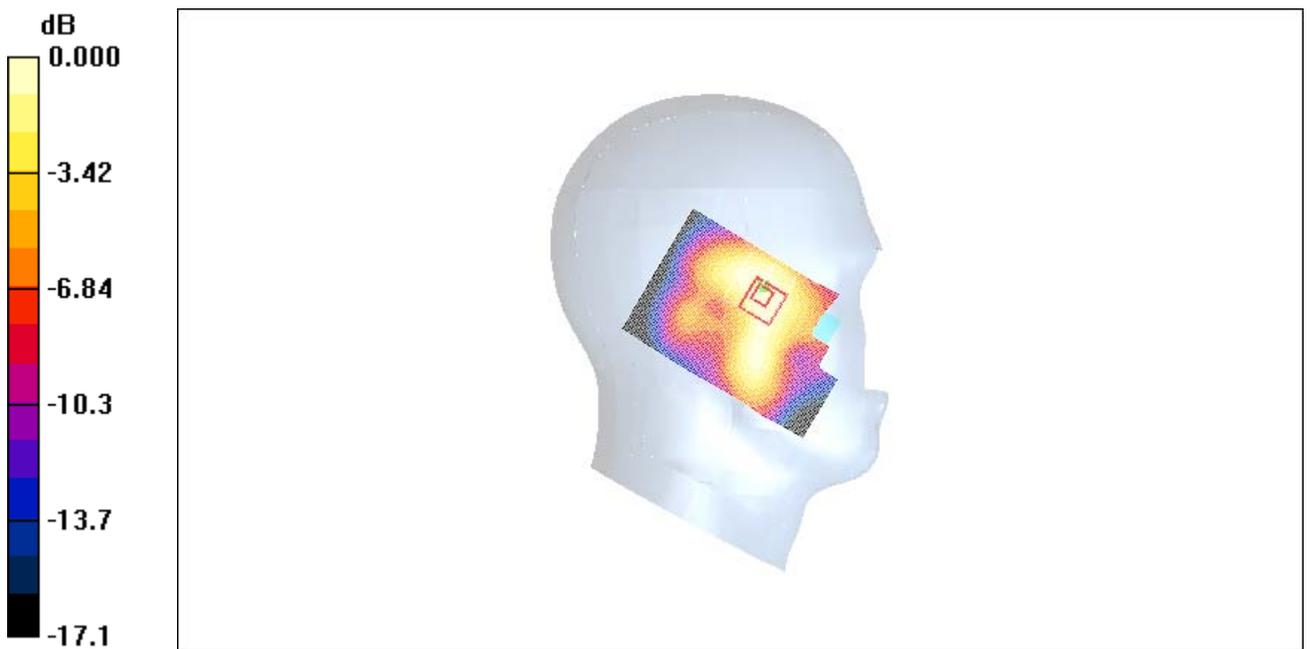
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.0 V/m; Power Drift = -0.168 dB

Peak SAR (extrapolated) = 1.01 W/kg

**SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.463 mW/g**

Maximum value of SAR (measured) = 0.749 mW/g



0 dB = 0.749mW/g

**Fig. 61 AWS 1700 MHz CH25 – Slide down**

**AWS 1700 Left Tilt High – Slide down**

Date/Time: 2009-3-27 8:36:17

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1753.75$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1753.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Tilt High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.462 mW/g

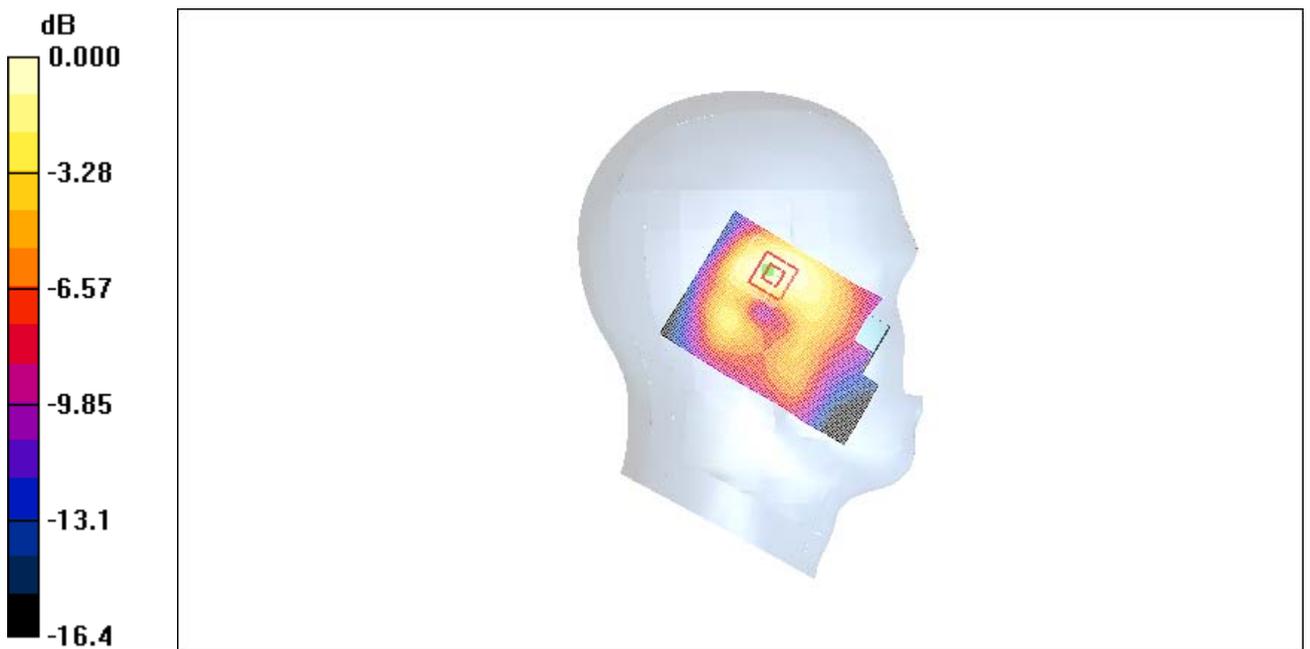
**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = 0.153 dB

Peak SAR (extrapolated) = 0.616 W/kg

**SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.266 mW/g**

Maximum value of SAR (measured) = 0.458 mW/g



0 dB = 0.458mW/g

**Fig. 62 AWS 1700 MHz CH875 – Slide down**

**AWS 1700 Left Tilt Middle – Slide down**

Date/Time: 2009-3-27 8:50:22

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1732.5 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.634 mW/g

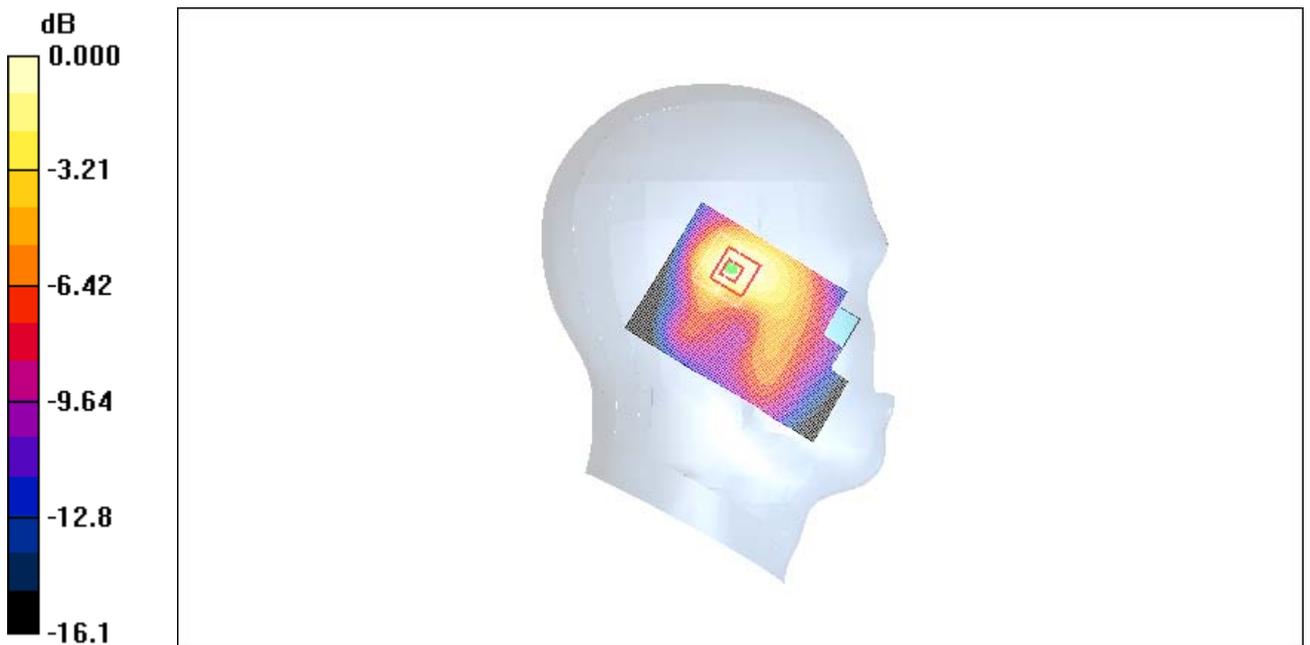
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.0 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 0.831 W/kg

**SAR(1 g) = 0.542 mW/g; SAR(10 g) = 0.337 mW/g**

Maximum value of SAR (measured) = 0.583 mW/g



0 dB = 0.583mW/g

**Fig. 63 AWS 1700 MHz CH450 – Slide down**

**AWS 1700 Left Tilt Low – Slide down**

Date/Time: 2009-3-27 9:04:53

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1711.25$  MHz;  $\sigma = 1.34$  mho/m;  $\epsilon_r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1711.25 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Tilt Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.616 mW/g

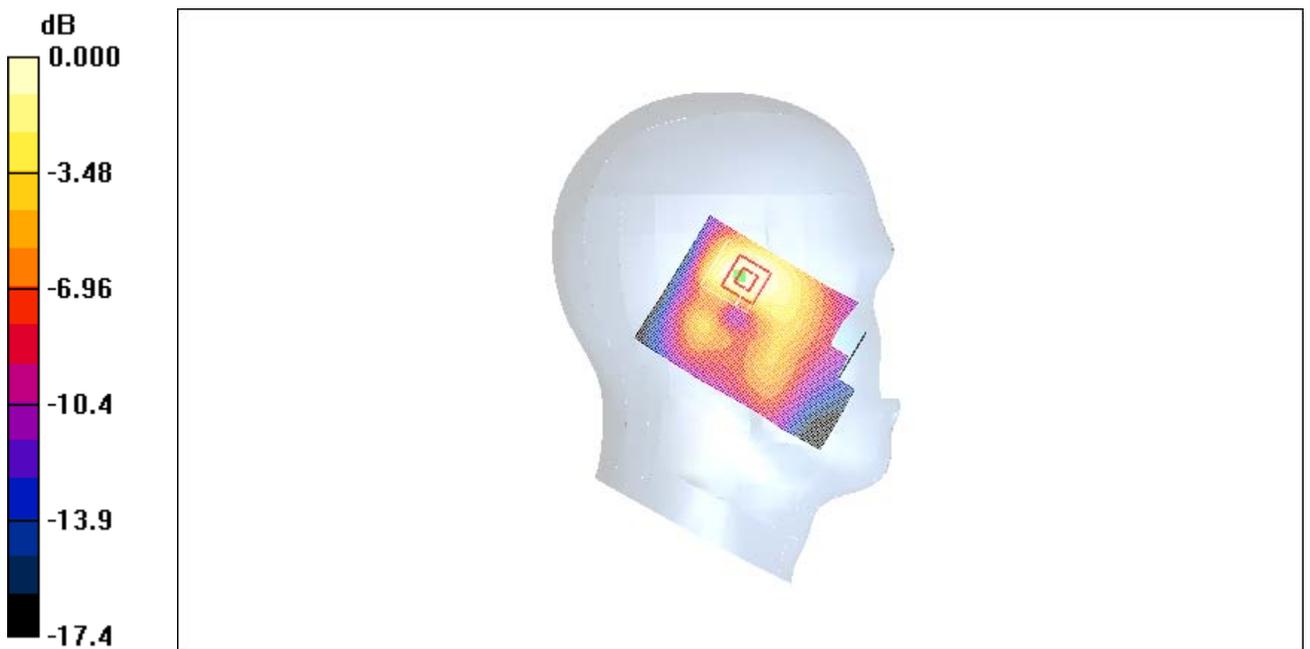
**Tilt Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.777 W/kg

**SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.322 mW/g**

Maximum value of SAR (measured) = 0.567 mW/g



0 dB = 0.567mW/g

**Fig. 64 AWS 1700 MHz CH25 – Slide down**

**AWS 1700 Right Cheek High – Slide down**

Date/Time: 2009-3-27 9:18:36

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1753.75$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1753.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.836 mW/g

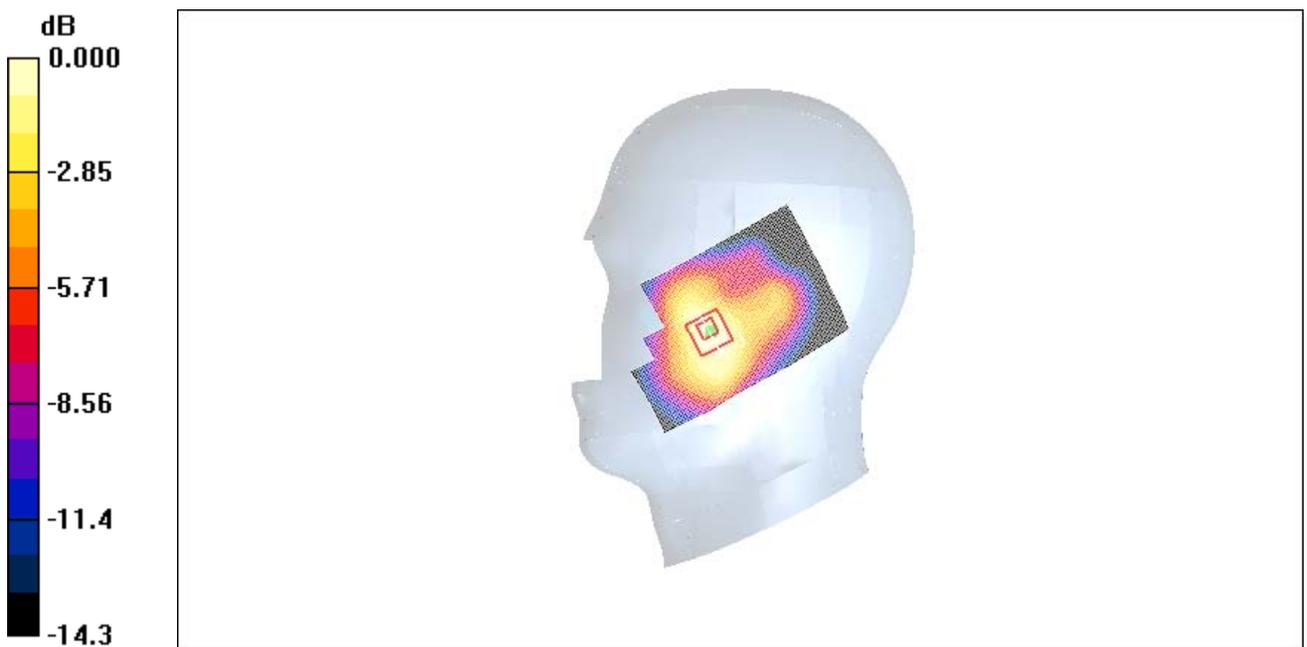
**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 1.14 W/kg

**SAR(1 g) = 0.787 mW/g; SAR(10 g) = 0.506 mW/g**

Maximum value of SAR (measured) = 0.849 mW/g



0 dB = 0.849mW/g

**Fig. 65 AWS 1700 MHz CH875 – Slide down**

**AWS 1700 Right Cheek Middle – Slide down**

Date/Time: 2009-3-27 9:32:05

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1732.5 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.954 mW/g

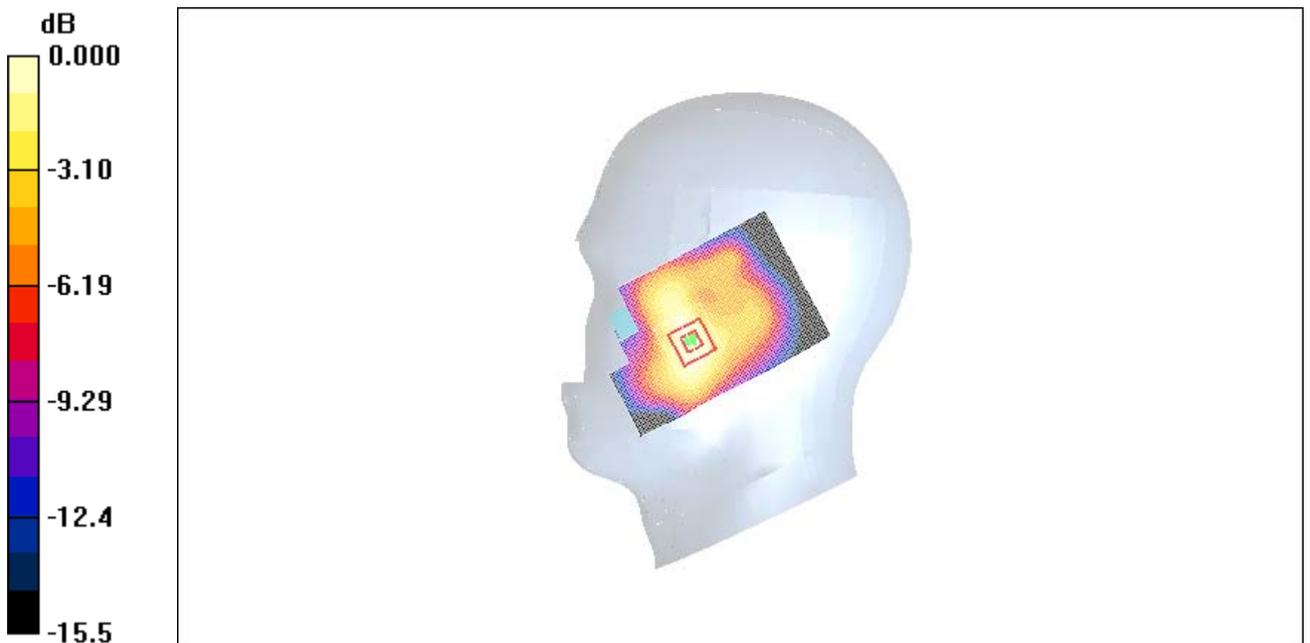
**Cheek Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.129 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.859 mW/g; SAR(10 g) = 0.552 mW/g**

Maximum value of SAR (measured) = 0.938 mW/g



0 dB = 0.938mW/g

**Fig. 66 AWS 1700 MHz CH450 – Slide down**

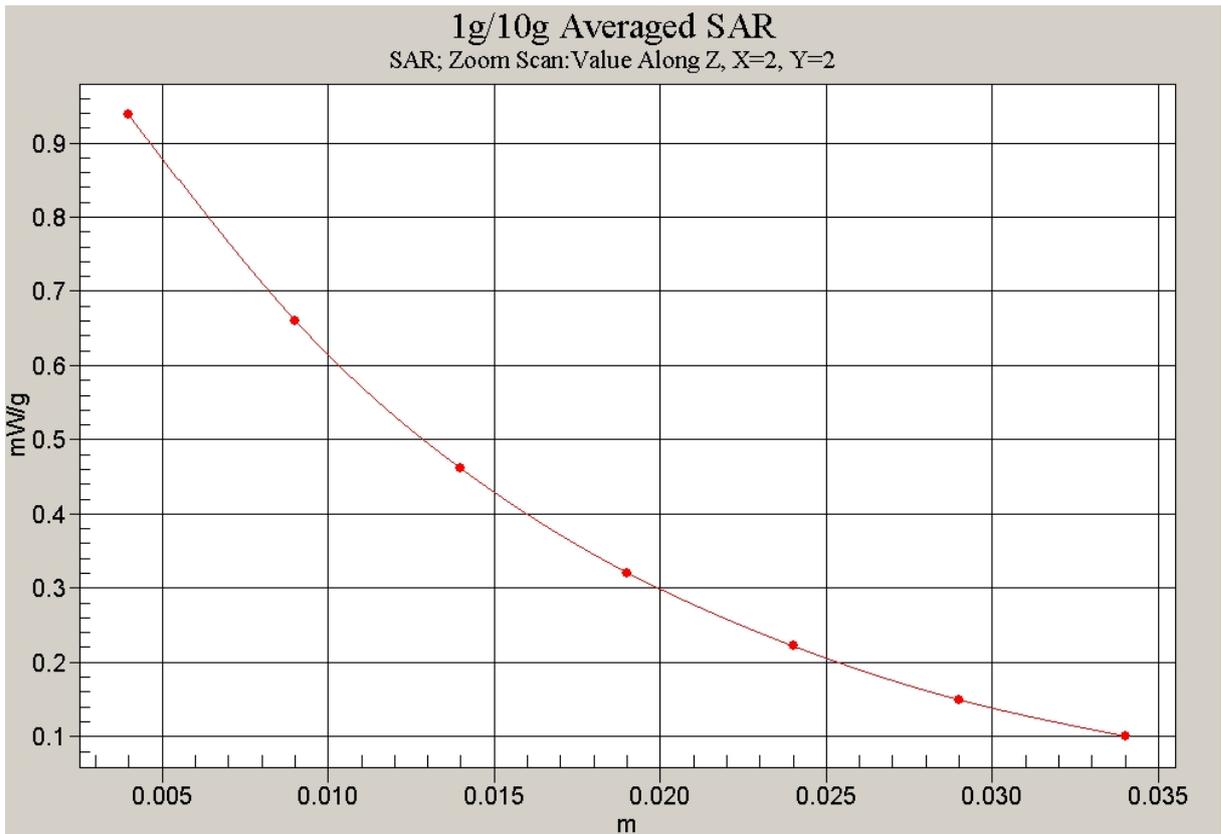


Fig. 67 Z-Scan at power reference point (AWS 1700MHz, CH450)

**AWS 1700 Right Cheek Low – Slide down**

Date/Time: 2009-3-27 9:46:28

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1711.25$  MHz;  $\sigma = 1.34$  mho/m;  $\epsilon_r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1711.25 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Cheek Low/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.901 mW/g

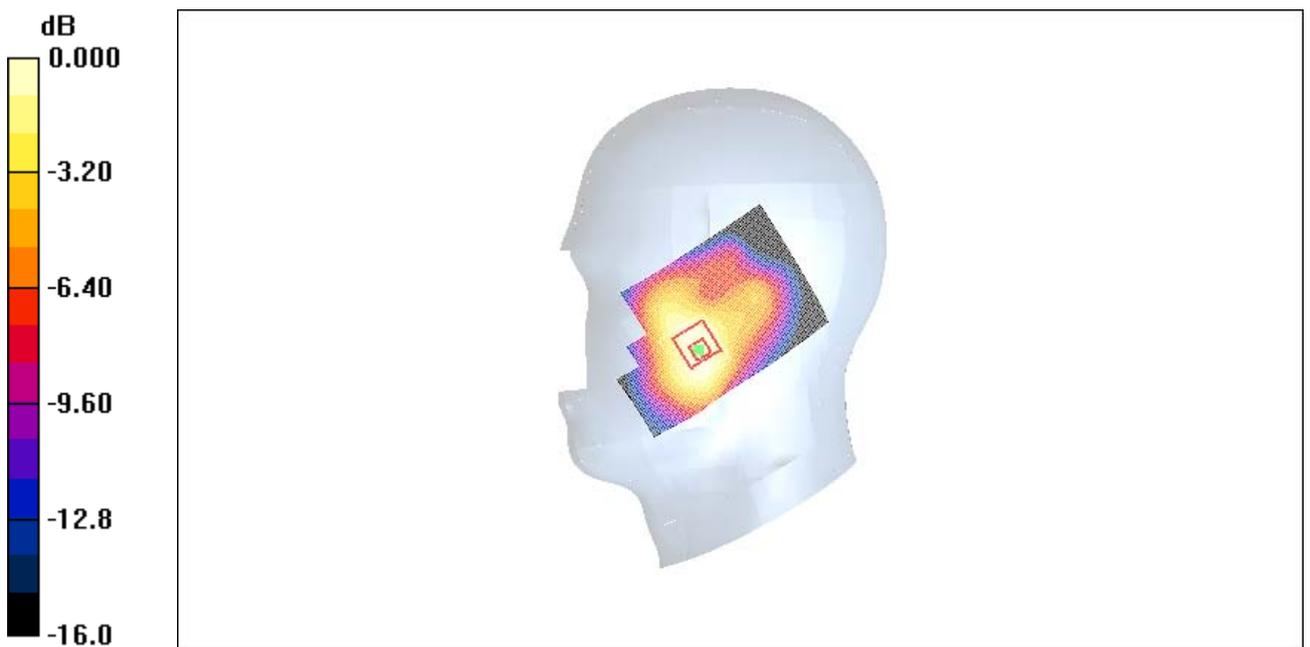
**Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.086 dB

Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.845 mW/g; SAR(10 g) = 0.553 mW/g**

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



0 dB = 0.896mW/g

**Fig. 68 AWS 1700 MHz CH25 – Slide down**

**AWS 1700 Right Tilt High – Slide down**

Date/Time: 2009-3-27 10:00:37

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1753.75$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1753.75 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Tilt High/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

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

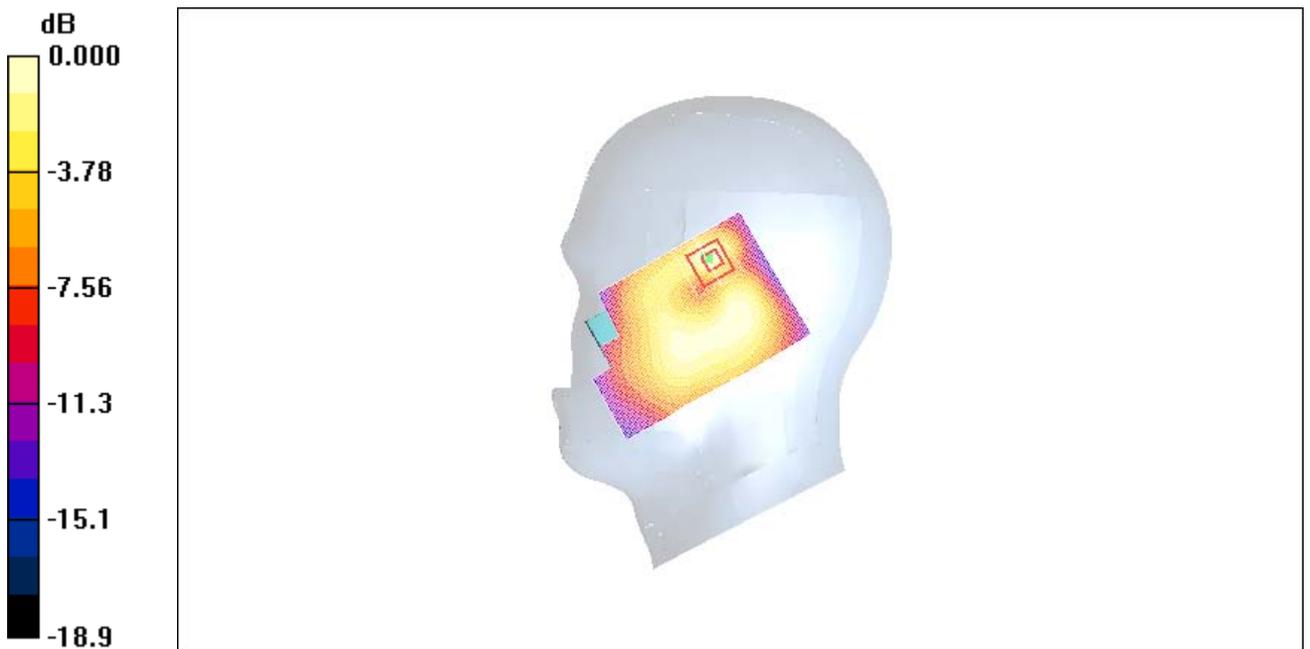
**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.5 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.682 W/kg

**SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.167 mW/g**

Maximum value of SAR (measured) = 0.370 mW/g



0 dB = 0.370mW/g

**Fig. 69 AWS 1700 MHz CH875 – Slide down**

**AWS 1700 Right Tilt Middle – Slide down**

Date/Time: 2009-3-27 10:14:32

Electronics: DAE4 Sn771

Medium: Head 1800

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.36$  mho/m;  $\epsilon_r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: CDMA 1700 Frequency: 1732.5 MHz Duty Cycle: 1:1

Probe: ES3DV3 - SN3149 ConvF(5.18, 5.18, 5.18)

**Tilt Middle/Area Scan (61x91x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.422 mW/g

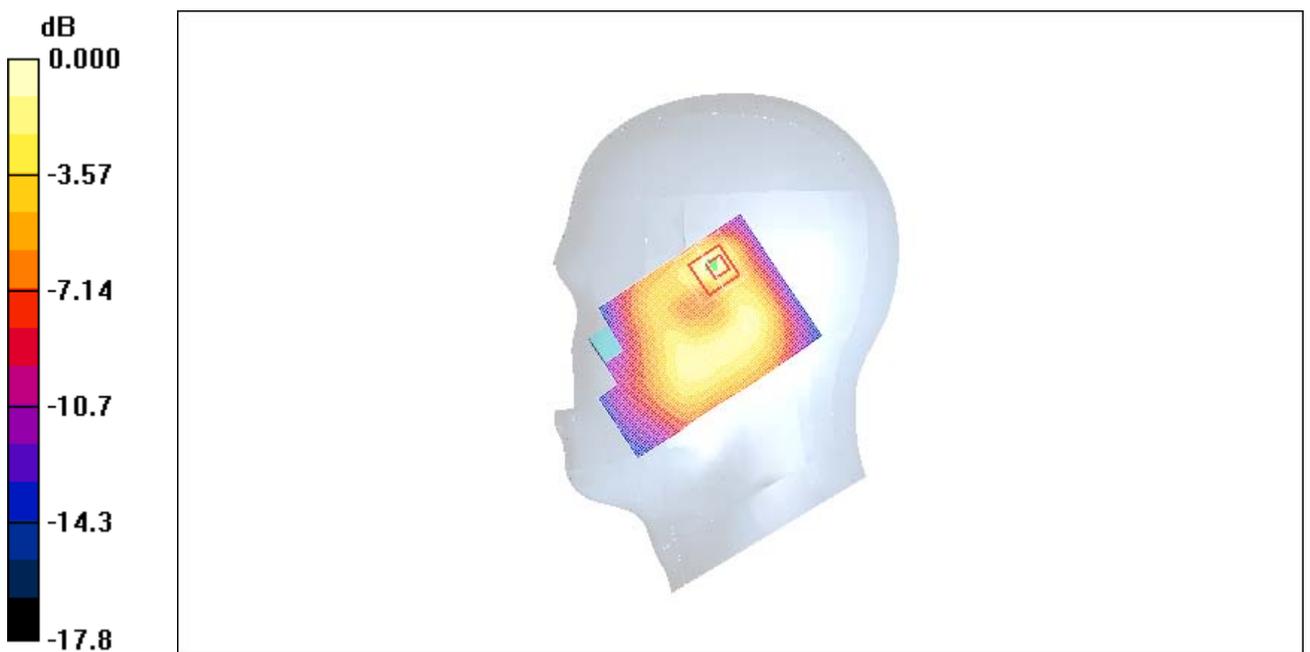
**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.743 W/kg

**SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.241 mW/g**

Maximum value of SAR (measured) = 0.418 mW/g



0 dB = 0.418mW/g

**Fig. 70 AWS 1700 MHz CH450 – Slide down**