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# No. 2011SAR00111

For

**TCT Mobile Limited** 

CDMA2000 dual band mobile phone

Venus

one touch 909B

With

Hardware Version: PIO

Software Version: vF23

FCCID: RAD210

Issued Date: 2011-09-16



No. DGA-PL-114/01-02

#### Note:

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ANNEX BTEST LAYOUT			
ANNEX CGRAPH RESULTS			
ANNEX D SYSTEM VALIDATION RESULTS			
ANNEX E PROBE CALIBRATION CERTIFICATE111			



## **1 Test Laboratory**

## **1.1 Testing Location**

Company Name:	TMC Beijing, Telecommunication Metrology Center of MIIT
Address:	No 52, Huayuan beilu, Haidian District, Beijing,P.R.China
Postal Code:	100191
Telephone:	+86-10-62304633
Fax:	+86-10-62304793

## **1.2 Testing Environment**

Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω

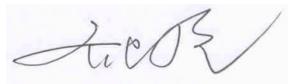
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.

## 1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	August 25, 2011
Testing End Date:	August 31, 2011

## 1.4 Signature

Lin Xiaojun (Prepared this test report)



Qi Dianyuan (Reviewed this test report)

Xiao Li

Deputy Director of the laboratory (Approved this test report)



## **2** Client Information

## **2.1 Applicant Information**

Company Name:	TCT Mobile Limited
Address /Post:	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Address /Post.	Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P. R. China
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

## 2.2 Manufacturer Information

Company Name:	TCT Mobile Limited
Address (Dest	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Address /Post:	Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	P. R. China
Telephone:	0086-21-61460890
Fax:	0086-21-61460602



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

### 3.1 About EUT

EUT Description:	CDMA2000 dual band mobile phone
Model Name:	Venus
Marketing Name:	one touch 909B
Frequency Band:	CDMA 835 / CDMA 1900
Hotspot mode:	Support simultaneous transmission of hotspot and voice(or data)
Form factor:	11.8cm×5.7cm

### 3.2 Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	A100000862d93b	PIO	vF23
*EUT ID: is us	sed to identify the test s	ample in the lab	internally.

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

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	CAB31P0000C1	/	BYD
AE2	Headset	CCB3001A10C1	/	Lianyun

\*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 62209-1–2006:** 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).



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

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

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

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

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

**KDB941225 D01:** SAR test for 3G devices.

**KDB941225 D06 Hot Spot SAR v01:** SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities.

## **5 OPERATIONAL CONDITIONS DURING TEST**

## 5.1 Schematic Test Configuration

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. 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 128, 190 and 251 respectively in the case of CDMA 835 MHz, or to 512, 661 and 810 respectively in the case of CDMA 1900 MHz. 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.

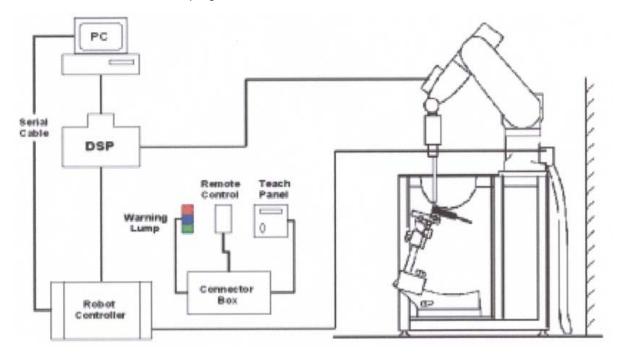
### 5.2 SAR Measurement Set-up

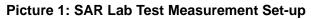
These measurements were performed with the automated near-field scanning system DASY4 Professional from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot (working range greater than 0.9m), which positions the probes with a positional



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

A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the Micron Pentium III 800 MHz computer with Windows 2000 system and SAR Measurement Software DASY4 Professional, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.





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.



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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  $\pm$  0.25dB.

### **ES3DV3 Probe Specification**

Construction	Symmetrical design with triangular core	
	Interleaved sensors	17
	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	17
	Additional CF for other liquids and frequencies	
	upon request	Picture 2: ES3DV3 E-field
Frequency	10 MHz to 4 GHz; Linearity: $\pm$ 0.2 dB (30 MHz to 4 G	Hz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to	
	probe axis)	
Dynamic Range	5 $\mu$ W/g to > 100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 330 mm (Tip: 20 mm)	
	Tip diameter: 3.9 mm (Body: 12 mm)	Leen Part
	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 Pi	cture3: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  $\pm$  0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

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

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate



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

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

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

C = Heat capacity of tissue (brain or muscle),  $\Delta T$  = Temperature increase due to RF

exposure.

Or

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

Where:

 $\sigma$  = Simulated tissue conductivity,

 $\rho$  = Tissue density (kg/m<sup>3</sup>).



**Picture 4: Device Holder** 

## 5.5 Other Test Equipment

## 5.5.1 Device Holder for Transmitters

In combination with the Generic Twin Phantom V3.0, the Mounting Device (POM) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatable positioned according to the FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, 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 Thickness2±0. l mmFilling VolumeApprox. 20 litersDimensions810 x l000 x 500 mm (H x L x W)AvailableSpecial



Picture 5: Generic Twin Phantom



## 5.6 Equivalent Tissues

The liquid used for the frequency range of 800-2000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl 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 Tisst			
MIXTURE %	FREQUENCY 835MHz		
Water	41.45		
Sugar	56.0		
Salt	1.45		
Preventol	0.1		
Cellulose	1.0		
Dielectric Parameters Target Value	f=850MHz ε=41.5 σ=0.90		
MIXTURE %	FREQUENCY 1900MHz		
Water	55.242		
Glycol monobutyl	44.452		
Salt	0.306		
Dielectric Parameters Target Value	f=1900MHz ε=40.0 σ=1.40		
MIXTURE %	FREQUENCY 2450MHz		
Water	58.79		
Glycol monobutyl	41.15		
Salt	0.06		
Dielectric Parameters Target Value	f=2450MHz ε=39.2 σ=1.80		
Table 2. Composition of the Body Tissu	sue Equivalent Matter		
MIXTURE %	FREQUENCY 835MHz		
Water	52.5		
Sugar	45.0		
Salt	1.4		
Preventol	0.1		
Cellulose	1.0		
Dielectric Parameters Target Value	f=850MHz ε=55.2 σ=0.97		
MIXTURE %	FREQUENCY 1900MHz		
Water	69.91		
Glycol monobutyl	29.96		

0.13

**FREQUENCY 2450MHz** 

72.60

27.22

0.18

ε=53.3

σ=1.52

ε=52.7 σ=1.95

f=1900MHz

f=2450MHz

Table 1. Composition of the Head Tissue Equivalent Matter	uvalent Matter	ad Tissue	of the He	position	. Comp	Table 1
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Salt

**Dielectric Parameters Target Value** 

**MIXTURE %** 

Water

**Glycol monobutyl** 

Salt

**Dielectric Parameters Target Value** 



### **5.7 System Specifications**

### **Specifications**

 Positioner:
 Stäubli Unimation Corp. Robot Model: RX90L

 Repeatability:
 ±0.02 mm

 No. of Axis:
 6

 Data Acquisition Electronic (DAE) System

 Cell Controller

 Processor:
 Pentium III

 Clock Speed:
 800 MHz

 Operating System:
 Windows 2000

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

 Software:
 DASY4 software

 Connecting Lines:
 Optical downlink for data and status info.

 Optical uplink for commands and clock
 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 for the EUT. In all cases, the measured 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 CMU-200. These measurements were done at low, middle and high channels.

### 6.2.2 Measurement result

	•				
	Conducted Power (dBm)				
CDMA(RC3)	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
835MHz	24.5	24.88	24.75		
CDMA(RC1)	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
835MHz	24.4	24.81	24.63		
EVDO 835	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
Rev0	24.45	24.81	24.65		
EVDO 835	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
RevA	24.48	24.82	24.68		
		Conducted Power (dBm)			
CDMA(RC3)	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)		
1900MHz	24.24	24.20	24.22		

Table 3: The conducted power for CDMA 835/1900



CDMA(RC1)	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
1900MHz	24.18	24.17	24.19
EVDO 1900	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
Rev0	24.07	24.05	24.06
EVDO 1900	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)
RevA	24.22	24.18	24.19

### Hotspot:

There is power reduction enabled for this model CDMA and EVDO Rev0&RevA. When Wi-Fi Hotspot mode is activated, whatever the cellular data connection (1xRTT/EVDO) is active or not, an automatic RF power reduction is activated and reduces the maximum output RF power level, please refer to below table for detailed info. When the device is in Wi-Fi hotspot mode, and cellular data connection (1xRTT/EVDO) is active, if there are incoming or outgoing voice calls, the data connection (1xRTT/EVDO) will stop, but Wi-Fi Hotspot mode will still be on, and the RF power reduction will still be activated. When Wi-Fi Hotspot mode is deactivated, the RF power reduction is deactivated, and the RF output power levels return to their normal RF power level. The tables below show the measured powers with hotspot.

	Conducted Power (dBm)				
CDMA(RC3)	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
835MHz	22.93	23.36	23.13		
CDMA(RC1)	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
835MHz	22.87	23.24	23.08		
EVDO 835	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
Rev0	22.86	23.19	23.05		
EVDO 835	Channel 777(848.31MHz)	Channel 384(836.52MHz)	Channel 1013(824.7MHz)		
RevA	22.89	23.21	23.09		
		Conducted Power (dBm)			
CDMA(RC3)	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)		
1900MHz	21.14	21.03	21.10		
CDMA(RC3)	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)		
1900MHz	21.06	21.05	21.07		
EVDO 1900	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)		
Rev0	21.03	20.94	20.95		
EVDO 1900	Channel 1175(1908.75MHz)	Channel 600(1880MHz)	Channel 25(1851.25MHz)		
RevA	21.09	20.98	21.01		

Table 4: The conducted power for CDMA 835/1900(hotspot on)

According to the KDB 941225 D01, the SAR for RC1 and EVDO are not required. Because the maximum average output of each channel in RC1 and EVDO is less than 0.25dB higher than that measured in RC3.

### 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 9 to Table 16 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 5: Dielectric Performance of Head Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 40%.						
Liquid temperature during the test: 22.5°C						
Measurement Date : 835 MHz Aug 25, 2011 1900 MHz Aug 26, 2011 2450 MHz Aug 31, 2011						
/ Frequency Permittivity $\epsilon$ Conductivity $\sigma$ (S/m)						
	835 MHz	41.5	0.90			
Target value	1900 MHz	40.0	1.40			
	2450 MHz	39.2	1.80			
Measurement value	835 MHz	41.2	0.88			
(Average of 10 tests)	1900 MHz	39.8	1.39			
	2450 MHz	39.7	1.82			

### Table 6: Dielectric Performance of Body Tissue Simulating Liquid

Measurement is made at temperature 23.0 °C and relative humidity 40%.						
Liquid temperature during the test: 22.5°C						
Measurement Date : 835 MHz Aug 25, 2011 1900 MHz Aug 26, 2011 2450 MHz Aug 31, 2011						
/ Frequency Permittivity ε Conductivity σ (S/m)						
	835 MHz	55.2	0.97			
Target value	1900 MHz	53.3	1.52			
	2450 MHz	52.7	1.95			
Measurement value	835 MHz	54.4	0.95			
(Average of 10 tests)	1900 MHz	54.0	1.54			
	2450 MHz	52.4	1.94			

## 7.2 System Validation

### Table 7: System Validation of Head

 Measurement is made at temperature 23.0 °C and relative humidity 40%.

 Liquid temperature during the test: 22.5°C

 Measurement Date : 835 MHz Aug 25, 2011
 1900 MHz Aug 26, 2011
 2450 MHz Aug 31, 2011

 Frequency

 Permittivity ε

	<b>D</b> 1	Frequency	Permittivity E	Conductivity of (S/m)
	Dipole calibration	835 MHz	41.6	0.92
Liquid	Target value	1900 MHz	39.6	1.40
parameters		2450 MHz	39.0	1.74
•	Actural	835 MHz	41.2	0.88
	Measurement	1900 MHz	39.8	1.39
	value	2450 MHz	39.7	1.82



	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
Verification results	Frequency	10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
results	835 MHz	6.12	9.41	5.8	9.16	-5.23%	-2.66%
	1900 MHz	20.1	39.4	19.56	38.6	-2.69%	-2.03%
	2450 MHz	24.6	52.4	23.68	51.44	-3.74%	-1.83%

Note: The forward power is 250mW. Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

Table 8: S	ystem Validation	of Body						
Measurement	Measurement is made at temperature 23.0 °C and relative humidity 40%.							
Liquid temper	ature during the t	est: 22.5°C						
Measurement Date : 835 MHz Aug 25, 2011 1900 MHz Aug 26, 2011 2450 MHz Aug 31, 2011								
		Frequ	iency	Permit	tivity ε	Conductiv	ity σ (S/m)	
	Dipole calibration	835	MHz	54	.5	0.9	97	
Liquid	Target value	1900	MHz	52	2.5	1.5	51	
parameters		2450 MHz		52.5		1.95		
	Actural	835 MHz		54.4		0.95		
	Measurement value	1900	1900 MHz		54.0		1.54	
	value	2450 MHz		52.4		1.94		
	Frequency	Target (W/		Measure (W/	ed value ′kg)	Devia	ation	
	Frequency	10 g	1 g	10 g	1 g	10 g	1 g	
Verification		Average	Average	Average	Average	Average	Average	
results	835 MHz	6.24	9.57	6.08	9.6	-2.56%	0.31%	
	1900 MHz	20.9	41.4	20.72	41.04	-0.86%	-0.87%	
	2450 MHz	23.9	51.6	23.64	51.44	-1.09%	-0.31%	

Note: The forward power is 250mW. Target values are the data of the dipole validation results, please check Annex F for the Dipole Calibration Certificate.

#### Validatio f D .



## 7.3 Summary of Measurement Results

#### Table 9: SAR Values (835MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	
	2.0	1.6	Power
Test Case	Measurem	ent Result	Drift
	(W/	′kg)	(dB)
	10 g	1 g	
	Average	Average	
Left hand, Touch cheek, High frequency (See Fig.1)	0.643	0.856	-0.147
Left hand, Touch cheek, Mid frequency (See Fig.2)	0.608	0.804	-0.030
Left hand, Touch cheek, Low frequency (See Fig.3)	0.442	0.583	0.179
Left hand, Tilt 15 Degree, High frequency (See Fig.4)	0.377	0.503	0.078
Left hand, Tilt 15 Degree, Mid frequency (See Fig.5)	0.394	0.520	-0.00469
Left hand, Tilt 15 Degree, Low frequency (See Fig.6)	0.280	0.368	0.025
Right hand, Touch cheek, High frequency (See Fig.7)	0.660	0.876	0.098
Right hand, Touch cheek, Mid frequency (See Fig.8)	0.634	0.837	0.158
Right hand, Touch cheek, Low frequency (See Fig.9)	0.489	0.645	-0.166
Right hand, Tilt 15 Degree, High frequency (See Fig.10)	0.412	0.549	0.026
Right hand, Tilt 15 Degree, Mid frequency (See Fig.11)	0.431	0.569	-0.070
Right hand, Tilt 15 Degree, Low frequency (See Fig.12)	0.329	0.433	-0.013

#### Table 10: SAR Values (1900MHz-Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	
	2.0	1.6	Power
Test Case	Measurem	ent Result	Drift
	(W)	′kg)	(dB)
	10 g	1 g	
	Average	Average	
Left hand, Touch cheek, High frequency (See Fig.13)	0.604	1.03	-0.119
Left hand, Touch cheek, Mid frequency (See Fig.14)	0.626	1.07	-0.169
Left hand, Touch cheek, Low frequency (See Fig.15)	0.683	1.15	-0.004
Left hand, Tilt 15 Degree, High frequency (See Fig.16)	0.375	0.593	-0.085
Left hand, Tilt 15 Degree, Mid frequency (See Fig.17)	0.389	0.609	-0.028
Left hand, Tilt 15 Degree, Low frequency (See Fig.18)	0.418	0.647	0.039
Right hand, Touch cheek, High frequency (See Fig.19)	0.677	1.16	-0.012
Right hand, Touch cheek, Mid frequency (See Fig.20)	0.672	1.14	0.021
Right hand, Touch cheek, Low frequency (See Fig.21)	0.734	1.24	-0.102
Right hand, Tilt 15 Degree, High frequency (See Fig.22)	0.328	0.551	-0.005
Right hand, Tilt 15 Degree, Mid frequency (See Fig.23)	0.312	0.516	0.045
Right hand, Tilt 15 Degree, Low frequency(See Fig.24)	0.316	0.512	-0.053



Limit of SAR (W/kg)	<b>10 g</b> <b>Average</b> 2.0	<b>1g</b> <b>Average</b> 1.6	Power
Test Case	Measurement Result (W/kg)		Drift (dB)
	10 g Average	1 g Average	
Body, Towards Ground, High frequency with AP OFF (See Fig.25)	0.790	1.08	-0.003
Body, Towards Ground, Mid frequency with AP OFF (See Fig.26)	0.728	0.988	-0.063
Body, Towards Ground, Low frequency with AP OFF (See Fig.27)	0.708	0.960	-0.010
Body, Towards Phantom, High frequency with AP OFF (See Fig.28)	0.700	0.945	0.027
Body, Towards Phantom, Mid frequency with AP OFF (See Fig.29)	0.611	0.823	-0.184
Body, Towards Phantom, Low frequency with AP OFF (See Fig.30)	0.571	0.766	-0.021
Body, Left Side, Mid frequency with AP OFF(See Fig.31)	0.477	0.675	-0.170
Body, Right Side, Mid frequency with AP OFF(See Fig.32)	0.505	0.713	-0.077
Body, Bottom Side, Mid frequency with AP OFF(See Fig.33)	0.035	0.053	0.073
Body, Towards Ground, High frequency with Headset CCB3001A10C1 and AP OFF (See Fig.34)	0.759	1.04	-0.023

#### Table 11: SAR Values (835MHz-Body) – AP off 15mm

## Table 12: SAR Values (835MHz-Body) – AP on 10mm

Limit of SAR (W/kg)	<b>10 g</b> <b>Average</b> 2.0	1g Average 1.6	Power
Test Case	Measu Result	Drift (dB)	
	10 g Average	1 g Average	
Body, Towards Ground, High frequency with AP ON (See Fig.35)	0.724	0.986	-0.035
Body, Towards Ground, Mid frequency with AP ON (See Fig.36)	0.672	0.916	-0.006
Body, Towards Ground, Low frequency with AP ON (See Fig.37)	0.681	0.922	0.025
Body, Towards Phantom, Mid frequency with AP ON (See Fig.38)	0.544	0.732	0.083
Body, Left Side, Mid frequency with AP ON(See Fig.39)	0.452	0.658	-0.072
Body, Right Side, Mid frequency with AP ON(See Fig.40)	0.466	0.675	-0.118
Body, Bottom Side, Mid frequency with AP ON(See Fig.41)	0.039	0.066	-0.079
Body, Towards Ground, High frequency with Headset CCB3001A10C1 and AP ON (See Fig.42)	0.711	0.969	-0.135



Limit of SAR (W/kg)	<b>10 g</b> Average 2.0	<b>1g</b> Average 1.6	Power
Test Case	Measu Result	Drift (dB)	
	10 g Average	1 g Average	
Body, Towards Ground, High frequency with AP OFF (See Fig.43)	0.676	1.09	0.049
Body, Towards Ground, Mid frequency with AP OFF (See Fig.44)	0.702	1.13	-0.012
Body, Towards Ground, Low frequency with AP OFF (See Fig.45)	0.753	1.22	-0.133
Body, Towards Phantom, High frequency with AP OFF (See Fig.46)	0.442	0.717	0.078
Body, Left Side, Mid frequency with AP OFF(See Fig.47)	0.127	0.210	0.063
Body, Right Side, Mid frequency with AP OFF(See Fig.48)	0.171	0.278	0.030
Body, Bottom Side, Mid frequency with AP OFF(See Fig.49)	0.400	0.677	-0.068
Body, Towards Ground, Low frequency with Headset CCB3001A10C1 and AP OFF (See Fig.50)	0.703	1.14	-0.113

#### Table 13: SAR Values (1900MHz-Body) – AP off 15mm

## Table 14: SAR Values (1900MHz-Body) – AP on 10mm

Limit of SAR (W/kg)	<b>10 g</b> <b>Average</b> 2.0	<b>1g</b> Average 1.6	Power
Test Case		rement (W/kg)	Drift (dB)
	10 g Average	1 g Average	
Body, Towards Ground, High frequency with AP ON (See Fig.51)	0.482	0.795	-0.054
Body, Towards Ground, Mid frequency with AP ON (See Fig.52)	0.502	0.833	-0.070
Body, Towards Ground, Low frequency with AP ON (See Fig.53)	0.651	1.07	0.081
Body, Towards Phantom, High frequency with AP ON (See Fig.54)	0.324	0.543	0.101
Body, Left Side, Mid frequency with AP ON(See Fig.55)	0.120	0.120	0.010
Body, Right Side, Mid frequency with AP ON(See Fig.56)	0.126	0.126	-0.137
Body, Bottom Side, Mid frequency with AP ON(See Fig.57)	0.295	0.295	0.021
Body, Towards Ground, Low frequency with Headset CCB3001A10C1 and AP ON (See Fig.58)	0.614	1.01	0.101



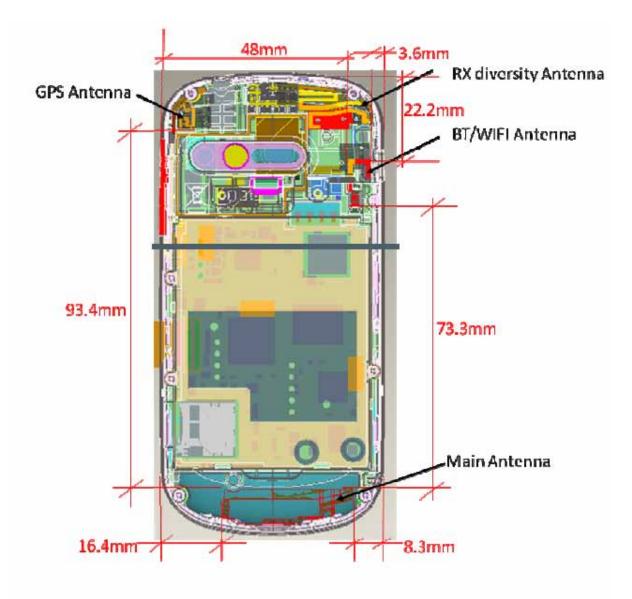
## 7.4 Simultaneous TX SAR Considerations

For this device, BT/WiFi transmitter can transmit simultaneously with the main transmitter (data and voice). See below for simultaneous transmission logic table:

/	CDMA	WiFi	BT
CDMA	/	Yes	Yes
WiFi	Yes	/	/
BT	Yes	/	/

The BT and WiFi will be evaluated separately to determine simultaneous transmission SAR test exclusion with CDMA results according to the procedures in KDB 648474.

The distance between BT/WiFi antenna and main antenna is >5cm. 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	3.14	4.52	4.79
Output Power(dBm)	5.14	4.52	4.79

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  $\leq 2P_{Ref}$  and its antenna is >5cm from other antenna

**Note:** Power thresholds ( $P_{Ref}$ ) is derived from multiples of  $0.5 \times 60/f_{(GHz)}$ , that is 12mW (10.79dBm) for BT frequency.

The average conducted power for WiFi is as following:

802.11b (dBm)

Channel\data	1Mbps	2Mbps	5.5Mbps	11Mbps
rate				
1	13.53	13.68	13.73	13.31
6	13.60	13.84	13.80	13.40
11	13.52	13.73	13.77	13.41

802.11g (dBm)

Channel\data	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
rate								
1	12.52	12.39	12.30	11.97	11.69	11.34	11.01	11.01
6	12.62	12.46	12.35	12.06	12.12	11.61	11.03	10.91
11	12.83	12.75	12.65	12.45	12.23	11.86	11.54	11.33

802.11n (dBm)

Channel\data	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
rate								
1	11.03	11.00	10.72	11.00	10.88	10.73	10.66	10.68
6	11.24	10.94	10.92	10.95	10.90	10.95	10.74	10.73
11	11.21	11.18	11.13	11.14	11.49	11.12	11.21	11.14

The peak conducted power for WiFi is as following:

802.11b (dBm)

Channel\data	1Mbps	2Mbps	5.5Mbps	11Mbps
rate				
1	16.93	17.02	18.51	20.02
6	/	/	/	20.58
11	/	/	/	20.63



#### 802.11g (dBm)

Channel\data	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
rate								
1	21.01	21.07	20.73	20.85	21.27	21.18	21.19	21.19
6	/	/	/	/	21.37	/	/	/
11	/	/	/	/	21.76	/	/	/

### 802.11n (dBm)

Channel\data	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
rate								
1	21.40	21.34	21.42	21.36	21.34	21.35	21.33	21.33
6	/	/	21.49	/	/	/	/	/
11	/	1	21.93	/	/	/	/	/

According to the conducted power measurement result, we can draw the conclusion that: stand-alone SAR for WiFi should be performed. Then, simultaneous transmission SAR for WiFi is considered with measurement results of RF and WiFi.

SAR is not required for 802.11g/n channels if the output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels, and for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate. According to the above conducted power, the EUT should be tested for "802.11b, 1Mbps, channel 6".

### Table 15: SAR Values (WIFI 802.b -Head)

Limit of SAR (W/kg)	10 g Average	1 g Average	Bower
	2.0	1.6	Power Drift
Test Case	Measurement	(dB)	
	10 g Average	1 g Average	(ub)
Left hand, Touch cheek, 1Mbps,channel 6 (See Fig.59)	0.024	0.046	-0.042
Left hand, Tilt 15 Degree, 1Mbps,channel 6 (See Fig.60)	0.018	0.034	0.186
Right hand, Touch cheek, 1Mbps,channel 6 (See Fig.61)	0.043	0.087	0.061
Right hand, Tilt 15 Degree, 1Mbps, channel 6 (See Fig.62)	0.023	0.039	0.112

Table 16: SAR Values (WIFI 802.b -Body)

Limit of SAR (W/kg)	10 g Average	1 g Average	Devrer
	2.0	Power Drift	
Test Case	Measurement	(dB)	
	10 g Average	1 g Average	(ub)
Toward Phantom, 1Mbps, channel 6 (See Fig.63)	0.016	0.028	0.199
Toward Ground, 1Mbps, channel 6 (See Fig.64)	0.083	0.159	0.107
Left Side, 1Mbps,channel 6 (See Fig.65)	0.050	0.098	-0.042
Top Side, 1Mbps,channel 6 (See Fig.66)	0.019	0.033	-0.110

Table 17: The sum of SAR values for CDMA and WiFi



	Position	CDMA	WiFi	Sum	
Maximum SAR	Right hand, Touch cheek	1.24	0.087	1 207	
value for Head	Right hand, Touch cheek	1.24	0.007	1.327	
Maximum SAR	Toward Cround	1.00	0.150	4 270	
value for Body	Toward Ground	1.22	0.159	1.379	

According to the above tables, the sum of SAR values for CDMA and WiFi <1.6W/kg. So simultaneous transmission SAR are not required for WiFi transmitter.

## 7.5 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 **CDMA 1900 Head**, Right hand, Touch cheek, Low frequency **(Table 10)**, and the value are: **0.734(10g)**, **1.24(1g)**.

No.	Error Description	Туре	Uncertainty	Probably	Div.	(Ci)	(Ci)	Std.	Std.	Degree
			value	Distribution		1g	10g	Unc.	Unc.	of
								(1g)	(10g)	freedom
Meas	Measurement system									
1	Probe calibration	В	5.5	Ν	1	1	1	5.5	5.5	$\infty$
2	Isotropy	В	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	$\infty$
3	Boundary effect	В	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
4	Linearity	В	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	$\infty$
5	Detection limit	В	1.0	Ν	1	1	1	0.6	0.6	$\infty$
6	Readout electronics	В	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	$\infty$
7	Response time	В	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
8	Integration time	В	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	$\infty$
9	RF ambient conditions-noise	В	0	R	$\sqrt{3}$	1	1	0	0	×
10	RF ambient conditions-reflection	В	0	R	$\sqrt{3}$	1	1	0	0	×
11	Probe positioned mech. restrictions	В	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	x
12	Probe positioning with respect to phantom shell	В	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	œ
13	Post-processing	В	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
Test	Test sample related									

## 8 Measurement Uncertainty



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14	Test sample positioning	А	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	А	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	В	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	8
Phar	ntom and set-up									
17	Phantom uncertainty	В	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	x
18	Liquid conductivity (target)	В	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	8
19	Liquid conductivity (meas.)	А	2.06	Ν	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	В	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	8
21	Liquid permittivity (meas.)	А	1.6	N	1	0.6	0.49	1.0	0.8	521
0	Combined standard uncertainty	<i>u</i> <sub>c</sub> =	$= \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.25	9.12	257
-	inded uncertainty fidence interval of	l	$u_e = 2u_c$					18.5	18.2	

## **9 MAIN TEST INSTRUMENTS**

### Table 17: List of Main Instruments

No.	Name	Туре	Serial Number	Calibration Date	Valid Period	
01	Network analyzer	HP 8753E	US38433212	August 3,2011	One year	
02	Power meter	NRVD	102083	September 10, 2011	One year	
03	Power sensor	NRV-Z5	100542	September 10, 2011		
04	Signal Generator	E4438C	MY49070393	November 13, 2010	One Year	
05	Amplifier	VTL5400	0505	No Calibration Requested		
06	BTS	8960	MY48365192	November 18, 2010	One year	
07	E-field Probe	SPEAG ES3DV3	3149	September 25, 2010	One year	
08	E-field Probe	SPEAG EX3DV4	3617	July 8, 2011	One year	
09	DAE	SPEAG DAE4	771	November 21, 2010	One year	
10	Dipole Validation Kit	SPEAG D835V2	443	February 26, 2010	Two years	
11	Dipole Validation Kit	SPEAG D1900V2	541	February 26, 2010	Two years	

\*\*\*END OF REPORT BODY\*\*\*



## ANNEX A MEASUREMENT PROCESS

The evaluation was performed with the following procedure:

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

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

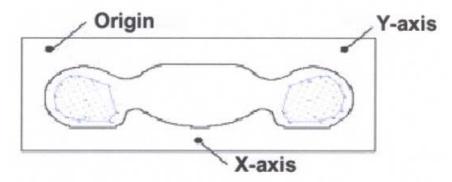
Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7 x 7 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

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  $x \sim y$  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: Left Hand Touch Cheek Position





Picture B5: Left Hand Tilt 15° Position



Picture B6: Right Hand Touch Cheek Position

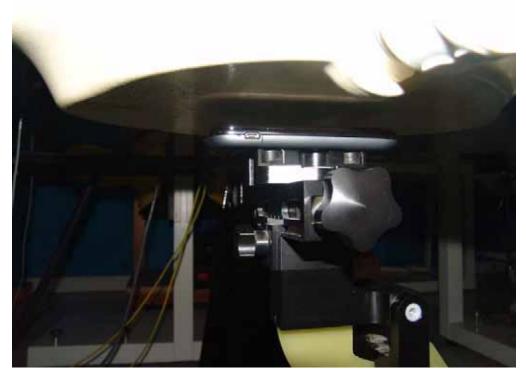




Picture B7: Right Hand Tilt 15° Position

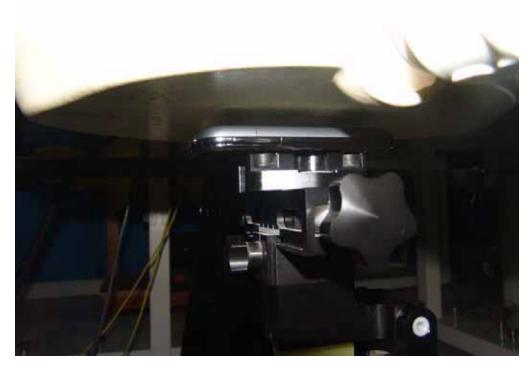
### Test positions for body:

The Body SAR is tested at the following 6 test positions with the distance =15mm (or 10mm) between the EUT and the phantom bottom :

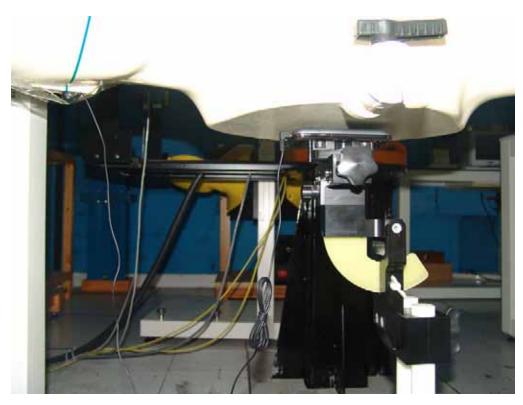


Picture B8: Forward Surface





Picture B9: Back Surface



Picture B9-1: Back Surface with Headset



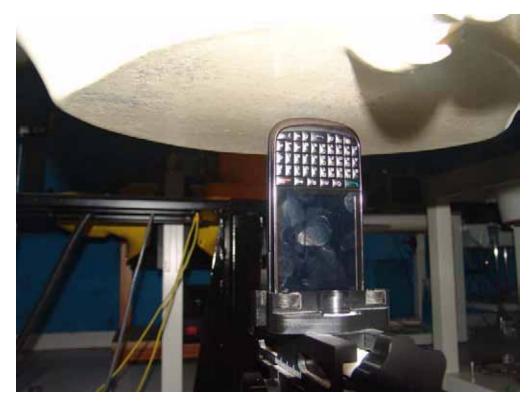


Picture B10: Left Side



Picture B11: Right Side





Picture B12: Bottom Side



Picture B13: Top Side



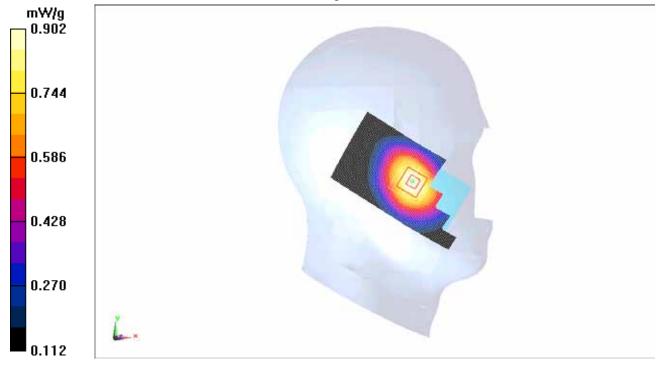
## ANNEX C GRAPH RESULTS

## 835 Left Cheek High

Date/Time: 2011-8-25 7:59:13 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek High/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.908 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 8.65 V/m; Power Drift = -0.147 dB Peak SAR (extrapolated) = 1.05 W/kg SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.643 mW/g Maximum value of SAR (measured) = 0.902 mW/g







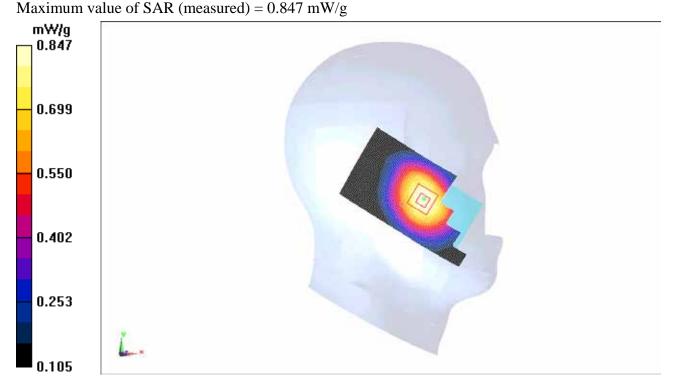
## 835 Left Cheek Middle

Date/Time: 2011-8-25 8:14:52 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.88$  mho/m;  $\epsilon r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Middle/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.861 mW/g

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

Reference Value = 8.36 V/m; Power Drift = -0.030 dB Peak SAR (extrapolated) = 0.982 W/kg SAR(1 g) = 0.804 mW/g; SAR(10 g) = 0.608 mW/g Maximum value of SAB (measured) = 0.847 mW/g







## 835 Left Cheek Low

Date/Time: 2011-8-25 8:29:07 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.615 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 7.16 V/m; Power Drift = 0.179 dB Peak SAR (extrapolated) = 0.714 W/kg SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.442 mW/g Maximum value of SAR (measured) = 0.615 mW/g

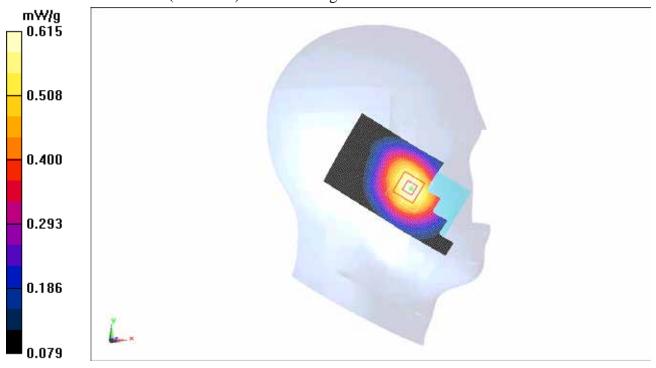


Fig. 3 835 MHz CH1013



## 835 Left Tilt High

Date/Time: 2011-8-25 8:46:32 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt High/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.522 mW/g

**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.8 V/m; Power Drift = 0.078 dB Peak SAR (extrapolated) = 0.635 W/kg

SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.377 mW/g

Maximum value of SAR (measured) = 0.528 mW/g

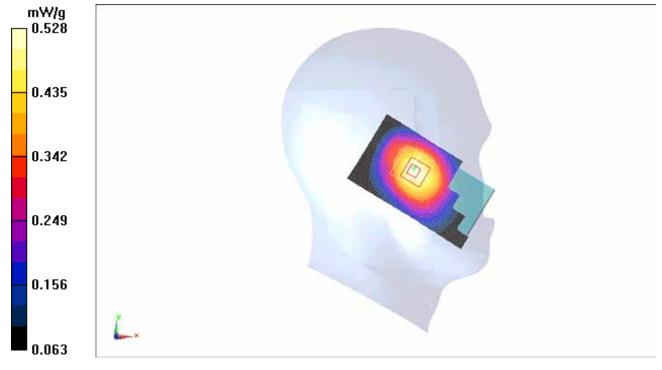


Fig.4 835MHz CH777



## 835 Left Tilt Middle

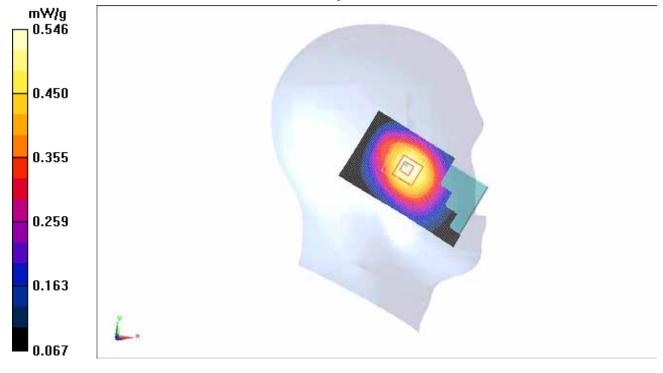
Date/Time: 2011-8-25 9:01:45 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.88$  mho/m;  $\epsilon r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.545 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 = -0.00469 dB Peak SAR (extrapolated) = 0.652 W/kg

SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.394 mW/g

Maximum value of SAR (measured) = 0.546 mW/g







## 835 Left Tilt Low

Date/Time: 2011-8-25 9:15:33 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.382 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.4 V/m; Power Drift = 0.025 dB Peak SAR (extrapolated) = 0.463 W/kg SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.280 mW/g Maximum value of SAR (measured) = 0.385 mW/g

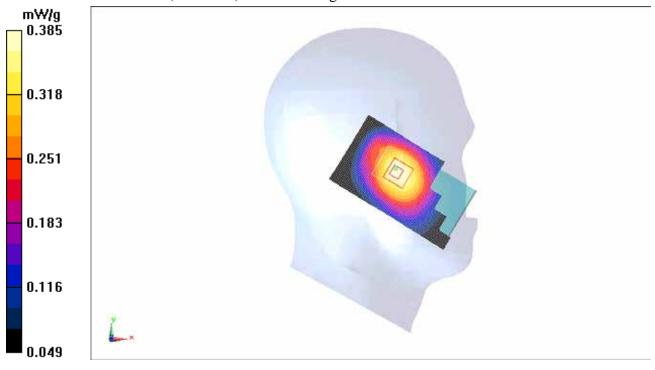


Fig. 6 835 MHz CH1013



# 835 Right Cheek High

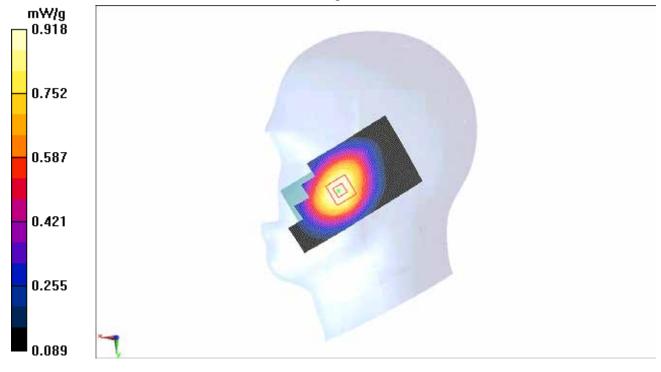
Date/Time: 2011-8-25 9:29:58 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek High/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.940 mW/g

**Cheek High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 8.32 V/m; Power Drift = 0.098 dB Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.660 mW/g

Maximum value of SAR (measured) = 0.918 mW/g







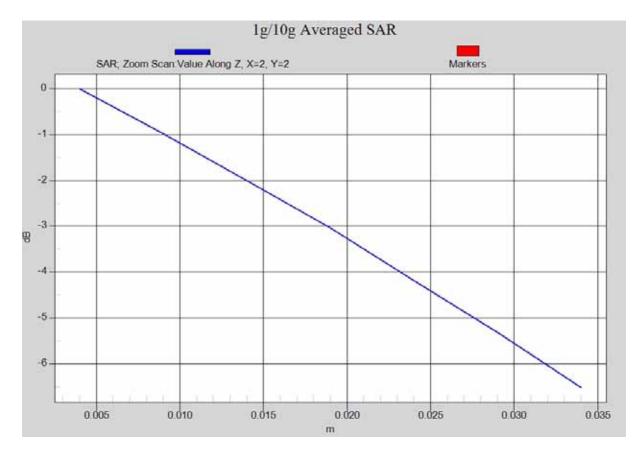


Fig. 7-1 Z-Scan at power reference point (835 MHz CH777)



# 835 Right Cheek Middle

Date/Time: 2011-8-25 9:49:11 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.88$  mho/m;  $\epsilon r = 41.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Middle/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.870 mW/g

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

Reference Value = 8.35 V/m; Power Drift = 0.158 dB Peak SAR (extrapolated) = 1.02 W/kg SAR(1 g) = 0.837 mW/g; SAR(10 g) = 0.634 mW/g Maximum value of SAR (measured) = 0.874 mW/g







## 835 Right Cheek Low

Date/Time: 2011-8-25 10:12:30 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Cheek Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.672 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 7.56 V/m; Power Drift = -0.166 dB Peak SAR (extrapolated) = 0.792 W/kg SAR(1 g) = 0.645 mW/g; SAR(10 g) = 0.489 mW/g Maximum value of SAR (measured) = 0.681 mW/g

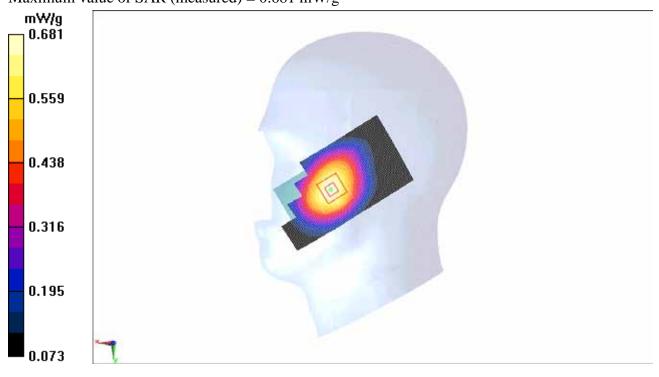


Fig. 9 835 MHz CH1013



## 835 Right Tilt High

Date/Time: 2011-8-25 10:28:02 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

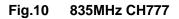
**Tilt High/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.571 mW/g

**Tilt High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 14.7 V/m; Power Drift = 0.026 dB Peak SAR (extrapolated) = 0.688 W/kg

SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.412 mW/g

Maximum value of SAR (measured) = 0.579 mW/g







# 835 Right Tilt Middle

Date/Time: 2011-8-25 10:45:46 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.88$  mho/m;  $\epsilon r = 41.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Middle/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.598 mW/g

**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 15.3 V/m; Power Drift = -0.070 dB Peak SAR (extrapolated) = 0.711 W/kg

SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.431 mW/g

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

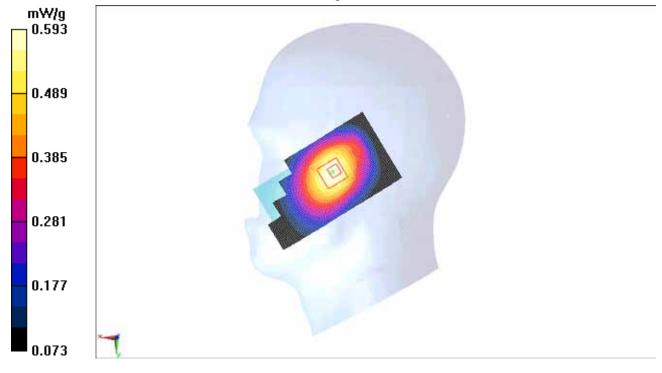


Fig.11 835 MHz CH384



#### 835 Right Tilt Low

Date/Time: 2011-8-25 11:02:36 Electronics: DAE4 Sn771 Medium: Head 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon r = 41.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.56, 6.56, 6.56)

**Tilt Low/Area Scan (51x91x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.454 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.7 V/m; Power Drift = -0.013 dB Peak SAR (extrapolated) = 0.539 W/kg SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.329 mW/g Maximum value of SAR (measured) = 0.455 mW/g



Fig. 12 835 MHz CH1013



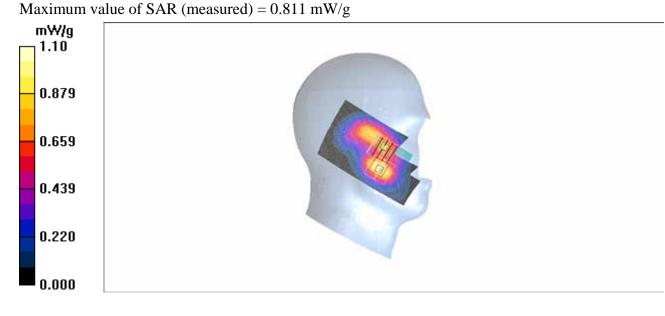
## 1900 Left Cheek High

Date/Time: 2011-8-26 8:12:33 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.10 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 13.6 V/m; Power Drift = -0.119 dB Peak SAR (extrapolated) = 1.64 W/kg SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.604 mW/g Maximum value of SAR (measured) = 1.14 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 13.6 V/m; Power Drift = -0.119 dB Peak SAR (extrapolated) = 1.15 W/kg SAR(1 g) = 0.773 mW/g; SAR(10 g) = 0.496 mW/g Maximum galaxy of SAB (measured) = 0.811 mW/g







# 1900 Left Cheek Middle

Date/Time: 2011-8-26 8:34:31 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.17 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.6 V/m; Power Drift = -0.169 dB Peak SAR (extrapolated) = 1.68 W/kg SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.626 mW/g Maximum value of SAR (measured) = 1.17 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.6 V/m; Power Drift = -0.169 dB Peak SAR (extrapolated) = 1.22 W/kgSAR(1 g) = 0.798 mW/g; SAR(10 g) = 0.518 mW/g Maximum value of SAR (measured) = 0.850 mW/g

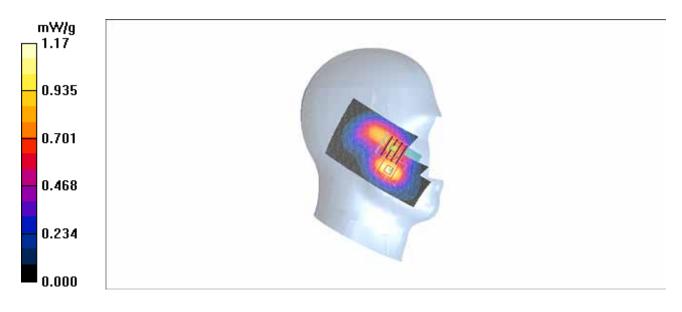


Fig. 14 1900 MHz CH600



## 1900 Left Cheek Low

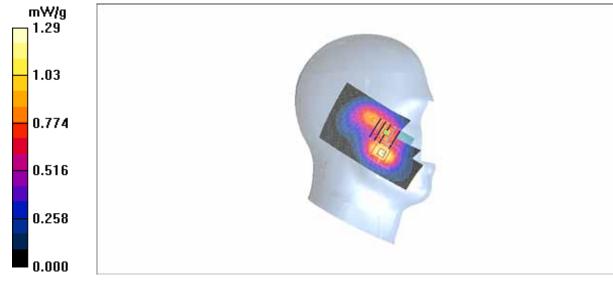
Date/Time: 2011-8-26 8:55:04 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.38$  mho/m;  $\epsilon r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.29 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 = -0.004 dB Peak SAR (extrapolated) = 1.80 W/kg SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.683 mW/gMaximum value of SAR (measured) = 1.26 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.6 V/m; Power Drift = -0.004 dB Peak SAR (extrapolated) = 1.30 W/kg SAR(1 g) = 0.866 mW/g; SAR(10 g) = 0.571 mW/g

Maximum value of SAR (measured) = 0.949 mW/g







### 1900 Left Tilt High

Date/Time: 2011-8-26 9:13:23 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.737 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 19.5 V/m; Power Drift = -0.085 dB Peak SAR (extrapolated) = 0.877 W/kg SAR(1 g) = 0.593 mW/g; SAR(10 g) = 0.375 mW/g Maximum value of SAR (measured) = 0.627 mW/g

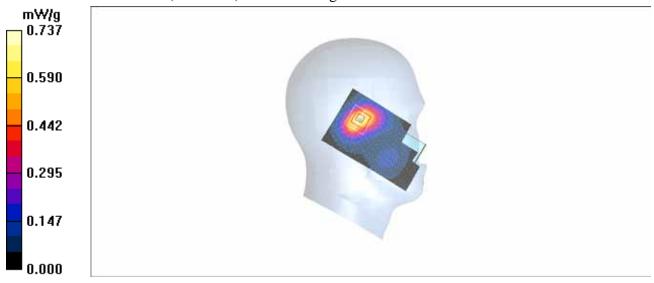


Fig.16 1900 MHz CH1175



## 1900 Left Tilt Middle

Date/Time: 2011-8-26 9:27:46 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.726 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 18.4 V/m; Power Drift = -0.028 dB Peak SAR (extrapolated) = 0.889 W/kg SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.389 mW/g Maximum value of SAR (measured) = 0.636 mW/g

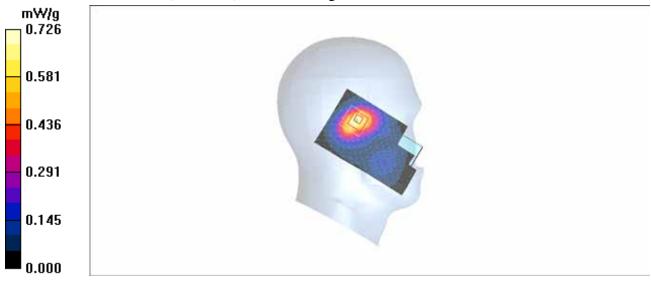


Fig. 17 1900 MHz CH600



#### 1900 Left Tilt Low

Date/Time: 2011-8-26 9:42:13 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.38$  mho/m;  $\epsilon r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.758 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 18.7 V/m; Power Drift = 0.039 dB Peak SAR (extrapolated) = 0.925 W/kg SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.418 mW/g

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

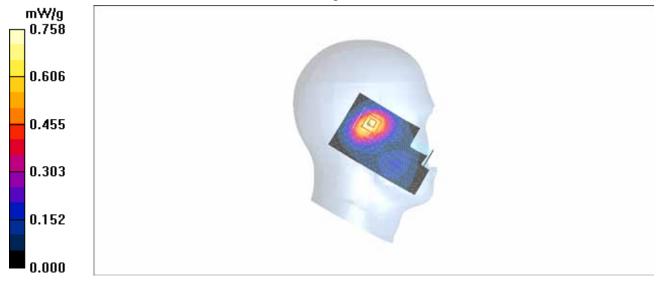


Fig. 18 1900 MHz CH25



# 1900 Right Cheek High

Date/Time: 2011-8-26 9:59:52 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.29 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 12.2 V/m; Power Drift = -0.012 dB Peak SAR (extrapolated) = 1.76 W/kg SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.677 mW/g Maximum value of SAR (measured) = 1.30 mW/g

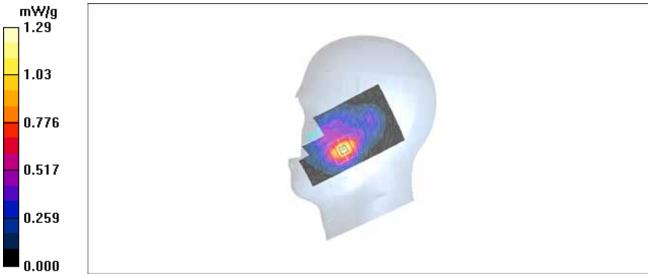


Fig. 19 1900 MHz CH1175



# 1900 Right Cheek Middle

Date/Time: 2011-8-26 10:15:04 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.25 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 = 0.021 dB Peak SAR (extrapolated) = 1.70 W/kg SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.672 mW/g Maximum value of SAR (measured) = 1.27 mW/g



Fig. 20 1900 MHz CH600



## 1900 Right Cheek Low

Date/Time: 2011-8-26 10:28:14 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.38$  mho/m;  $\epsilon r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Cheek Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.35 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 11.5 V/m; Power Drift = -0.102 dB Peak SAR (extrapolated) = 1.88 W/kg SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.734 mW/g

Maximum value of SAR (measured) = 1.39 mW/g

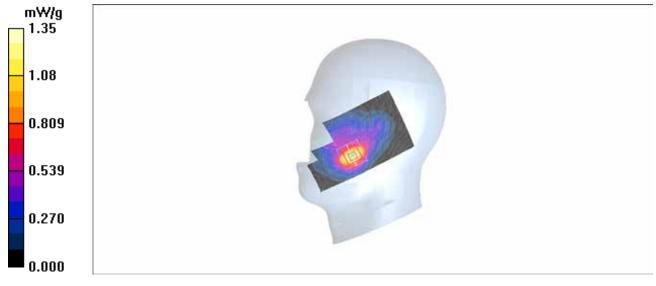


Fig. 21 1900 MHz CH25



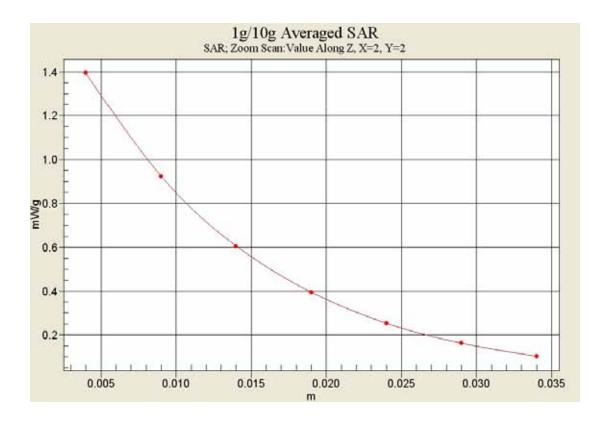


Fig. 21-1 Z-Scan at power reference point (1900 MHz CH25)



## **1900 Right Tilt High**

Date/Time: 2011-8-26 10:43:55 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.618 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 18.3 V/m; Power Drift = -0.005 dB Peak SAR (extrapolated) = 0.855 W/kg SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.328 mW/g Maximum value of SAR (measured) = 0.596 mW/g

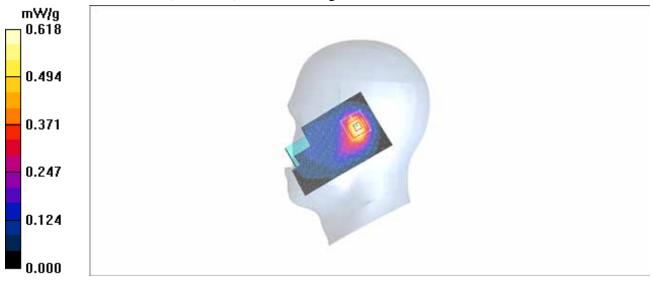


Fig. 22 1900 MHz CH1175



## 1900 Right Tilt Middle

Date/Time: 2011-8-26 10:59:35 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.39$  mho/m;  $\epsilon r = 39.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.573 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 = 0.045 dB Peak SAR (extrapolated) = 0.788 W/kg SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.312 mW/g Maximum value of SAR (measured) = 0.533 mW/g

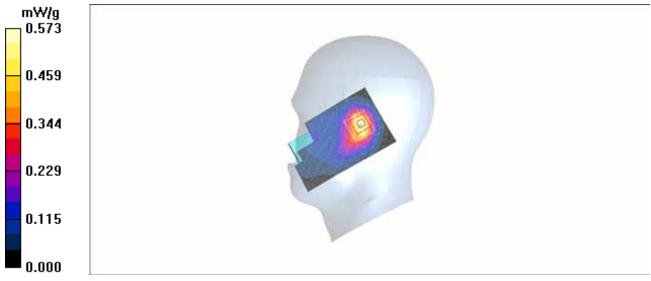


Fig.23 1900 MHz CH600



### **1900 Right Tilt Low**

Date/Time: 2011-8-26 11:17:57 Electronics: DAE4 Sn771 Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.38$  mho/m;  $\epsilon r = 39.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(5.03, 5.03, 5.03)

**Tilt Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.582 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 17.5 V/m; Power Drift = -0.053 dB Peak SAR (extrapolated) = 0.761 W/kg SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 0.538 mW/g

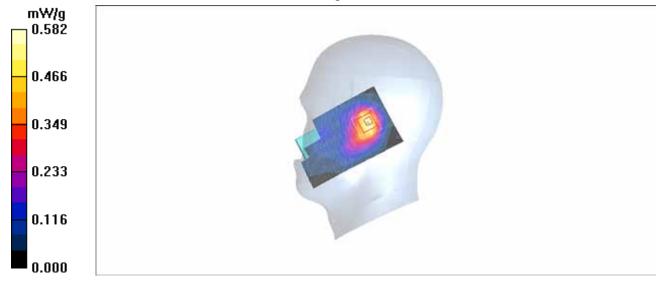


Fig.24 1900 MHz CH25



# 835 Body Towards Ground High with AP OFF

Date/Time: 2011-8-25 13:06:14 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.96$  mho/m;  $\epsilon r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.14 mW/g

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

Reference Value = 32.9 V/m; Power Drift = -0.003 dBPeak SAR (extrapolated) = 1.38 W/kgSAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.790 mW/gMaximum value of SAR (measured) = 1.14 mW/g

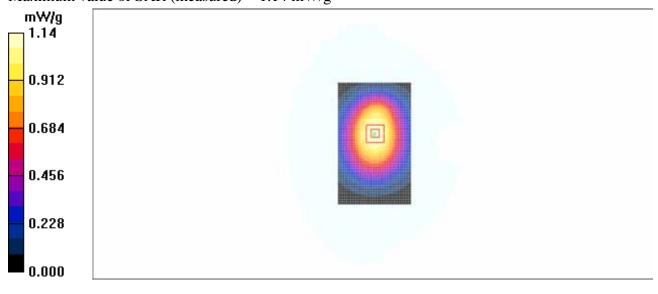


Fig. 25 835MHz CH777



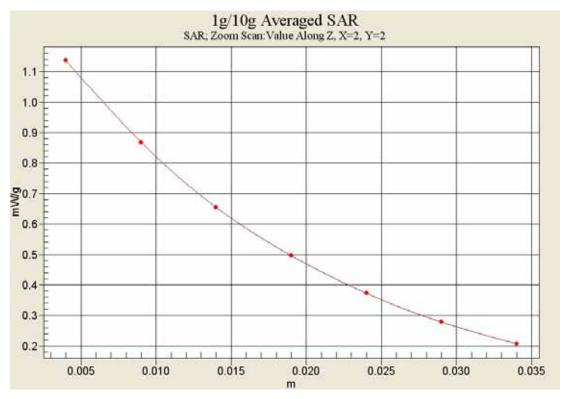


Fig. 25-1 Z-Scan at power reference point (835 MHz CH777)



### 835 Body Towards Ground Middle with AP OFF

Date/Time: 2011-8-25 13:25:11 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.06 mW/g

#### Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm Reference Value = 31.9 V/m; Power Drift = -0.063 dB Peak SAR (extrapolated) = 1.26 W/kg SAR(1 g) = 0.988 mW/g; SAR(10 g) = 0.728 mW/g Maximum value of SAR (measured) = 1.04 mW/g

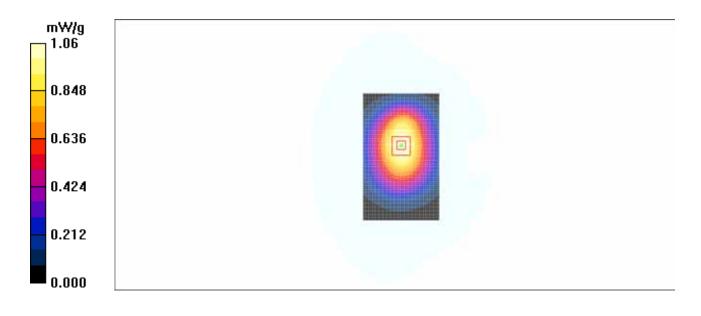


Fig. 26 835 MHz CH384



# 835 Body Towards Ground Low with AP OFF

Date/Time: 2011-8-25 13:43:52 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.01 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 31.1 V/m; Power Drift = -0.010 dB Peak SAR (extrapolated) = 1.22 W/kg SAR(1 g) = 0.960 mW/g; SAR(10 g) = 0.708 mW/g Maximum value of SAR (measured) = 1.01 mW/g

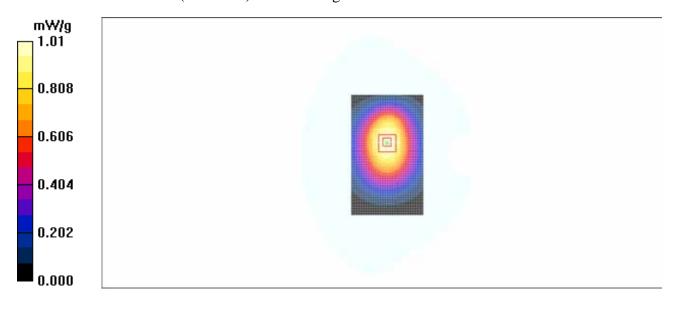


Fig. 27 835 MHz CH1013



## 835 Body Towards Phantom High with AP OFF

Date/Time: 2011-8-25 14:04:42 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.96$  mho/m;  $\epsilon r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Phantom High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.997 mW/g

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

Reference Value = 30.7 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.700 mW/g

Maximum value of SAR (measured) = 0.994 mW/g

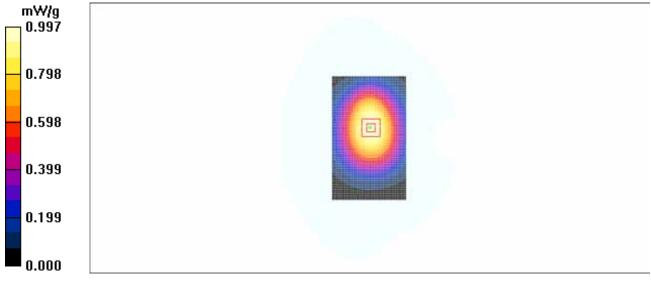


Fig. 28 835MHz CH777



## 835 Body Towards Phantom Middle with AP OFF

Date/Time: 2011-8-25 14:23:41 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Phantom Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.887 mW/g

#### Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm Reference Value = 29.5 V/m; Power Drift = -0.184 dB Peak SAR (extrapolated) = 1.06 W/kgSAR(1 g) = 0.823 mW/g; SAR(10 g) = 0.611 mW/g Maximum value of SAR (measured) = 0.865 mW/g

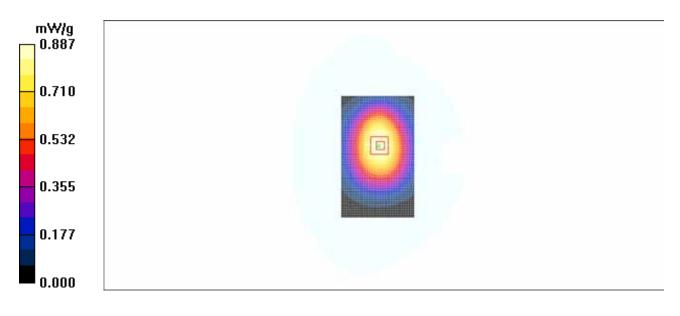


Fig. 29 835 MHz CH384



# 835 Body Towards Phantom Low with AP OFF

Date/Time: 2011-8-25 14:41:13 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Phantom Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.818 mW/g

Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 27.8 V/m; Power Drift = -0.021 dB Peak SAR (extrapolated) = 0.966 W/kg SAR(1 g) = 0.766 mW/g; SAR(10 g) = 0.571 mW/g Maximum value of SAR (measured) = 0.806 mW/g

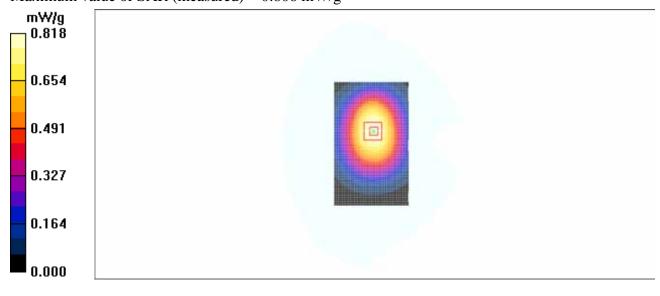


Fig. 30 835 MHz CH1013



# 835 Body Left Side Middle with AP OFF

Date/Time: 2011-8-25 15:06:42 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Left Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.743 mW/g

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

Reference Value = 27.1 V/m; Power Drift = -0.170 dB Peak SAR (extrapolated) = 0.908 W/kg SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.477 mW/g Maximum value of SAR (measured) = 0.719 mW/g

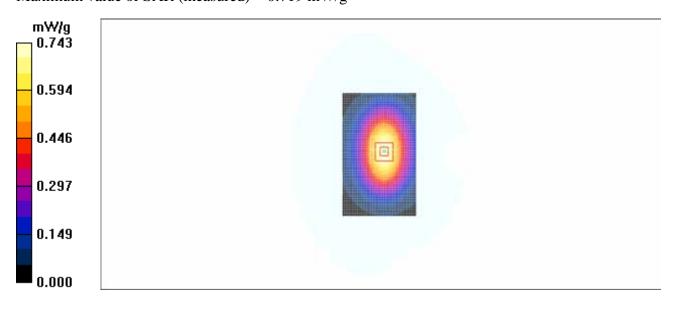


Fig. 31 835 MHz CH384



# 835 Body Right Side Middle with AP OFF

Date/Time: 2011-8-25 15:25:48 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Right Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.764 mW/g

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

Reference Value = 27.7 V/m; Power Drift = -0.077 dBPeak SAR (extrapolated) = 0.949 W/kgSAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.505 mW/g

Maximum value of SAR (measured) = 0.758 mW/g

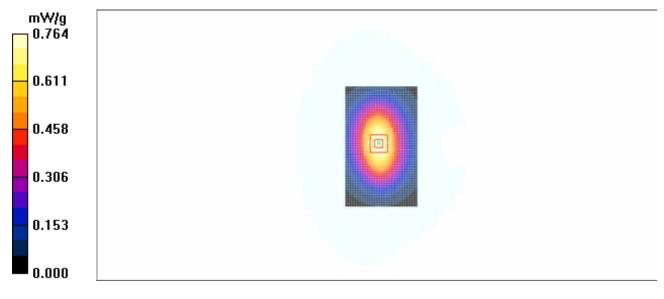


Fig. 32 835 MHz CH384



## 835 Body Bottom Side Middle with AP OFF

Date/Time: 2011-8-25 15:45:02 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Bottom Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.057 mW/g

Bottom Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 7.14 V/m; Power Drift = 0.073 dB Peak SAR (extrapolated) = 0.080 W/kg SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.035 mW/g Maximum value of SAR (measured) = 0.057 mW/g

Bottom Side Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 7.14 V/m; Power Drift = 0.073 dB Peak SAR (extrapolated) = 0.084 W/kg SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.052 mW/g

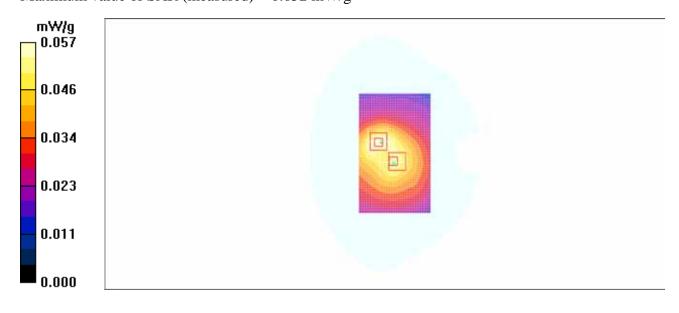


Fig. 33 835 MHz CH384



# 835 Body Towards Ground High with Headset CCB3001A10C1 and AP OFF

Date/Time: 2011-8-25 16:13:46 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.96$  mho/m;  $\epsilon r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:8.3 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.12 mW/g

**Toward Ground High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 32.2 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.35 W/kgSAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.759 mW/gMaximum value of SAR (measured) = 1.10 mW/g

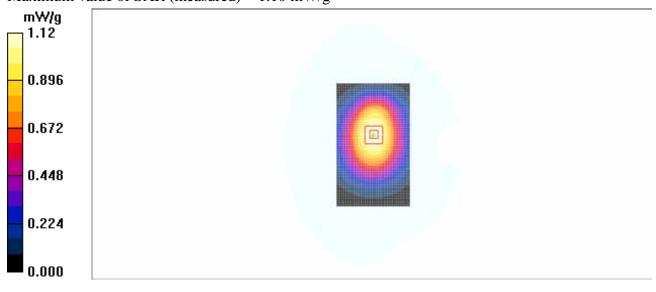


Fig. 34 835MHz CH777



# 835 Body Towards Ground High with AP ON

Date/Time: 2011-8-25 16:33:26 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.96$  mho/m;  $\epsilon r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.04 mW/g

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

Reference Value = 29.8 V/m; Power Drift = -0.035 dB Peak SAR (extrapolated) = 1.26 W/kg SAR(1 g) = 0.986 mW/g; SAR(10 g) = 0.724 mW/g Maximum value of SAR (measured) = 1.04 mW/g

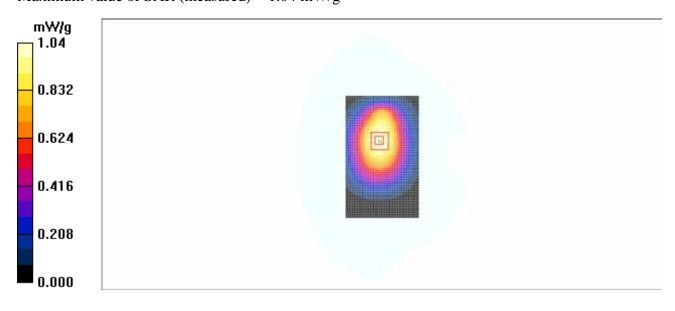


Fig. 35 835MHz CH777



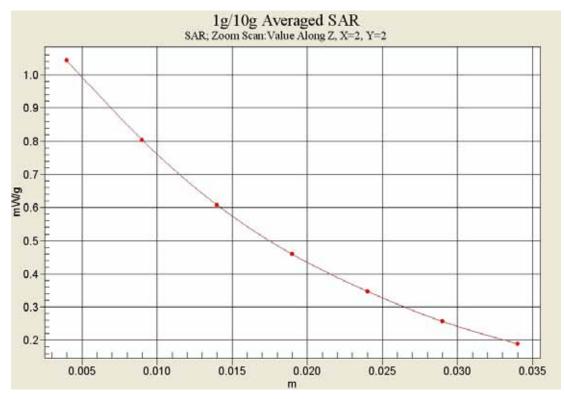


Fig. 35-1 Z-Scan at power reference point (835 MHz CH777)



## 835 Body Towards Ground Middle with AP ON

Date/Time: 2011-8-25 16:54:13 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.961 mW/g

#### Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm Reference Value = 28.5 V/m; Power Drift = -0.006 dB Peak SAR (extrapolated) = 1.17 W/kg SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.672 mW/g Maximum value of SAR (measured) = 0.968 mW/g

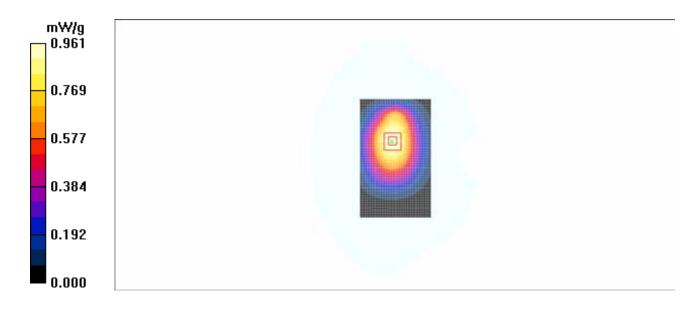


Fig. 36 835 MHz CH384



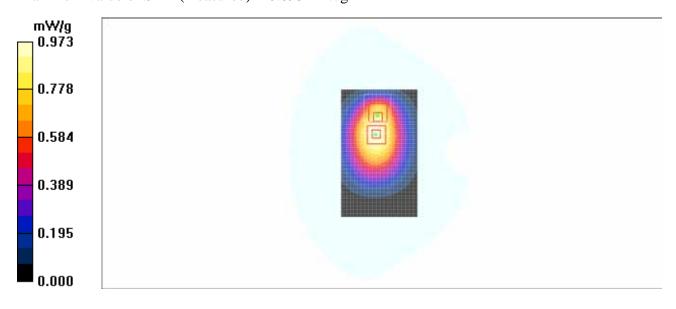
# 835 Body Towards Ground Low with AP ON

Date/Time: 2011-8-25 17:17:46 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used: f = 824.7 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.973 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 28.5 V/m; Power Drift = 0.025 dB Peak SAR (extrapolated) = 1.17 W/kg SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.681 mW/gMaximum value of SAR (measured) = 0.972 mW/g

Toward Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dz=5mmReference Value = 28.5 V/m; Power Drift = 0.025 dB Peak SAR (extrapolated) = 1.08 W/kg SAR(1 g) = 0.808 mW/g; SAR(10 g) = 0.519 mW/g Maximum value of SAR (measured) = 0.893 mW/g







### 835 Body Towards Phantom Middle with AP ON

Date/Time: 2011-8-25 17:49:13 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 836.52 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Phantom Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.764 mW/g

#### Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm Reference Value = 27.3 V/m; Power Drift = 0.083 dB Peak SAR (extrapolated) = 0.928 W/kg SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.544 mW/g Maximum value of SAR (measured) = 0.770 mW/g

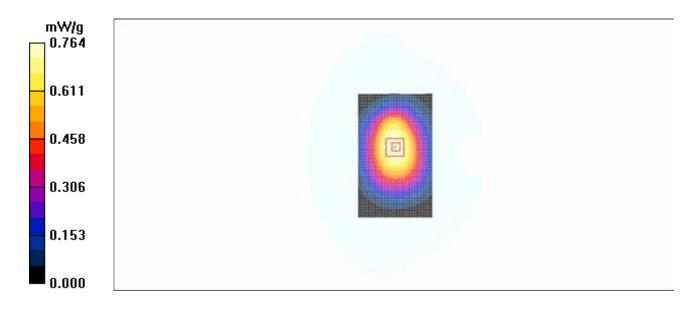


Fig. 38 835 MHz CH384



## 835 Body Left Side Middle with AP ON

Date/Time: 2011-8-25 18:07:22 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Left Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.700 mW/g

**Left Side Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 26.2 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.921 W/kg

SAR(1 g) = 0.658 mW/g; SAR(10 g) = 0.452 mW/g

Maximum value of SAR (measured) = 0.703 mW/g

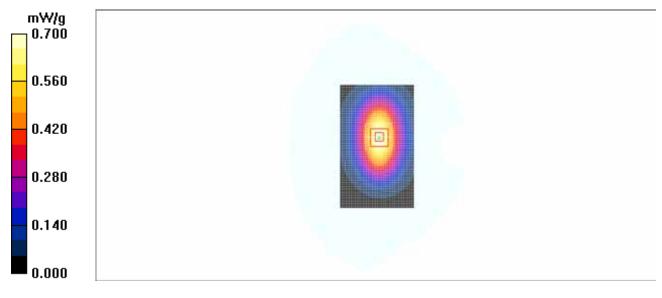


Fig. 39 835 MHz CH384



### 835 Body Right Side Middle with AP ON

Date/Time: 2011-8-25 18:24:07 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Right Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.730 mW/g

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

Reference Value = 26.9 V/m; Power Drift = -0.118 dBPeak SAR (extrapolated) = 0.939 W/kgSAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.719 mW/g

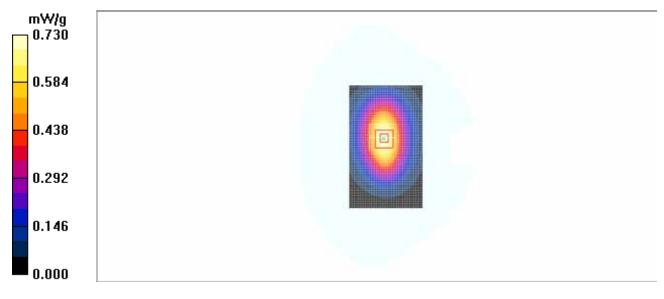


Fig. 40 835 MHz CH384



#### 835 Body Bottom Side Middle with AP ON

Date/Time: 2011-8-25 18:42:15 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 836.52 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 824.7 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Bottom Side Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.075 mW/g

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

Reference Value = 8.10 V/m; Power Drift = -0.079 dB Peak SAR (extrapolated) = 0.134 W/kg SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.039 mW/g Maximum value of SAR (measured) = 0.070 mW/g

Maximum value of SAR (measured) = 0.070 mW/g

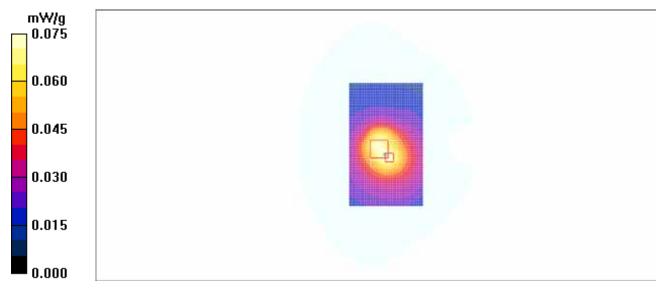


Fig. 41 835 MHz CH384



# 835 Body Towards Ground High with Headset CCB3001A10C1 and AP ON

Date/Time: 2011-8-25 19:07:52 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used (interpolated): f = 848.31 MHz;  $\sigma = 0.96$  mho/m;  $\epsilon r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 835 Frequency: 848.31 MHz Duty Cycle: 1:8.3 Probe: ES3DV3 - SN3149 ConvF(6.22, 6.22, 6.22)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.03 mW/g

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

Reference Value = 29.1 V/m; Power Drift = -0.135 dB Peak SAR (extrapolated) = 1.24 W/kg SAR(1 g) = 0.969 mW/g; SAR(10 g) = 0.711 mW/g Maximum value of SAR (measured) = 1.02 mW/g

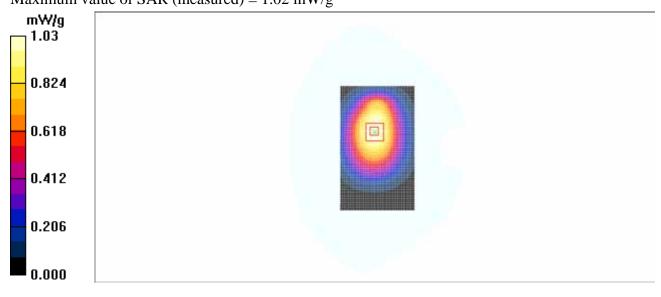


Fig. 42 835MHz CH777



# 1900 Body Towards Ground High with AP OFF

Date/Time: 2011-8-26 12:57:20 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.18 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.5 V/m; Power Drift = 0.049 dB Peak SAR (extrapolated) = 1.74 W/kg SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.676 mW/g Maximum value of SAR (measured) = 1.16 mW/g

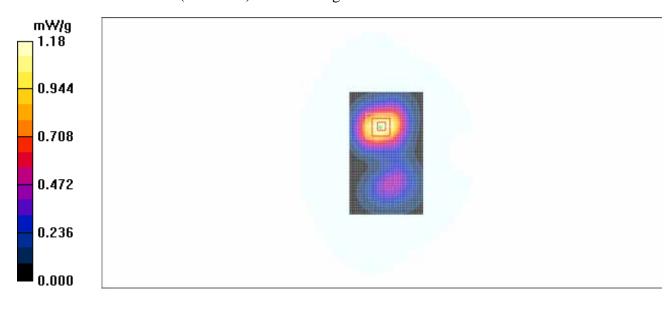


Fig. 43 1900 MHz CH1175



### 1900 Body Towards Ground Middle with AP OFF

Date/Time: 2011-8-26 13:16:45 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.54$  mho/m;  $\epsilon r = 54.0$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.25 mW/g

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

Reference Value = 13.3 V/m; Power Drift = -0.012 dBPeak SAR (extrapolated) = 1.80 W/kgSAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.702 mW/gMaximum value of SAR (measured) = 1.21 mW/g

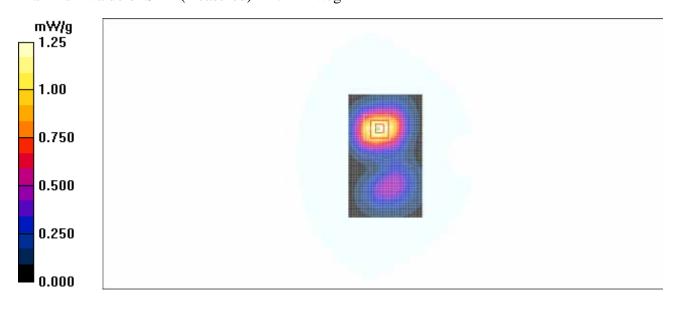


Fig. 44 1900 MHz CH600



#### 1900 Body Towards Ground Low with AP OFF

Date/Time: 2011-8-26 13:35:09 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon r = 54.11$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.36 mW/g

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

Reference Value = 13.8 V/m; Power Drift = -0.133 dB Peak SAR (extrapolated) = 1.97 W/kg SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.753 mW/g Maximum value of SAR (measured) = 1.32 mW/g

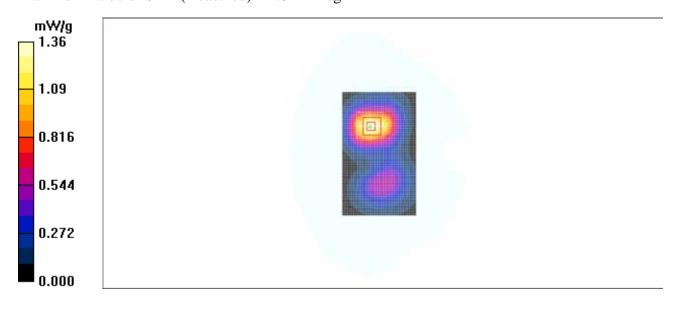


Fig. 45 1900 MHz CH25



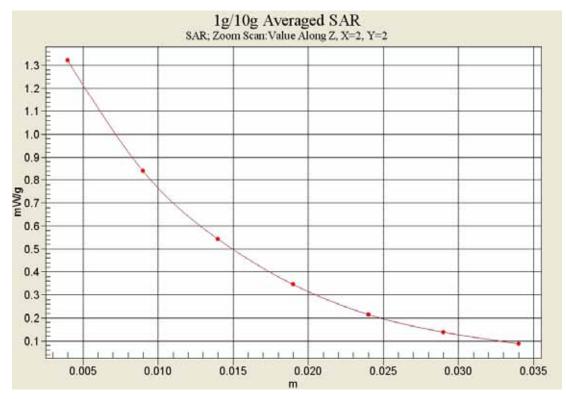


Fig. 45-1 Z-Scan at power reference point (1900 MHz CH25)



## **1900 Body Towards Phantom High AP OFF**

Date/Time: 2011-8-26 13:53:36 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Phantom High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.784 mW/g

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

Reference Value = 9.83 V/m; Power Drift = 0.078 dB Peak SAR (extrapolated) = 1.16 W/kg SAR(1 g) = 0.717 mW/g; SAR(10 g) = 0.442 mW/g Maximum value of SAR (measured) = 0.770 mW/g

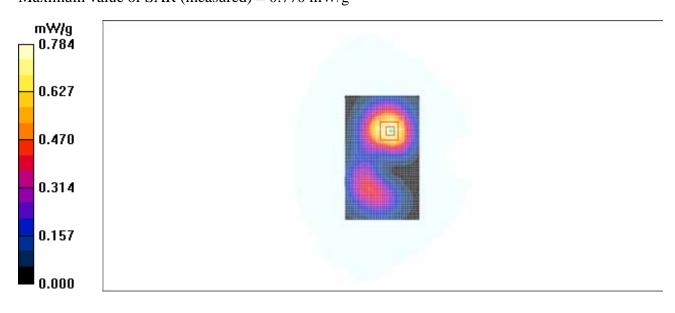


Fig. 46 1900 MHz CH1175



# 1900 Body Left Side High with AP OFF

Date/Time: 2011-8-26 14:16:35 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\varepsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°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)

Left Side High/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.229 mW/g

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

Reference Value = 9.75 V/m; Power Drift = 0.063 dBPeak SAR (extrapolated) = 0.338 W/kg SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.127 mW/g

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

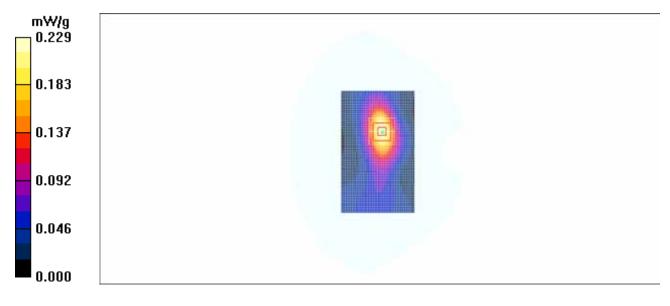


Fig. 47 1900 MHz CH1175



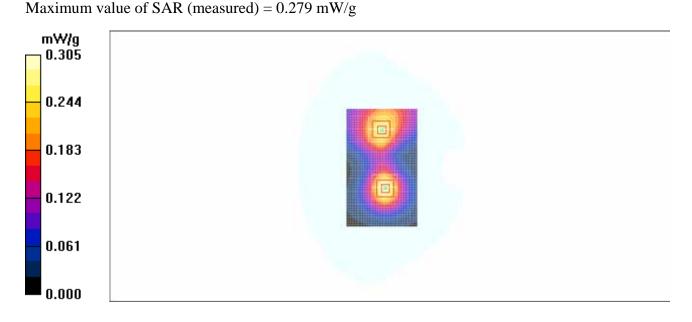
# **1900 Body Right Side High with AP OFF**

Date/Time: 2011-8-26 14:39:13 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°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)

**Right Side High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.305 mW/g

**Right Side High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.84 V/m; Power Drift = 0.030 dB Peak SAR (extrapolated) = 0.440 W/kg **SAR(1 g) = 0.278 mW/g; SAR(10 g) = 0.171 mW/g Maximum value of SAR (measured) = 0.301 mW/g** 

Right Side High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.84 V/m; Power Drift = 0.030 dB Peak SAR (extrapolated) = 0.408 W/kg SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.164 mW/g







#### 1900 Body Bottom Side High with AP OFF

Date/Time: 2011-8-26 15:11:24 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°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)

**Bottom Side High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.764 mW/g

Bottom Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 21.8 V/m; Power Drift = -0.068 dB Peak SAR (extrapolated) = 1.11 W/kg SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.400 mW/g

Maximum value of SAR (measured) = 0.743 mW/g

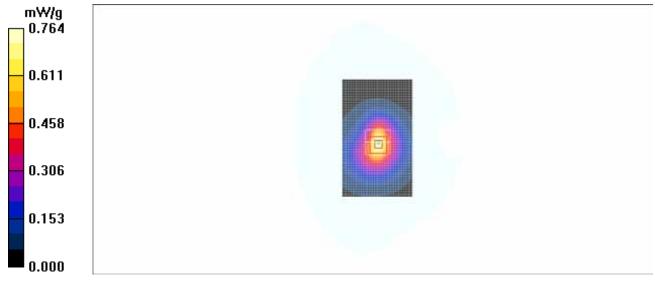


Fig. 49 1900 MHz CH1175



# 1900 Body Towards Ground Low with Headset CCB3001A10C1 and AP OFF

Date/Time: 2011-8-26 15:29:13 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon r = 54.11$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:8.3 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.29 mW/g

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

Reference Value = 12.7 V/m; Power Drift = -0.113 dB Peak SAR (extrapolated) = 1.89 W/kg SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.703 mW/g Maximum value of SAR (measured) = 1.24 mW/g

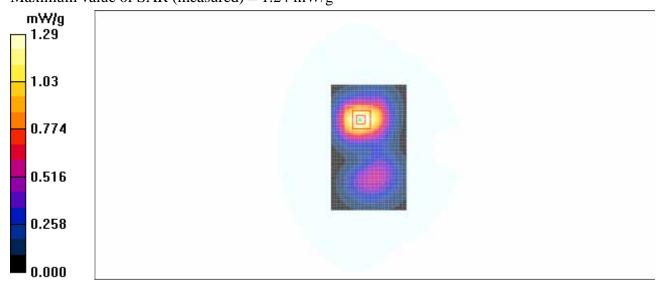


Fig. 50 1900 MHz CH25



### 1900 Body Towards Ground High with AP ON

Date/Time: 2011-8-26 15:49:11 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.870 mW/g

Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 12.3 V/m; Power Drift = -0.054 dB Peak SAR (extrapolated) = 1.31 W/kg SAR(1 g) = 0.795 mW/g; SAR(10 g) = 0.482 mW/g Maximum value of SAR (measured) = 0.855 mW/g

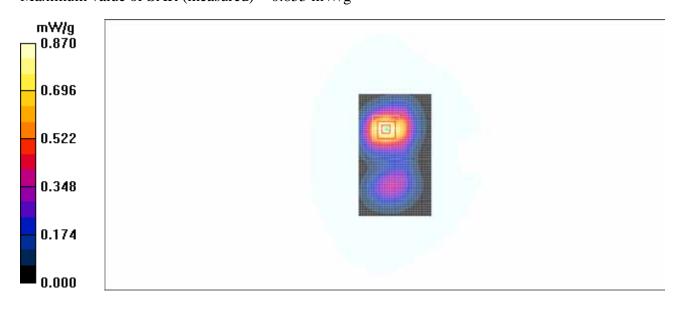


Fig. 51 1900 MHz CH1175



### 1900 Body Towards Ground Middle with AP ON

Date/Time: 2011-8-26 16:06:36 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.54$  mho/m;  $\epsilon r = 54.0$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1880 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.918 mW/g

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

Reference Value = 13.1 V/m; Power Drift = -0.070 dB Peak SAR (extrapolated) = 1.39 W/kg SAR(1 g) = 0.833 mW/g; SAR(10 g) = 0.502 mW/g Maximum value of SAR (measured) = 0.903 mW/g

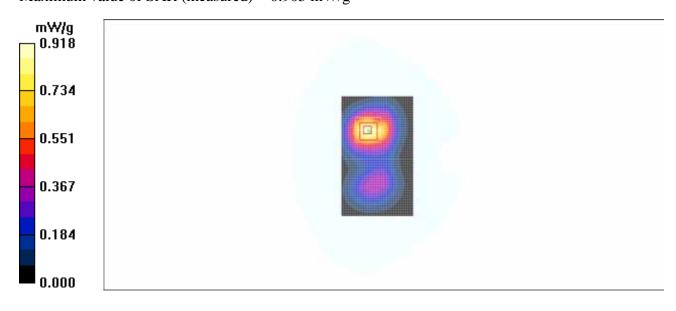


Fig. 52 1900 MHz CH600



#### 1900 Body Towards Ground Low with AP ON

Date/Time: 2011-8-26 16:22:25 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon r = 54.11$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.20 mW/g

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

Reference Value = 11.4 V/m; Power Drift = 0.081 dB Peak SAR (extrapolated) = 1.74 W/kg SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.651 mW/g Maximum value of SAR (measured) = 1.15 mW/g

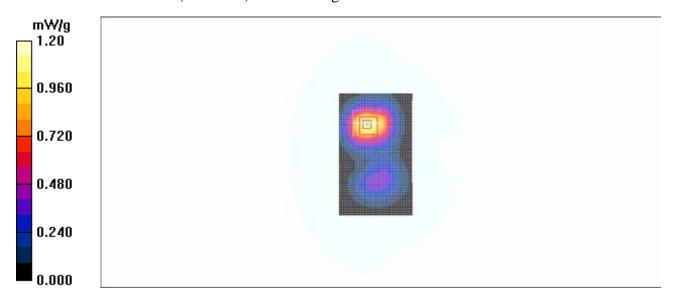


Fig. 53 1900 MHz CH25



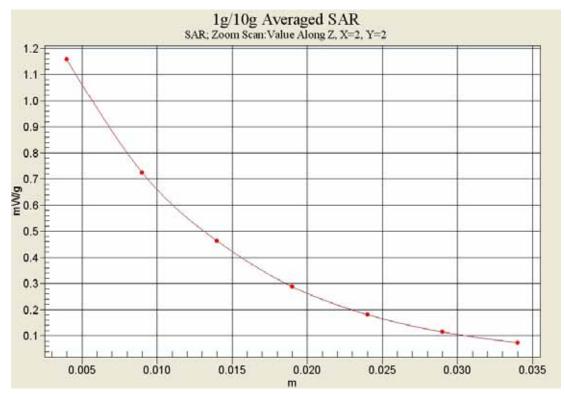


Fig. 53-1 Z-Scan at power reference point (1900 MHz CH25)



## 1900 Body Towards Phantom High AP ON

Date/Time: 2011-8-26 16:41:47 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1908.75 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Phantom High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.609 mW/g

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

Reference Value = 9.63 V/m; Power Drift = 0.101 dB Peak SAR (extrapolated) = 0.909 W/kg SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.324 mW/g Maximum value of SAR (massured) = 0.587 mW/g

Maximum value of SAR (measured) = 0.587 mW/g

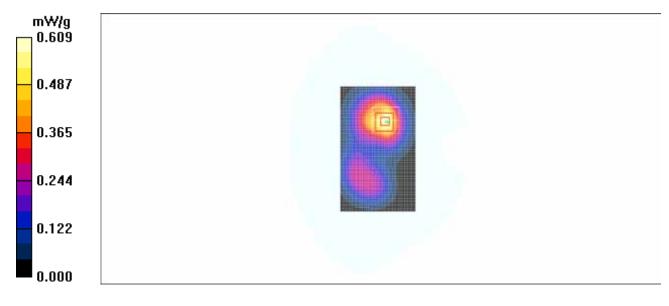


Fig. 54 1900 MHz CH1175



# 1900 Body Left Side High with AP ON

Date/Time: 2011-8-26 17:01:40 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°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)

**Left Side High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.232 mW/g

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

Reference Value = 8.46 V/m; Power Drift = 0.010 dB Peak SAR (extrapolated) = 0.344 W/kg SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.120 mW/g Maximum value of SAR (measured) = 0.210 mW/g

Maximum value of SAR (measured) = 0.219 mW/g

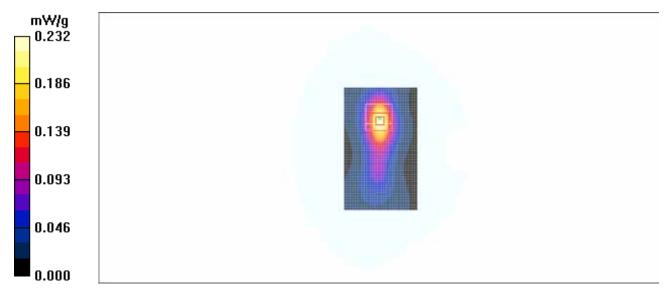


Fig. 55 1900 MHz CH1175



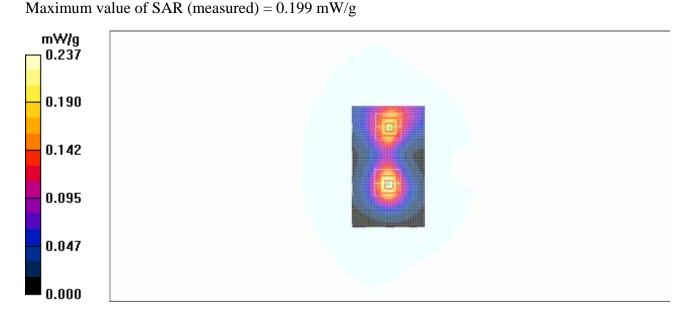
# 1900 Body Right Side High with AP ON

Date/Time: 2011-8-26 17:19:13 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°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)

**Right Side High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.237 mW/g

**Right Side High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.42 V/m; Power Drift = -0.137 dB Peak SAR (extrapolated) = 0.348 W/kg **SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.126 mW/g Maximum value of SAR (measured) = 0.230 mW/g** 

Right Side High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.42 V/m; Power Drift = -0.137 dB Peak SAR (extrapolated) = 0.297 W/kg SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.112 mW/g







## 1900 Body Bottom Side High with AP ON

Date/Time: 2011-8-26 17:51:07 Electronics: DAE4 Sn771 Medium: Body 835 MHz Medium parameters used: f = 1908.75 MHz;  $\sigma = 1.55$  mho/m;  $\epsilon r = 53.35$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0°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)

**Bottom Side High/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.586 mW/g

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

Reference Value = 20.0 V/m; Power Drift = 0.021 dB Peak SAR (extrapolated) = 0.891 W/kg SAR(1 g) = 0.528 mW/g; SAR(10 g) = 0.295 mW/g

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

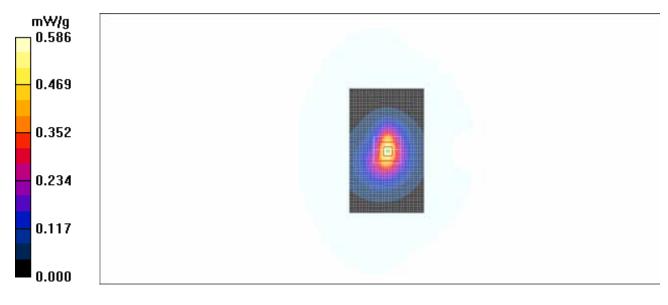


Fig. 57 1900 MHz CH1175



# 1900 Body Towards Ground Low with Headset CCB3001A10C1 and AP ON

Date/Time: 2011-8-26 18:29:42 Electronics: DAE4 Sn771 Medium: Body 1900 MHz Medium parameters used (interpolated): f = 1851.25 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon r = 54.11$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature:23.0°C Liquid Temperature: 22.5°C Communication System: CDMA 1900MHz Frequency: 1851.25 MHz Duty Cycle: 1:1 Probe: ES3DV3 - SN3149 ConvF(4.68, 4.68, 4.68)

**Toward Ground Low/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.15 mW/g

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

Reference Value = 10.8 V/m; Power Drift = 0.101 dB Peak SAR (extrapolated) = 1.68 W/kg SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.614 mW/g

Maximum value of SAR (measured) = 1.09 mW/g

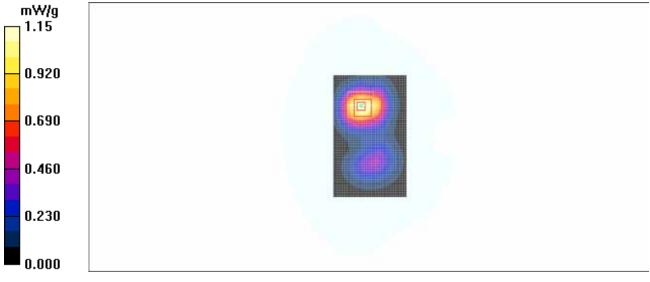


Fig. 58 1900 MHz CH25



## WiFi 802.11b 1Mbps Left Cheek Channel 6

Date/Time: 2011-8-31 8:08:33 Electronics: DAE4 Sn771 Medium: Head 2450 MHz Medium parameters used (interpolated): f = 2437 MHz;  $\sigma = 1.83$  mho/m;  $\epsilon r = 39.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0 °C Liquid Temperature: 22.5°C Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1 Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

**Cheek Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.059 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 4.46 V/m; Power Drift = -0.042 dB Peak SAR (extrapolated) = 0.088 W/kg SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.024 mW/g Maximum value of SAR (measured) = 0.050 mW/g

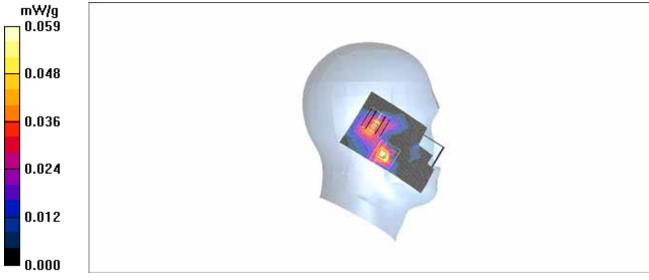
**Cheek Middle/Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.46 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.067 W/kg

SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.024 mW/g

Maximum value of SAR (measured) = 0.042 mW/g







# WiFi 802.11b 1Mbps Left Tilt Channel 6

Date/Time: 2011-8-31 8:26:15 Electronics: DAE4 Sn771 Medium: Head 2450 MHz Medium parameters used (interpolated): f = 2437 MHz;  $\sigma = 1.83$  mho/m;  $\epsilon r = 39.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0 °C Liquid Temperature: 22.5°C Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1 Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

**Tilt Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.040 mW/g

**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 4.33 V/m; Power Drift = 0.186 dB Peak SAR (extrapolated) = 0.061 W/kg

SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.037 mW/g

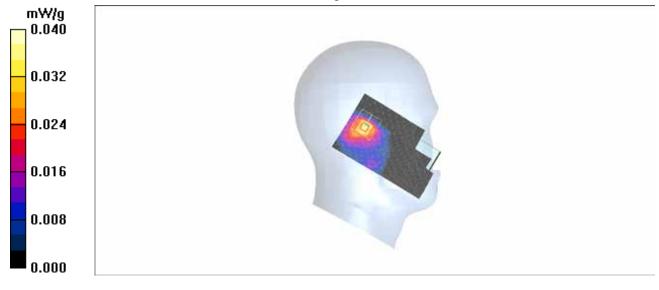


Fig.60 802.11b 1Mbps CH6



### WiFi 802.11b 1Mbps Right Cheek Channel 6

Date/Time: 2011-8-31 8:41:33 Electronics: DAE4 Sn771 Medium: Head 2450 MHz Medium parameters used (interpolated): f = 2437 MHz;  $\sigma = 1.83$  mho/m;  $\epsilon r = 39.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0 °C Liquid Temperature: 22.5°C Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1 Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

**Cheek Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.101 mW/g

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

Reference Value = 3.83 V/m; Power Drift = 0.061 dB Peak SAR (extrapolated) = 0.187 W/kg SAR(1 g) = 0.087 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.094 mW/g



Fig.61 802.11b 1Mbps CH6



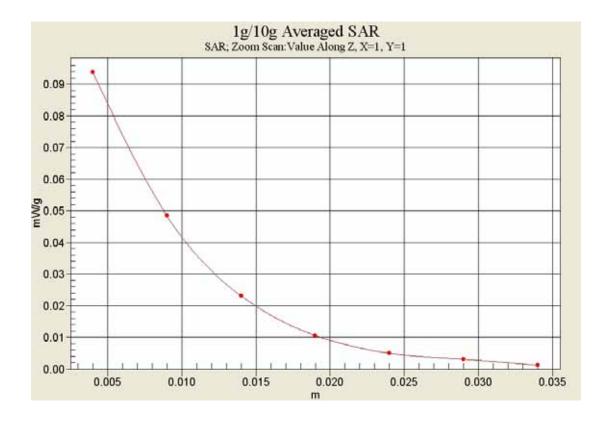


Fig. 61-1 Z-Scan at power reference point (802.11b 1Mbps CH6)



## WiFi 802.11b 1Mbps Right Tilt Channel 6

Date/Time: 2011-8-31 8:58:21 Electronics: DAE4 Sn771 Medium: Head 2450 MHz Medium parameters used (interpolated): f = 2437 MHz;  $\sigma = 1.83$  mho/m;  $\epsilon r = 39.7$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0 °C Liquid Temperature: 22.5°C Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1 Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

**Tilt Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.047 mW/g

**Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 4.82 V/m; Power Drift = 0.112 dB Peak SAR (extrapolated) = 0.066 W/kg

SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.023 mW/g

Maximum value of SAR (measured) = 0.043 mW/g



Fig.62 802.11b 1Mbps CH6



#### WiFi 802.11b 1Mbps Toward Phantom Channel 6

Date/Time: 2011-8-31 13:51:22 Electronics: DAE4 Sn771 Medium: Body 2450 MHz Medium parameters used (interpolated): f = 2437 MHz;  $\sigma = 1.94$  mho/m;  $\epsilon r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup> Ambient Temperature: 23.0 °C Liquid Temperature: 22.5 °C Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1 Probe: EX3DV4 - SN3617 ConvF(7.19, 7.19, 7.19)

**Toward Phantom Middle/Area Scan (61x101x1):** Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 0.031 mW/g

Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 1.10 V/m; Power Drift = 0.199 dB Peak SAR (extrapolated) = 0.046 W/kg SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.016 mW/g Maximum value of SAR (measured) = 0.030 mW/g

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

Reference Value = 1.10 V/m; Power Drift = 0.199 dB

Peak SAR (extrapolated) = 0.032 W/kg

SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.020 mW/g



