



Report No.: RZA2010-0151



OET 65

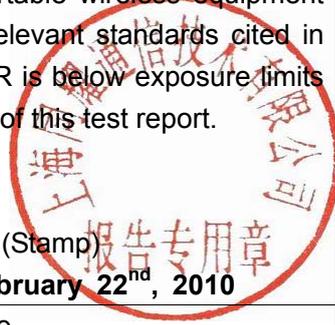
TEST REPORT

Product Name	CDMA 1X Digital Mobile Phone
FCC ID	Q78-ZTECE520
Model	ZTE-C E520
Client	ZTE CORPORATION

TA Technology (Shanghai) Co., Ltd.



GENERAL SUMMARY

Product Name	CDMA 1X Digital Mobile Phone	Model	ZTE-C E520
FCC ID	Q78-ZTECE520	Report No.	RZA2010 -0151
Client	ZTE CORPORATION		
Manufacturer	ZTE CORPORATION		
Standard(s)	<p>ANSI/IEEE C95.1-1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.</p> <p>IEEE 1528-2003: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head Due to Wireless Communications Devices: Experimental Techniques.</p> <p>OET Bulletin 65 supplement C, published June 2001 including DA 02-1438, published June 2002: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits. Transition Period for the Phantom Requirements of Supplement C to OET Bulletin 65.</p>		
Conclusion	<p>Localized Specific Absorption Rate (SAR) of this portable wireless equipment has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.</p> <p>General Judgment: Pass</p> <div style="text-align: right;">  <p>(Stamp) Date of issue: February 22nd, 2010</p> </div>		
Comment	The test result only responds to the measured sample.		

Approved by _____

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TABLE OF CONTENT

1. General Information	5
1.1. Notes of the test report	5
1.2. Testing laboratory	5
1.3. Applicant Information	6
1.4. Manufacturer Information	6
1.5. Information of EUT	7
1.6. Test Date	8
2. Operational Conditions during Test	9
2.1. General description of test procedures	9
2.2. Information for the measurement of CDMA 1x devices	9
2.2.1. Output Power Verification	9
2.2.2. Head SAR measurement	9
2.2.3. Body SAR measurement	9
3. SAR Measurements System Configuration	11
3.1. SAR Measurement Set-up	11
3.2. DASY4 E-field Probe System	12
3.2.1. EX3DV4 Probe Specification	12
3.2.2. E-field Probe Calibration	13
3.3. Other Test Equipment	13
3.3.1. Device Holder for Transmitters	13
3.3.2. Phantom	14
3.4. Scanning procedure	14
3.5. Data Storage and Evaluation	16
3.5.1. Data Storage	16
3.5.2. Data Evaluation by SEMCAD	16
3.6. System check	19
3.7. Equivalent Tissues	20
4. Laboratory Environment	21
5. Characteristics of the Test	22
5.1. Applicable Limit Regulations	22
5.2. Applicable Measurement Standards	22
6. Conducted Output Power Measurement	23
6.1. Summary	23
6.2. Conducted Power Results	23
7. Test Results	24
7.1. Dielectric Performance	24
7.2. System Checking Results	25
7.3. Test Results	26
7.3.1. Summary of Measurement Results (CDMA Cellular)	26
7.3.2. Summary of Measurement Results (CDMA PCS)	27
7.3.3. Summary of Measurement Results (CDMA AWS)	28

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 4 of 127

7.3.4. Summary of Measurement Results (Bluetooth function).....	29
7.4. Conclusion	29
8. Measurement Uncertainty	30
9. Main Test Instruments	32
ANNEX A: Test Layout	33
ANNEX B: System Check Results	37
ANNEX C: Graph Results	43
ANNEX D: Probe Calibration Certificate	83
ANNEX E: D835V2 Dipole Calibration Certificate	92
ANNEX F: D1800V2 Dipole Calibration Certificate	101
ANNEX G: D1900V2 Dipole Calibration Certificate.....	110
ANNEX H: DAE4 Calibration Certificate.....	119
ANNEX I: The EUT Appearances and Test Configuration	124

1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

1.2. Testing laboratory

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TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 6 of 127

1.3. Applicant Information

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TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 7 of 127

1.5. Information of EUT

General information

Device type :	portable device		
Exposure category:	uncontrolled environment / general population		
Name of EUT:	CDMA 1X Digital Mobile Phone		
ESN:	/		
Device operating configurations :			
Operating mode(s):	CDMA Cellular		
	CDMA PCS		
	CDMA AWS		
Test Modulation:	QPSK		
Operating frequency range(s):	Band	Tx (MHz)	Rx (MHz)
	CDMA Cellular	824.7 ~ 848.31	869.7 ~ 893.31
	CDMA PCS	1851.25 ~ 1908.75	1931.25 ~ 1988.75
	CDMA AWS	1711.25 ~ 1752.5	2111.25 ~ 2152.5
Test channel (Low –Middle –High)	1013 – 384 – 777 25 – 600 – 1175 25 – 450 – 850	(CDMA Cellular) (CDMA PCS) (CDMA AWS)	(tested) (tested) (tested)
hardware version:	c2nB		
software version:	ZTEE520V1.0.0B02		
antenna type:	internal antenna		

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No. RZA2010 -0151

Page 8 of 127

Auxiliary equipment details

AE1: Battery

Model: Li3709T42P3h553447
Manufacture: ZTE CORPORATION
IMEI or SN: 60110811040332785

AE2: Travel Adaptor

Model: STC-A22050M5-C
Manufacture: ZTE CORPORATION
IMEI or SN: /

Equipment Under Test (EUT) is a model of CDMA 1X Digital Mobile Phone with internal antenna. The detail about Mobile phone, Lithium Battery and AC/DC Adapter is in chapter 1.5 in this report. SAR is tested for CDMA Cellular, CDMA PCS and CDMA AWS.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is performed from January 31, 2010 to February 2, 2010.

2. Operational Conditions during Test

2.1. General description of test procedures

A communication link is set up with a System Simulator (SS) by air link, and a call is established. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1013, 384 and 777 respectively in the case of CDMA Cellular, to 25, 600 and 1175 respectively in the case of CDMA PCS, to 25, 450 and 850 respectively in the case of CDMA AWS. The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with E5515C, and the EUT is set to maximum output power by E5515C. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30 dB.

2.2. Information for the measurement of CDMA 1x devices

2.2.1. Output Power Verification

Test Parameter setup for maximum RF output power according to section 4.4.5 of 3GPP2

Parameter	Units	Value
I or	dBm/1.23MHz	-104
PilotE c /I or	dB	-7
TrafficE c /I or	dB	-7.4

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

2.2.2. Head SAR measurement

SAR is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55. SAR for RC1 is not required because the maximum average output of each channel is less than 0.25 dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1 using the exposure configuration that results in the highest SAR for that channel in RC3.

2.2.3. Body SAR measurement

SAR is measured in RC3 with the EUT configured to transmit at full rate using TDSO/SO32, transmit at full rate on FCH with all other code channels disabled. SAR for multiple code channels (FCH+SCHn) is not required when the maximum average output of each RF channel is less than 0.25dB higher than measured with FCH only.

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 10 of 127

Body SAR in RC1 is not required because the maximum average output of each channel is less than 0.25 dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1; with Loopback Service Option SO55, at full rate using the body exposure configuration that results in the highest SAR for that channel in RC3.

Test communication setup meet as followings:

Communication standard between mobile station and base station simulator	3GPP2 C.S0011-B
Radio configuration	RC3 (Supporting CDMA 1X)
Spreading Rate	SR1
Data Rate	9600bps
Service Options	SO55 (loop back mode)
Service Options	SO32 (test data service mode)
Multiplex Options	The mobile station does not support this service.

3. SAR Measurements System Configuration

3.1. SAR Measurement Set-up

The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY4 measurement server.
- The DASY4 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003
- DASY4 software and SEMCAD data evaluation software.
- Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.

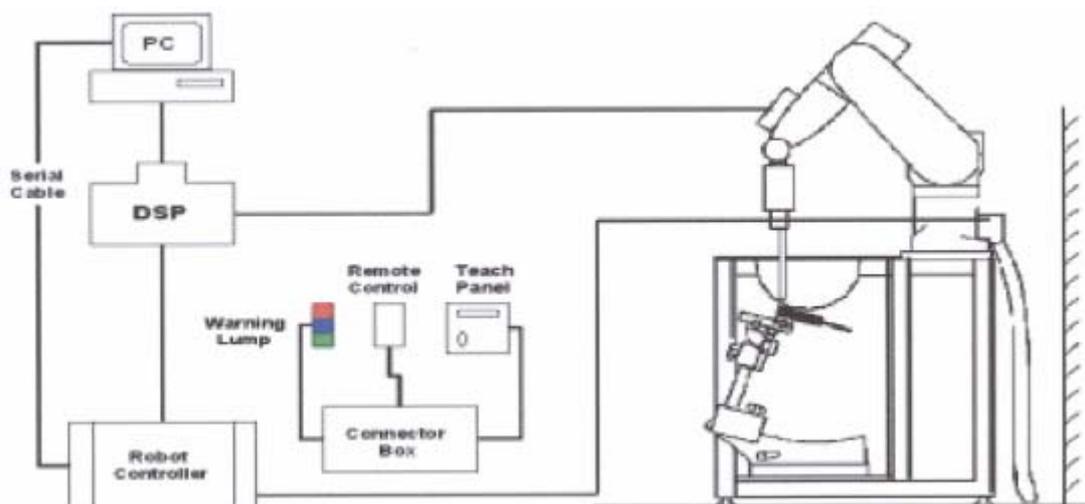


Figure 1. SAR Lab Test Measurement Set-up

3.2. DASY4 E-field Probe System

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

3.2.1. EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core 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 835 ,HSL 900, HSL 1750 and HSL 1950 Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.



Figure 2. EX3DV4 E-field Probe



Figure 3. EX3DV4 E-field probe

3.2.2. E-field Probe Calibration

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

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

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

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

Where: Δt = Exposure time (30 seconds),
C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.
Or

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

Where:
 σ = Simulated tissue conductivity,
 ρ = Tissue density (kg/m³).

3.3. Other Test Equipment

3.3.1. Device Holder for Transmitters

The DASY device holder is designed to cope with the different positions given in the standard.

It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the inference of the clamp on the test results could thus be lowered.



Figure 4. Device Holder

3.3.2. Phantom

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

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



Figure 5. Generic Twin Phantom

3.4. Scanning procedure

The DASY4 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The "reference" and "drift" measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT's output power and should vary max. $\pm 5\%$.
- The "surface check" measurement tests the optical surface detection system of the DASY4 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above $\pm 0.1\text{mm}$). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within $\pm 30^\circ$.)
- Area Scan
The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot. Before starting the area scan a grid

spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged.

After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

- **Zoom Scan**

Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x7 points within a cube whose base is centered around the maxima found in the preceding area scan.

- **Spatial Peak Detection**

The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses. The DASY4 system allows evaluations that combine measured data and robot positions, such as:

- maximum search
- extrapolation
- boundary correction
- peak search for averaged SAR

During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space. They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation. For a grid using 7x7x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.

- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

3.5. Data Storage and Evaluation

3.5.1. Data Storage

The DASY4 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

3.5.2. Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Normi, a _{i0} , a _{i1} , a _{i2}
	- Conversion factor	ConvF _i
	- Diode compression point	Dcp _i
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	
	- Density	

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY4 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 17 of 127

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot c f / d c p_i$$

With V_i = compensated signal of channel i (i = x, y, z)

U_i = input signal of channel i (i = x, y, z)

cf = crest factor of exciting field (DASY parameter)

dcp_i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With V_i = compensated signal of channel i (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
[mV/(V/m)²] for E-field Probes

$ConvF$ = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (E_{tot}^2 \cdot \dots) / (\dots \cdot 1000)$$

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 18 of 127

with **SAR** = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

σ = conductivity in [mho/m] or [Siemens/m]

ρ = equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with **P_{pwe}** = equivalent power density of a plane wave in mW/cm²

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

3.6. System check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the table 7 and table 8.

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system ($\pm 10\%$).

System check is performed regularly on all frequency bands where tests are performed with the DASY4 system.



Figure 6. System Check Set-up

TA Technology (Shanghai) Co., Ltd.
Test Report

3.7. Equivalent Tissues

The liquid is consisted of water, sugar, salt, Preventol, Glycol and Cellulose. The liquid has previously been proven to be suited for worst-case. The Table 1 and Table 2 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

Table 1: Composition of the Head Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Brain) 835MHz		
Water	41.45		
Sugar	56		
Salt	1.45		
Preventol	0.1		
Cellulose	1.0		
Dielectric Parameters Target Value	f=835MHz	$\epsilon=41.5$	$\sigma=0.9$

MIXTURE%	FREQUENCY(Brain) 1750MHz		
Water	55.242		
Glycol	44.452		
Salt	0.306		
Dielectric Parameters Target Value	f=1750MHz	$\epsilon=40.1$	$\sigma=1.37$

MIXTURE%	FREQUENCY(Brain)1900MHz		
Water	55.242		
Glycol monobutyl	44.452		
Salt	0.306		
Dielectric Parameters Target Value	f=1900MHz	$\epsilon=40.0$	$\sigma=1.40$

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 21 of 127

Table 2: Composition of the Body Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Body)835MHz
Water	52.5
Sugar	45
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz $\epsilon=55.2$ $\sigma=0.97$

MIXTURE%	FREQUENCY(Body)1750MHz
Water	69.91
Glycol	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1750MHz $\epsilon=53.4$ $\sigma=1.49$

MIXTURE%	FREQUENCY(Body)1900MHz
Water	69.91
Glycol	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz $\epsilon=53.3$ $\sigma=1.52$

4. Laboratory Environment

Table 3: The Ambient Conditions during Test

Temperature	Min. = 20°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

5. Characteristics of the Test

5.1. Applicable Limit Regulations

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

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

5.2. Applicable Measurement Standards

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

OET Bulletin 65 supplement C, published June 2001 including DA 02-1438, published June 2002: Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits. Transition Period for the Phantom Requirements of Supplement C to OET Bulletin 65.

6. Conducted Output Power Measurement

6.1. Summary

The DUT is tested using an E5515C communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power. Conducted output power was measured using an integrated RF connector and attached RF cable. This result contains conducted output power for the EUT.

6.2. Conducted Power Results

Table 4: Conducted Power Measurement Results

CDMA Cellular (RC3)	Conducted Power		
	Channel 1013	Channel 384	Channel 777
Before test (dBm)	23.35	23.31	23.36
After test (dBm)	23.33	23.30	23.35
CDMA Cellular (RC1)	Conducted Power		
	Channel 1013	Channel 384	Channel 777
Before test (dBm)	23.46	23.32	23.41
After test (dBm)	23.45	23.31	23.40
CDMA PCS (RC3)	Conducted Power		
	Channel 25	Channel 600	Channel 1175
Before test (dBm)	23.02	23.08	23.01
After test (dBm)	23.00	23.07	23.00
CDMA PCS (RC1)	Conducted Power		
	Channel 25	Channel 600	Channel 1175
Before test (dBm)	23.05	23.16	23.03
After test (dBm)	23.04	23.15	23.02
CDMA AWS (RC3)	Conducted Power		
	Channel 25	Channel 450	Channel 850
Before test (dBm)	23.25	23.04	23.33
After test (dBm)	23.24	23.02	23.31
CDMA AWS (RC1)	Conducted Power		
	Channel 25	Channel 450	Channel 850
Before test (dBm)	23.25	23.12	23.38
After test (dBm)	23.24	23.10	23.37

7. Test Results

7.1. Dielectric Performance

Table 5: Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp ℃
		ϵ_r	σ (s/m)	
835MHz (head)	Target value ±5% window	41.5 39.43 - 43.58	0.90 0.86 - 0.95	/
	Measurement value 2010-2-1	42.19	0.91	22.5
1750MHz (head)	Target value ±5% window	40.01 38.00 – 42.00	1.37 1.33 – 1.47	/
	Measurement value 2010-2-1	40.03	1.34	21.9
1900MHz (head)	Target value ±5% window	40.00 38.00 – 42.00	1.40 1.33 – 1.47	/
	Measurement value 2010-2-2	40.03	1.38	21.8

Table 6: Dielectric Performance of Body Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp ℃
		ϵ_r	σ (s/m)	
835MHz (body)	Target value ±5% window	55.20 52.44 - 57.96	0.97 0.92 - 1.02	/
	Measurement value 2010-1-31	54.87	0.98	22.5
1750MHz (body)	Target value ±5% window	53.4 50.64 – 55.97	1.49 1.44 – 1.60	/
	Measurement value 2010-1-31	52.11	1.51	21.9
1900MHz (body)	Target value ±5% window	53.3 50.64 – 55.97	1.52 1.44 – 1.60	/
	Measurement value 2010-2-1	52.75	1.52	21.8

TA Technology (Shanghai) Co., Ltd.

Test Report

7.2. System Checking Results

Table 7: System Checking for Head tissue simulant

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ϵ_r	σ (s/m)	°C
835MHz	Recommended value ±10% window	1.58 1.42 - 1.74	2.42 2.18 - 2.66	40.5	0.89	/
	Measurement value 2010-2-1	1.62	2.48	42.19	0.91	21.9
1800 MHz	Recommended value ±10% window	5.14 4.63 — 5.65	9.66 8.69 — 10.63	41.1	1.37	/
	Measurement value 2010-2-1	5.01	9.68	39.85	1.39	22.1
1900 MHz	Recommended value ±10% window	5.38 4.84 — 5.92	10.3 9.27 — 11.33	41	1.42	/
	Measurement value 2010-2-2	5.46	10.6	40.03	1.38	21.7

Note: 1. The graph results see ANNEX B.

2. Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

Table 8: System Check for body tissue stimulant

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ϵ_r	σ (s/m)	°C
835MHz	Recommended value ±10% window	1.68 1.51 - 1.85	2.56 2.30 - 2.82	53	0.99	/
	Measurement value 2010-1-31	1.68	2.56	54.87	0.98	21.9
1800 MHz	Recommended value ±10% window	4.97 4.47 — 5.47	9.31 8.38 — 10.24	54.2	1.49	/
	Measurement value 2010-1-31	5.25	10.1	51.96	1.57	22.1
1900 MHz	Recommended value ±10% window	5.52 4.97 — 6.07	10.5 9.45 — 11.55	54	1.55	/
	Measurement value 2010-2-1	5.17	9.73	52.75	1.52	21.7

Note: 1. The graph results see ANNEX B.

2. Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

TA Technology (Shanghai) Co., Ltd.

Test Report

7.3. Test Results

7.3.1. Summary of Measurement Results (CDMA Cellular)

Table 9: SAR Values (CDMA Cellular)

Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift(dB)	
		10 g Average	1 g Average		
Test position of Head					
Left hand, Touch cheek	Middle	0.396	0.542	-0.013	Figure 13
Left hand, Tilt 15 Degree	Middle	0.268	0.365	0.157	Figure 14
Right hand, Touch cheek	High	0.371	0.513	-0.020	Figure 15
	Middle	0.409	0.563	-0.075	Figure 16
	Low	0.385	0.525	-0.083	Figure 17
Right hand, Tilt 15 Degree	Middle	0.288	0.394	0.022	Figure 18
Test position of Body (Distance 15mm)					
Towards Ground	High	0.427	0.594	0.029	Figure 19
	Middle	0.492	0.678	0.050	Figure 20
	Low	0.477(max.cube)	0.661(max.cube)	-0.045	Figure 21
Towards Phantom	Middle	0.290	0.396	0.047	Figure 22

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above; the value from the second assessed cube is given in the SAR distribution plots (See ANNEX C).

TA Technology (Shanghai) Co., Ltd.
Test Report

7.3.2. Summary of Measurement Results (CDMA PCS)

Table 10: SAR Values (CDMA PCS)

Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift(dB)	
		10 g Average	1 g Average		
Test position of Head					
Left hand, Touch cheek	High	0.635	1.150	-0.149	Figure 23
	Middle	0.678	1.210	-0.098	Figure 24
	Low	0.580	1.060	-0.022	Figure 25
Left hand, Tilt 15 Degree	Middle	0.266	0.441	0.025	Figure 26
Right hand, Touch cheek	High	0.567	0.942	-0.027	Figure 27
	Middle	0.707	1.180	-0.038	Figure 28
	Low	0.541	0.886	-0.006	Figure 29
Right hand, Tilt 15 Degree	Middle	0.214	0.345	0.058	Figure 30
Test position of Body (Distance 15mm)					
Towards Ground	High	0.391	0.620	0.042	Figure 31
	Middle	0.425	0.663	0.095	Figure 32
	Low	0.349	0.561	0.061	Figure 33
Towards Phantom	Middle	0.303	0.517	-0.153	Figure 34

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.

TA Technology (Shanghai) Co., Ltd.
Test Report

7.3.3. Summary of Measurement Results (CDMA AWS)

Table 11: SAR Values (CDMA AWS)

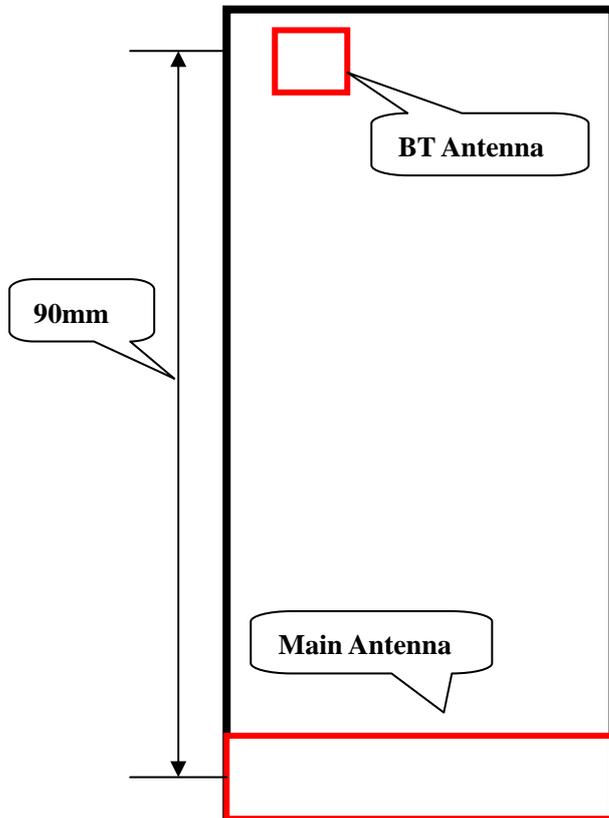
Limit of SAR (W/kg)		10 g Average	1 g Average	Power Drift (dB)	Graph Results
		2.0	1.6	± 0.21	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift(dB)	
		10 g Average	1 g Average		
Test position of Head					
Left hand, Touch cheek	High	0.644	1.160	-0.007	Figure 35
	Middle	0.692	1.230	-0.026	Figure 36
	Low	0.690	1.220	-0.024	Figure 37
Left hand, Tilt 15 Degree	Middle	0.317	0.515	-0.014	Figure 38
Right hand, Touch cheek	High	0.620	1.020	-0.006	Figure 39
	Middle	0.646	1.050	0.077	Figure 40
	Low	0.655	1.060	-0.087	Figure 41
Right hand, Tilt 15 Degree	Middle	0.240	0.377	0.077	Figure 42
Test position of Body (Distance 15mm)					
Towards Ground	High	0.408	0.688	-0.007	Figure 43
	Middle	0.436	0.738	-0.040	Figure 44
	Low	0.455(max.cube)	0.771(max.cube)	0.024	Figure 45
Towards Phantom	Middle	0.421	0.718	-0.054	Figure 46

Note: 1.The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR_{1g} limit (< 0.8W/kg), testing at the high and low channels is optional.
4. Tests in body position were performed with 15 mm air gap between DUT and Phantom to simulate the use of a non-metallic belt-clip or holster.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above; the value from the second assessed cube is given in the SAR distribution plots (See ANNEX C).

7.3.4. Summary of Measurement Results (Bluetooth function)

The distance between BT antenna and GSM antenna >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 Output Power(dBm)	0.25	-1.87	-0.39

According to the output power measurement result and the distance between the two antennas, we can draw the conclusion that: stand-alone SAR is not required for BT transmitter, because the output power of BT transmitter is $\leq 2P_{Ref}$ and the GSM antenna is > 5cm.

So, because of the power and the distance, we didn't perform the standalone BT SAR tests.

7.4. Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this report. Maximum localized SAR_{1g} are **1.23 W/kg** (head) and **0.771 W/kg** (body) that are below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 30of 127

8. Measurement Uncertainty

No.	source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard uncertainty u_i (%)	Degree of freedom V_{eff} or v_i
1	System repetivity	A	0.5	N	1	1	0.5	9
Measurement system								
2	probe calibration	B	5.9	N	1	1	5.9	∞
3	axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	$\sqrt{0.5}$	1.9	∞
4	Hemispherical isotropy of the probe	B	9.4	R	$\sqrt{3}$	$\sqrt{0.5}$	3.9	∞
6	boundary effect	B	1.9	R	$\sqrt{3}$	1	1.1	∞
7	probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	System detection limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	readout Electronics	B	1.0	N	1	1	1.0	∞
10	response time	B	0	R	$\sqrt{3}$	1	0	∞
11	integration time	B	4.32	R	$\sqrt{3}$	1	2.5	∞
12	noise	B	0	R	$\sqrt{3}$	1	0	∞
13	RF Ambient Conditions	B	3	R	$\sqrt{3}$	1	1.73	∞
14	Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
15	Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
16	Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
Test sample Related								
17	-Test Sample Positioning	A	2.9	N	1	1	2.9	5
18	-Device Holder Uncertainty	A	4.1	N	1	1	4.1	5
19	-Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	∞
Physical parameter								

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 31 of 127

20	-phantom	B	4.0	R	$\sqrt{3}$	1	2.3	∞
21	-liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.64	1.8	∞
22	-liquid conductivity (measurement uncertainty)	B	5.0	N	1	0.64	3.2	∞
23	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
24	-liquid permittivity (measurement uncertainty)	B	5.0	N	1	0.6	3.0	∞
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					12.0	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2		24.0	

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No. RZA2010 -0151

Page 32of 127

9. Main Test Instruments

Table 12: List of Main Instruments

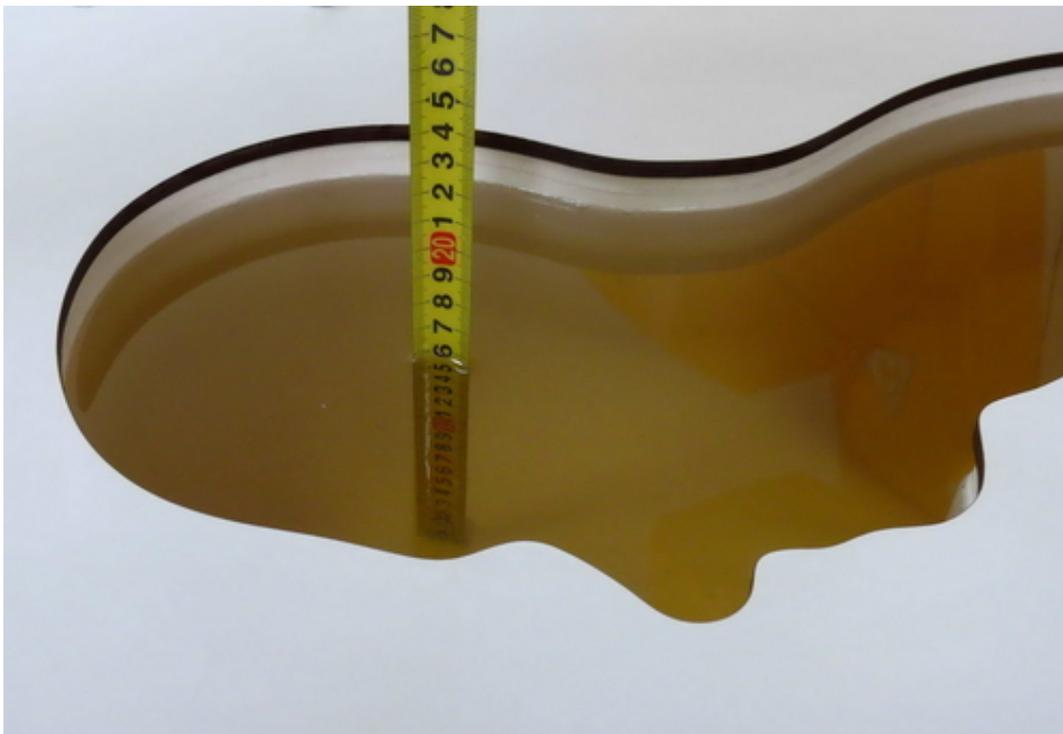
No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 13, 2009	One year
02	Dielectric Probe Kit	Agilent 85070E	US44020115	No Calibration Requested	
03	Power meter	Agilent E4417A	GB41291714	March 14, 2009	One year
04	Power sensor	Agilent 8481H	MY41091316	March 14, 2009	One year
05	Signal Generator	HP 8341B	2730A00804	September 13, 2009	One year
06	Amplifier	IXA-020	0401	No Calibration Requested	
07	BTS	E5515C	MY48360988	December 4, 2009	One year
08	E-field Probe	EX3DV4	3677	September 23, 2009	One year
09	DAE	DAE4	905	June 24, 2009	One year
10	Validation Kit 835MHz	D835V2	4d082	July 13, 2009	One year
11	Validation Kit 1900MHz	D1900V2	5d018	June 26, 2009	One year
12	Validation Kit 1800MHz	D1800V2	2d052	June 26, 2009	One year

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

ANNEX A: Test Layout



Picture 1: Specific Absorption Rate Test Layout



Picture 2: Liquid depth in the Head Phantom (835 MHz)



Picture 3: Liquid depth in the Flat Phantom (835 MHz)



Picture 4: Liquid depth in the Head Phantom (1800 MHz)



Picture 5: Liquid depth in the Flat Phantom (1800 MHz)



Picture 6: Liquid depth in the Head Phantom (1900 MHz)



Picture 7: Liquid depth in the Flat Phantom (1900 MHz)

ANNEX B: System Check Results

System Performance Check at 835 MHz Head TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d082

Date/Time: 2/1/2010 6:12:02 AM

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 42.19$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

835 MHz Dipole/Area Scan (41x121x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.71 mW/g

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

Reference Value = 55.5 V/m ; Power Drift = -0.092 dB

Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 2.48 mW/g ; SAR(10 g) = 1.62 mW/g

Maximum value of SAR (measured) = 2.67 mW/g

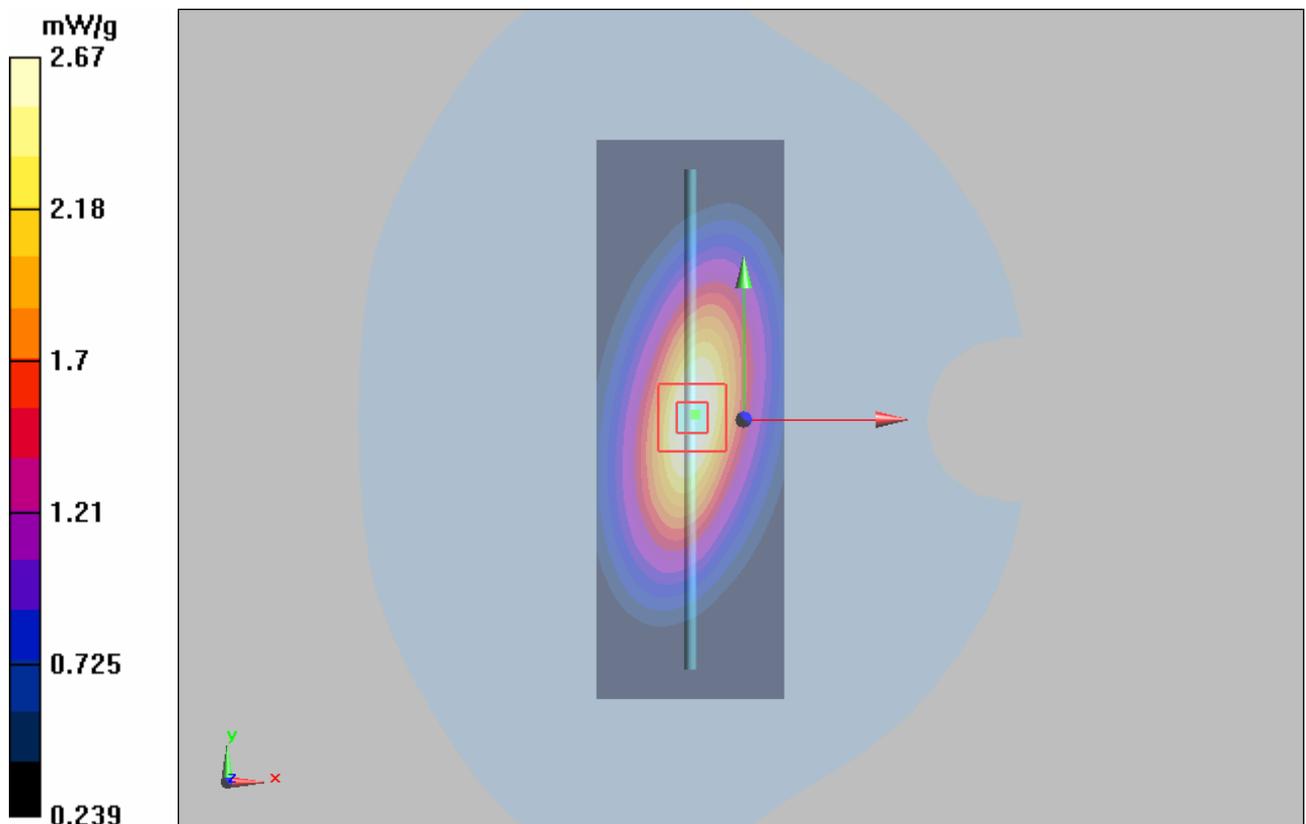


Figure 7 System Performance Check 835MHz 250mW

System Performance Check at 835 MHz Body TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d082

Date/Time: 1/31/2010 2:08:20 PM

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 835$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 54.87$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

835 MHZ Dipole/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.77 mW/g

835 MHZ Dipole/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.9 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.68 mW/g

Maximum value of SAR (measured) = 2.77 mW/g

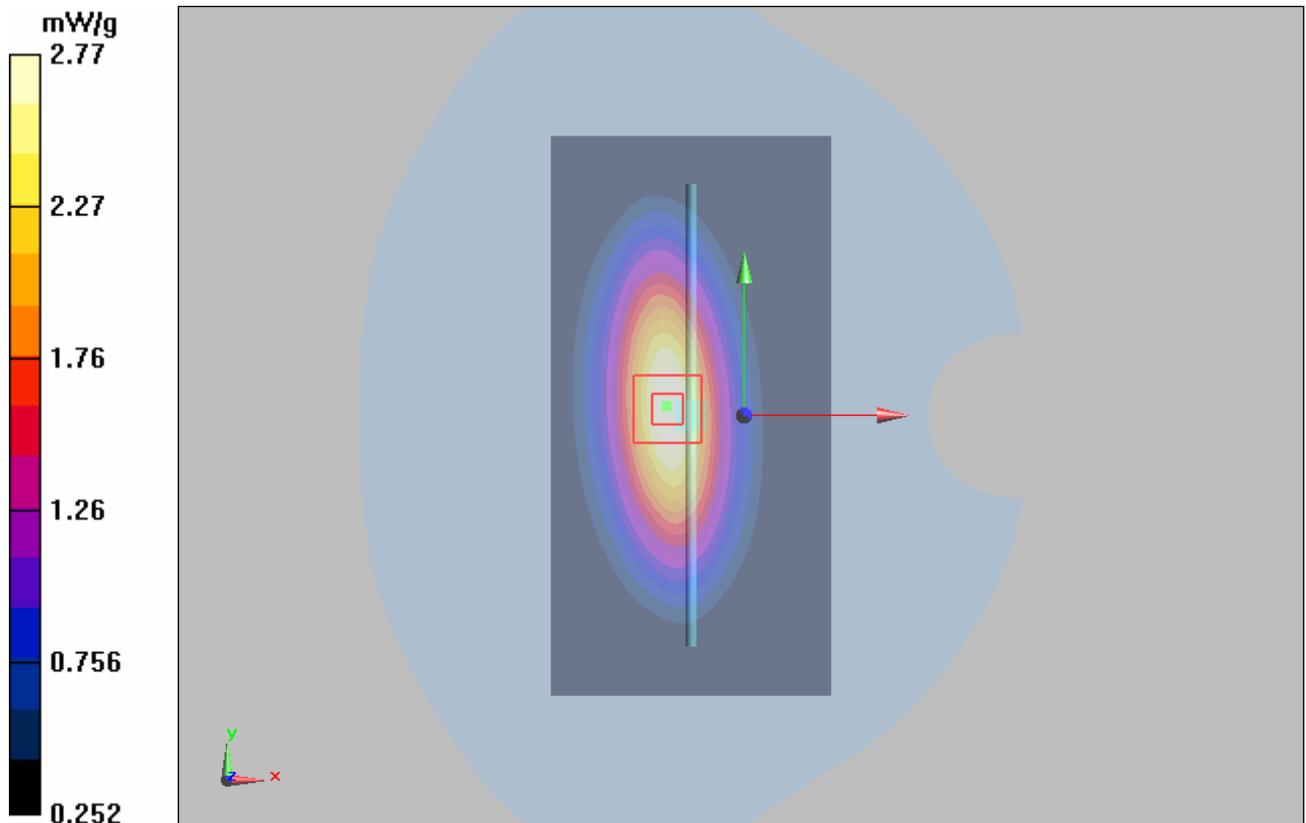


Figure 8 System Performance Check 835MHz 250mW

System Performance Check at 1800 MHz Head TSL

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d052

Date/Time: 2/1/2010 7:21:27 AM

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 39.85$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

1800 MHz Dipole/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.3 mW/g

1800 MHz Dipole/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.3 V/m; Power Drift = 0.080 dB

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 9.68 mW/g; SAR(10 g) = 5.01 mW/g

Maximum value of SAR (measured) = 10.8 mW/g

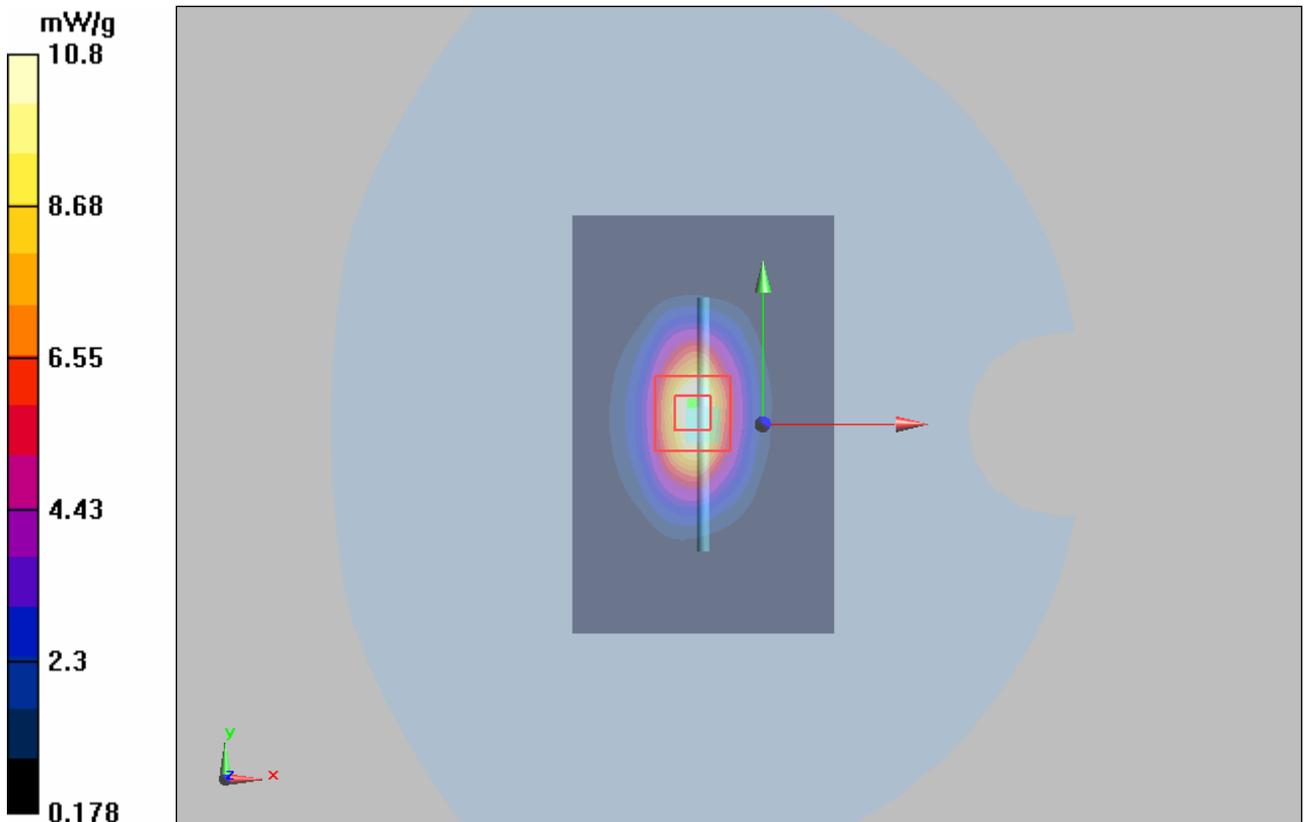


Figure 9 System Performance Check 1800MHz 250mW

System Performance Check at 1800 MHz Body TSL

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 2d052

Date/Time: 1/31/2010 10:55:45 AM

Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.96$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqjud Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.7, 7.7, 7.7); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

1800 MHz Dipole/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.2 mW/g

1800 MHz Dipole/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 83.2 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.25 mW/g

Maximum value of SAR (measured) = 11.4 mW/g

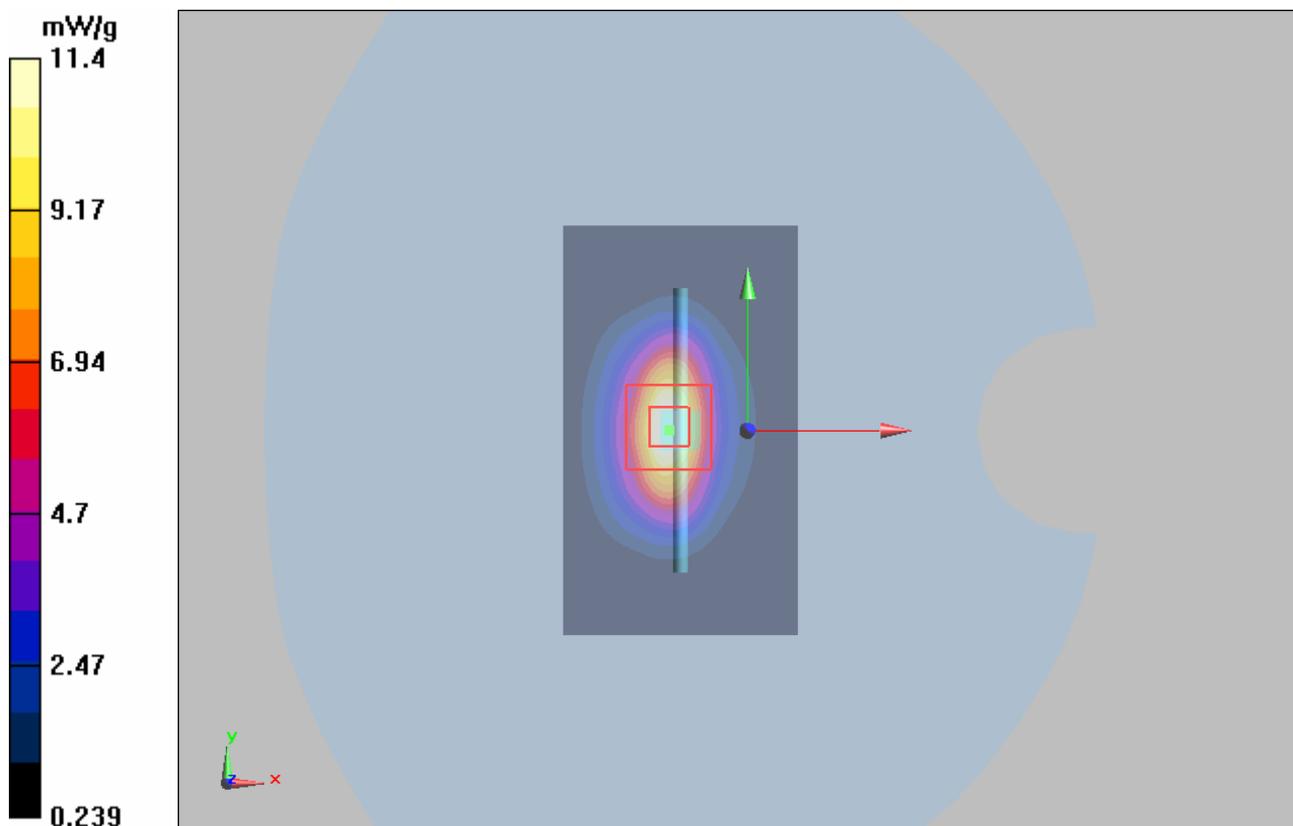


Figure 10 System Performance Check 1800MHz 250mW

System Performance Check at 1900 MHz Head TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d018

Date/Time: 2/2/2010 9:30:04 AM

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 40.03$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM2; Type: SAM;

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

1900 MHz Dipole/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.9 mW/g

1900 MHz Dipole/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.8 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.46 mW/g

Maximum value of SAR (measured) = 11.9 mW/g

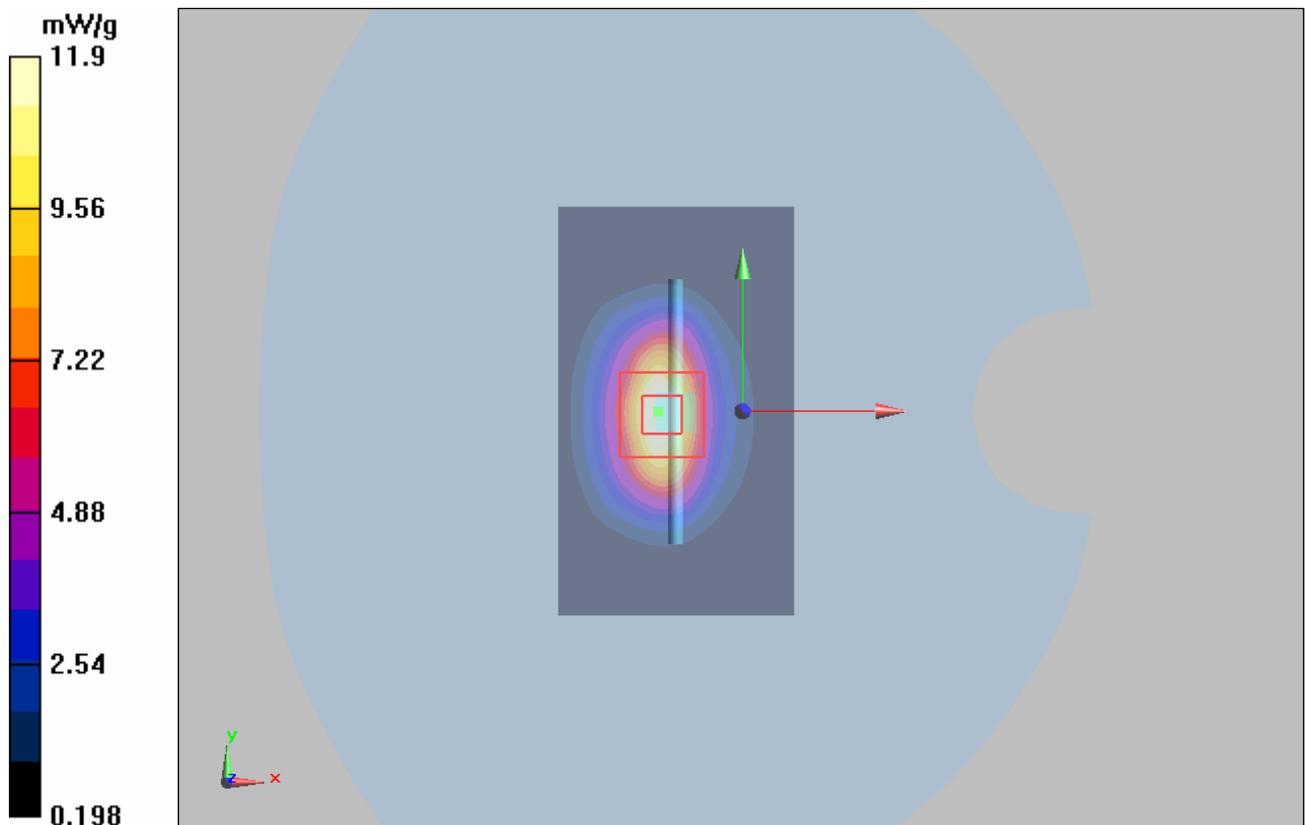


Figure 11 System Performance Check 1900MHz 250mW

System Performance Check at 1900 MHz Body TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d018

Date/Time: 2/1/2010 2:02:19 PM

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.75$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM2; Type: SAM;

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

1900 MHZ Dipole/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.5 mW/g

1900 MHZ Dipole/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 75.9 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 16.8 W/kg

SAR(1 g) = 9.73 mW/g; SAR(10 g) = 5.17 mW/g

Maximum value of SAR (measured) = 11 mW/g

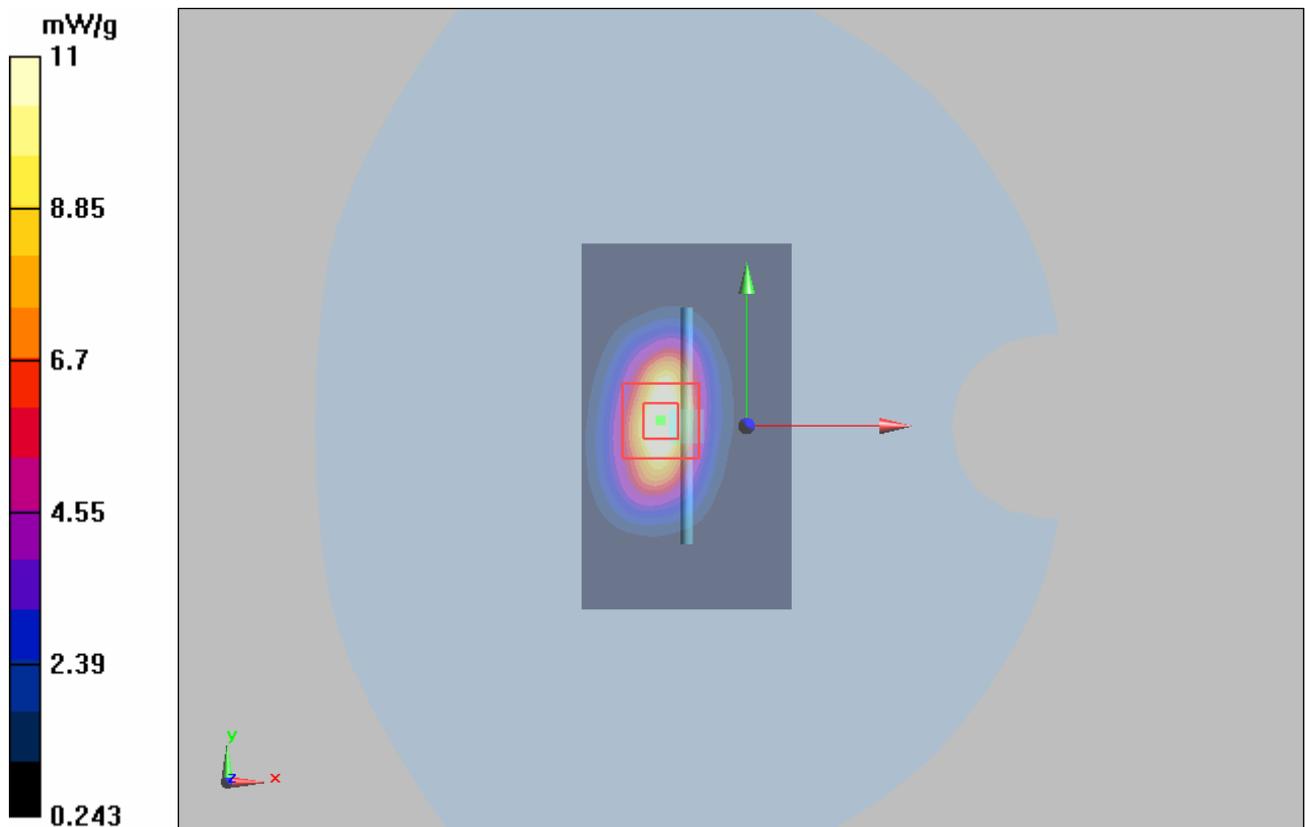


Figure 12 System Performance Check 1900MHz 250mW

ANNEX C: Graph Results

CDMA Cellular Left Cheek Middle

Date/Time: 2/1/2010 7:40:07 AM

Communication System: CDMA Cellular; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.582 mW/g

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

Reference Value = 10.1 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.691 W/kg

SAR(1 g) = 0.542 mW/g; SAR(10 g) = 0.396 mW/g

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

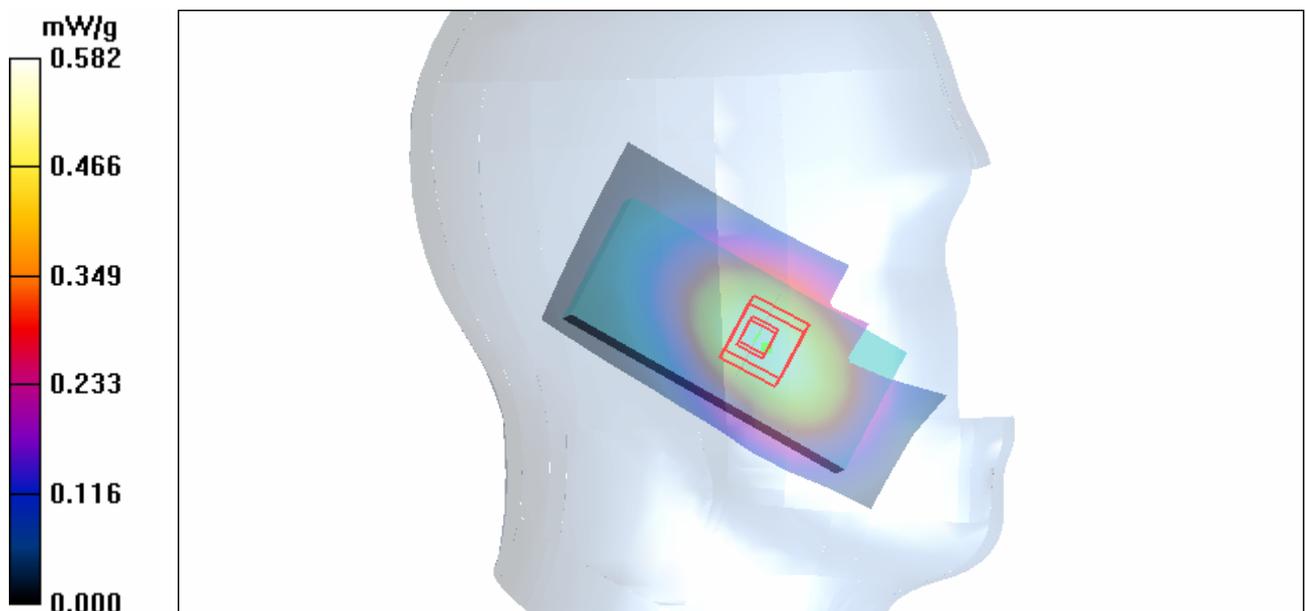


Figure 13 Left Hand Touch Cheek CDMA Cellular Channel 384

CDMA Cellular Left Tilt Middle

Date/Time: 2/1/2010 11:26:11 AM

Communication System: CDMA Cellular; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.389 mW/g

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

Reference Value = 15.4 V/m; Power Drift = 0.157 dB

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.268 mW/g

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

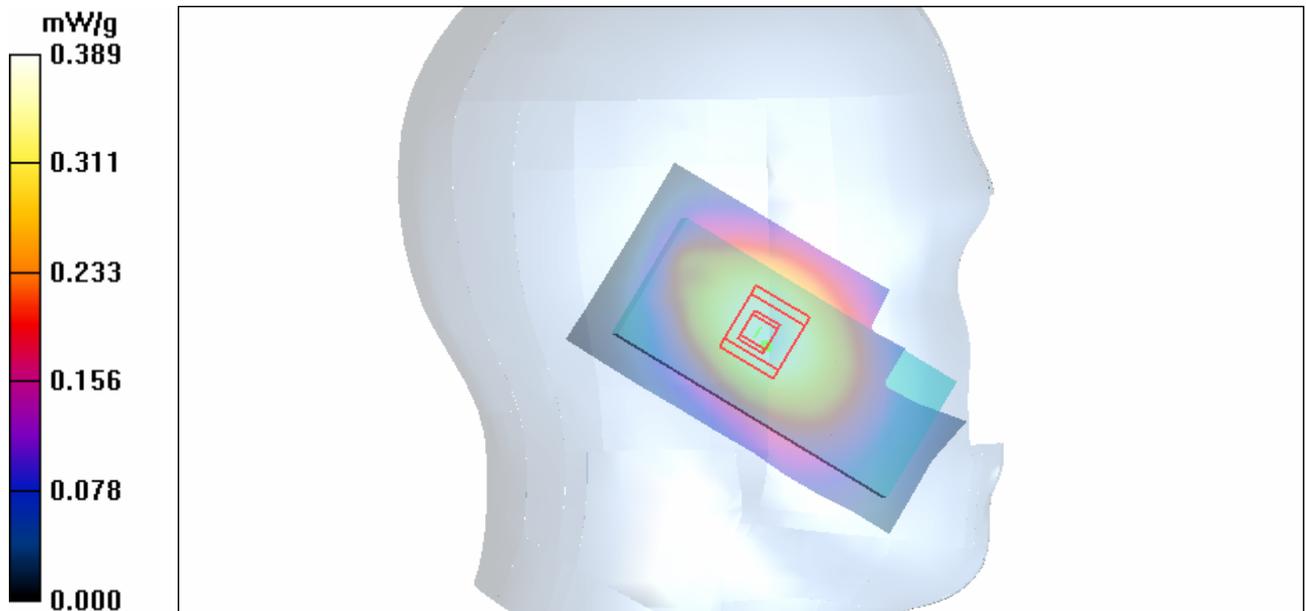


Figure 14 Left Hand Tilt 15° CDMA Cellular Channel 384

CDMA Cellular Right Cheek High

Date/Time: 2/1/2010 10:34:41 AM

Communication System: CDMA Cellular; Frequency: 848.31 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 848.31$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 41.7$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqid Temperature: 21.5°C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.545 mW/g

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

Reference Value = 9.24 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.691 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.371 mW/g

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

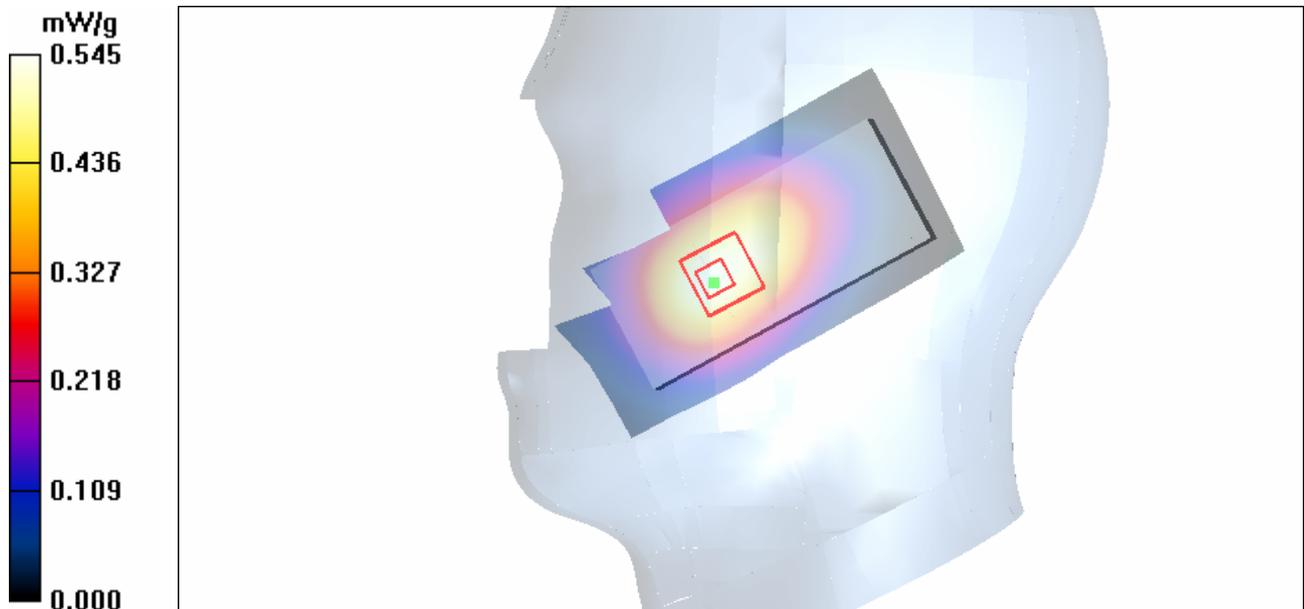


Figure 15 Right Hand Touch Cheek CDMA Cellular Channel 777

CDMA Cellular Right Cheek Middle

Date/Time: 2/1/2010 9:56:48 AM

Communication System: CDMA Cellular; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.923$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

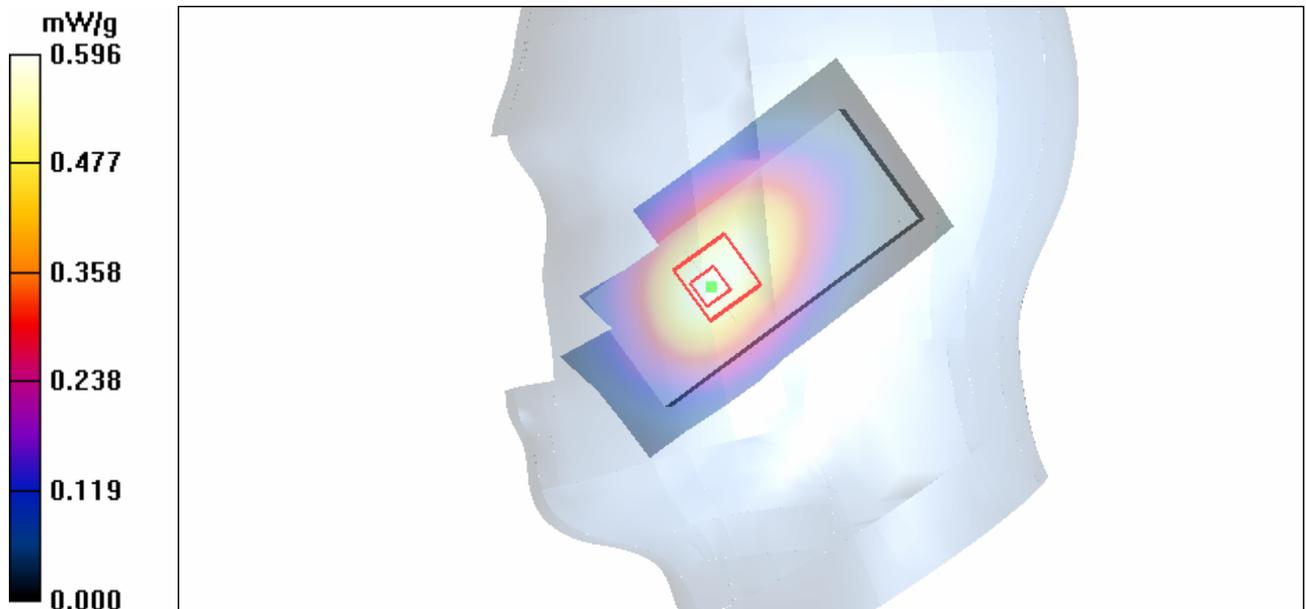
Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.738 W/kg

SAR(1 g) = 0.563 mW/g; SAR(10 g) = 0.409 mW/g

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



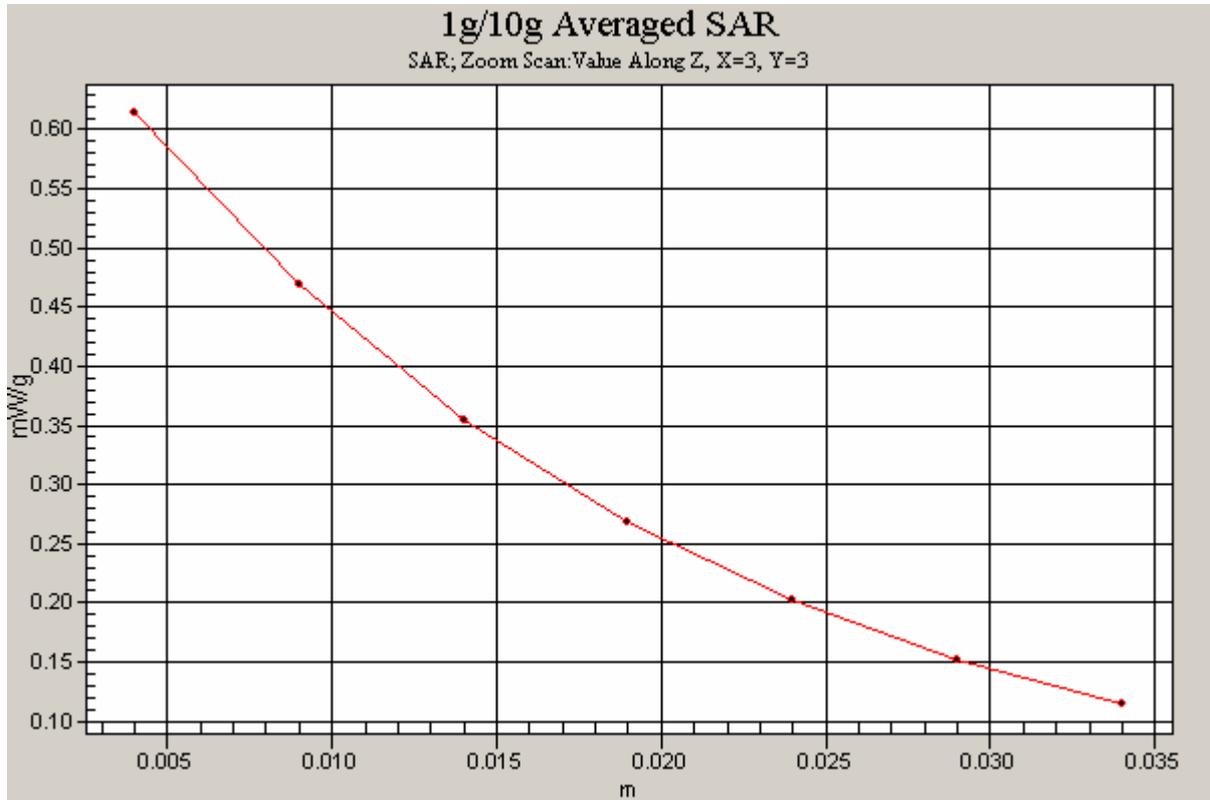


Figure 16 Right Hand Touch Cheek CDMA Cellular Channel 384

CDMA Cellular Right Cheek Low

Date/Time: 2/1/2010 10:16:09 AM

Communication System: CDMA Cellular; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 825$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 42$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.576 mW/g

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

Reference Value = 10.0 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.679 W/kg

SAR(1 g) = 0.525 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.563 mW/g

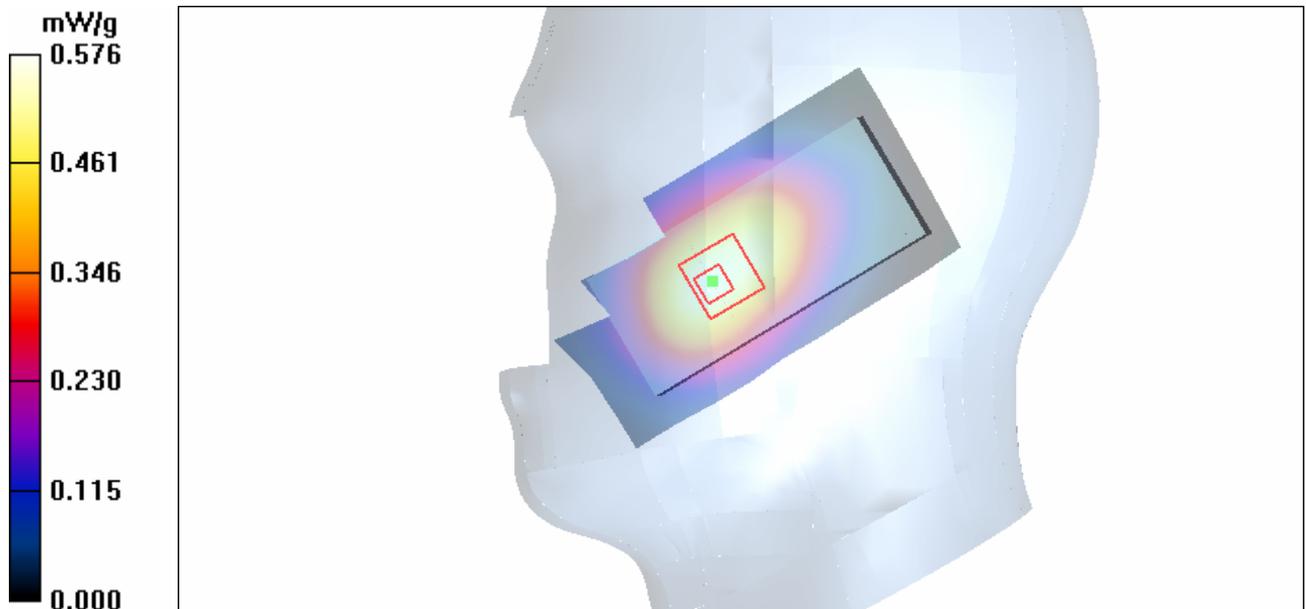


Figure 17 Right Hand Touch Cheek CDMA Cellular Channel 1013

CDMA Cellular Right Tilt Middle

Date/Time: 2/1/2010 10:54:05 AM

Communication System: CDMA Cellular; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.923$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.2, 9.2, 9.2); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.405 mW/g

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

Reference Value = 15.2 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.498 W/kg

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.288 mW/g

Maximum value of SAR (measured) = 0.414 mW/g

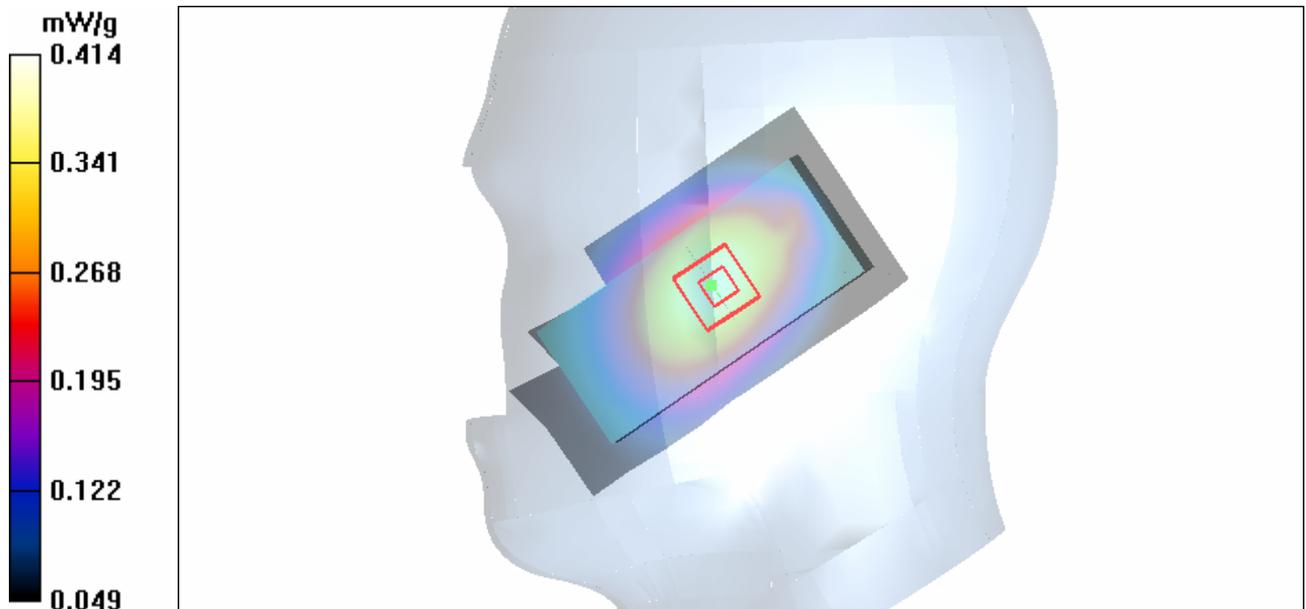


Figure 18 Right Hand Tilt 15° CDMA Cellular Channel 384

CDMA Cellular Towards Ground High

Date/Time: 1/31/2010 5:24:42 PM

Communication System: CDMA Cellular; Frequency: 848.31 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 848.31$ MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqid Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.634 mW/g

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

Reference Value = 12.4 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.780 W/kg

SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (measured) = 0.628 mW/g

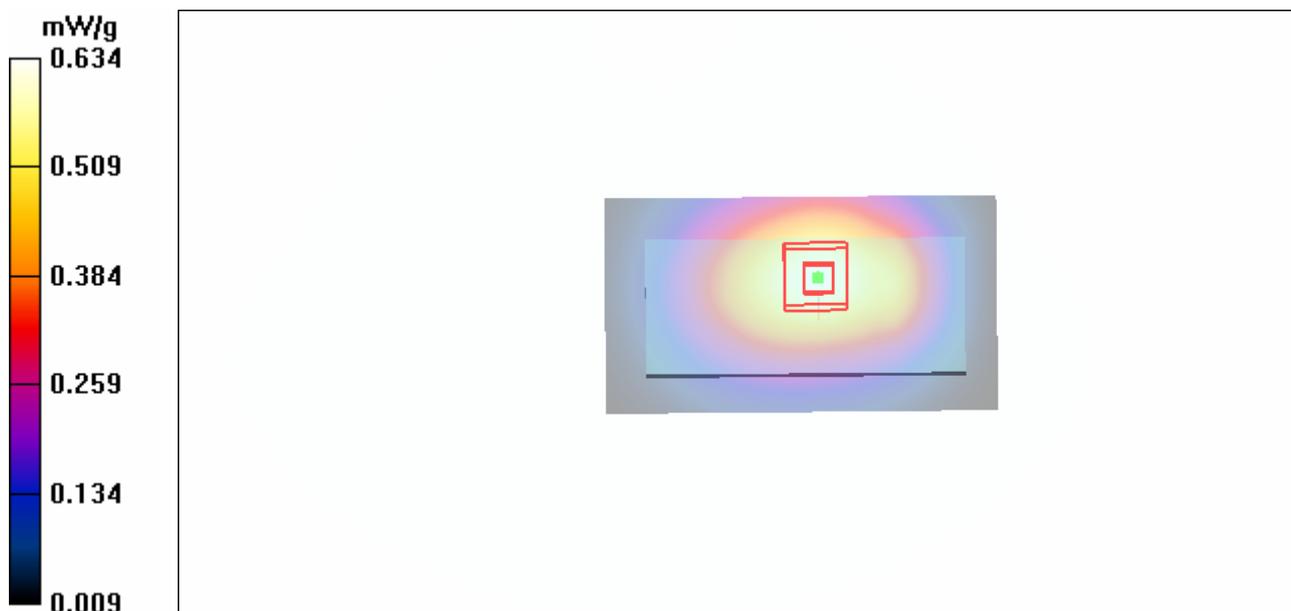


Figure 19 Body, Towards Ground, CDMA Cellular Channel 777

CDMA Cellular Towards Ground Middle

Date/Time: 1/31/2010 6:15:12 PM

Communication System: CDMA Cellular; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

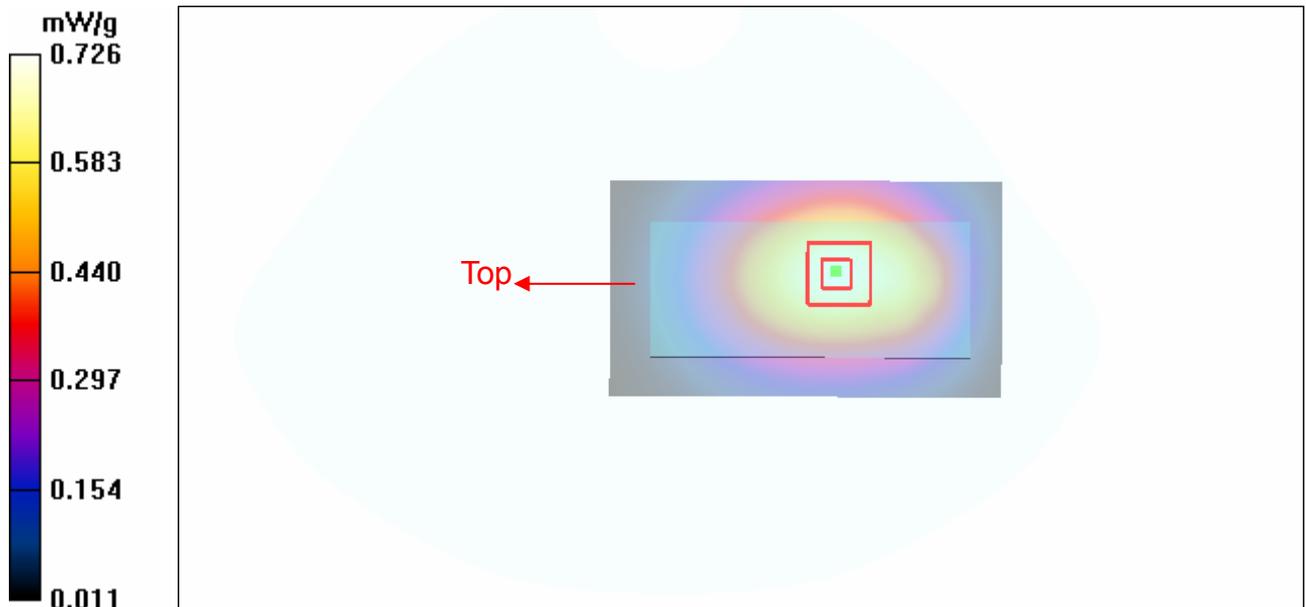
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.886 W/kg

SAR(1 g) = 0.678 mW/g; SAR(10 g) = 0.492 mW/g

Maximum value of SAR (measured) = 0.715 mW/g



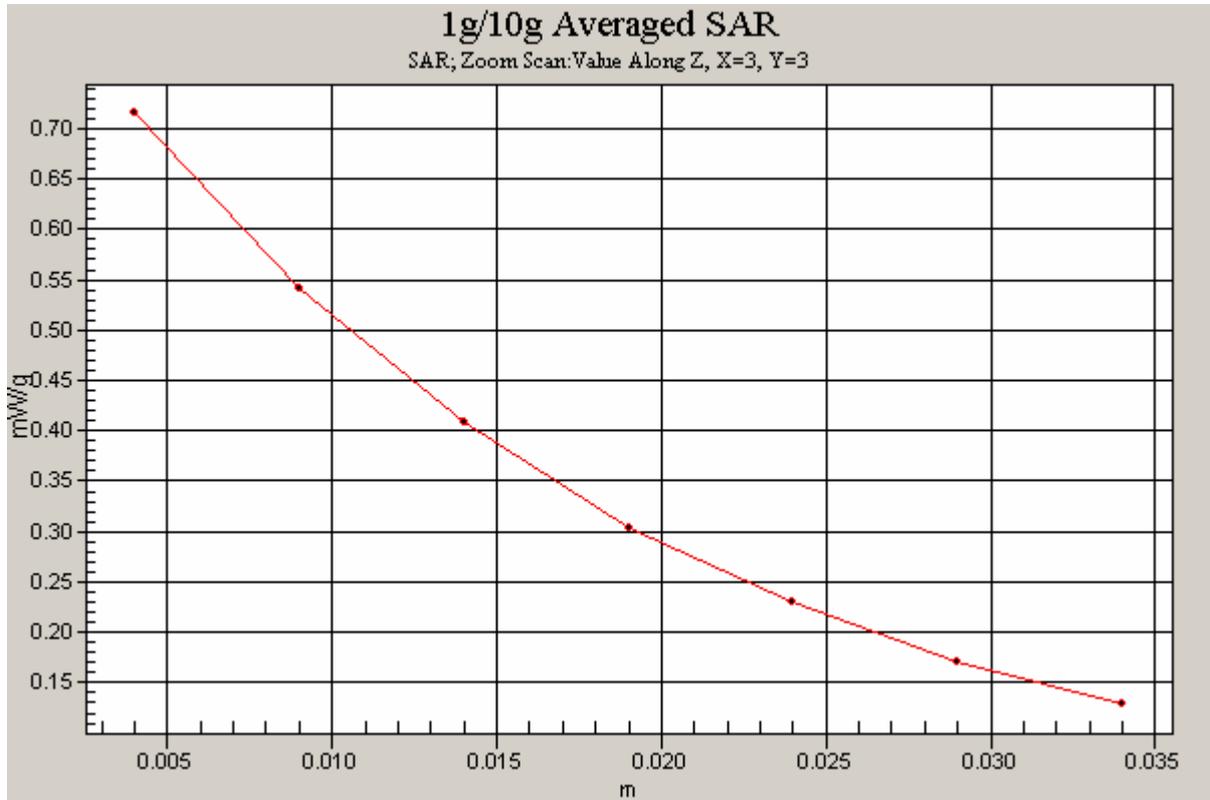


Figure 20 Body, Towards Ground, CDMA Cellular Channel 384

CDMA Cellular Towards Ground Low

Date/Time: 1/31/2010 4:55:41 PM

Communication System: CDMA Cellular; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 825$ MHz; $\sigma = 0.97$ mho/m; $\epsilon_r = 55$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 13.0 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.863 W/kg

SAR(1 g) = 0.661 mW/g; SAR(10 g) = 0.477 mW/g

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

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

Reference Value = 13.0 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.825 W/kg

SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.407 mW/g

Maximum value of SAR (measured) = 0.672 mW/g

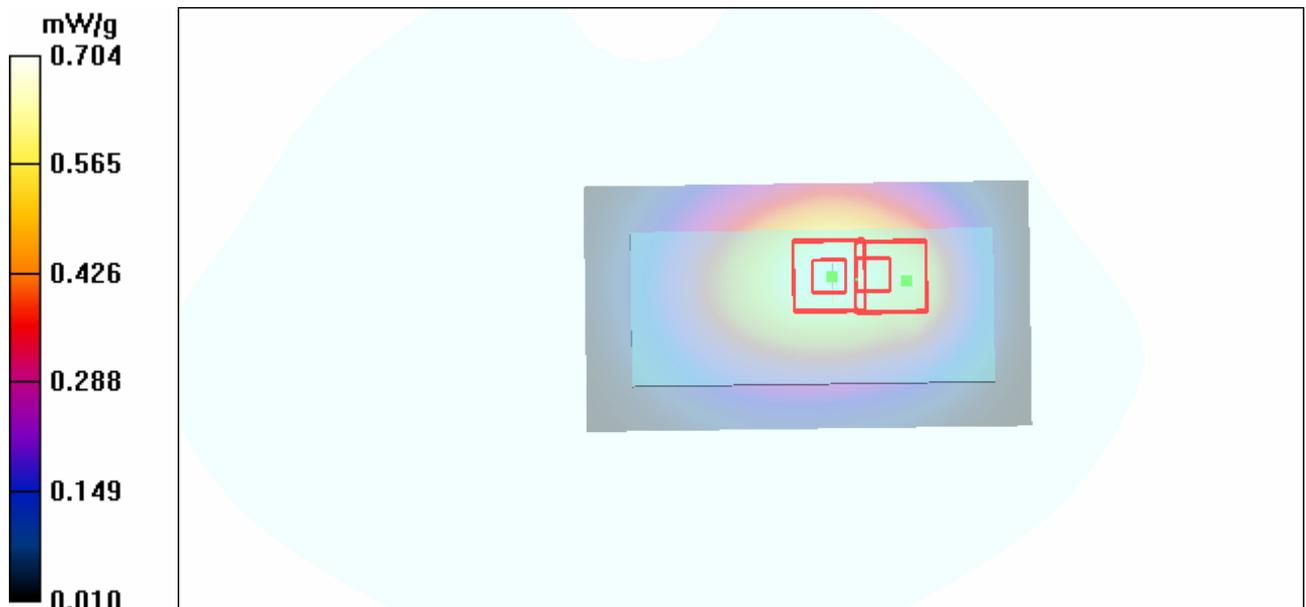


Figure 21 Body, Towards Ground, CDMA Cellular Channel 1013

CDMA Cellular Towards Phantom Middle

Date/Time: 1/31/2010 4:37:13 PM

Communication System: CDMA Cellular; Frequency: 836.52 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 9.03 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.510 W/kg

SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.290 mW/g

Maximum value of SAR (measured) = 0.418 mW/g

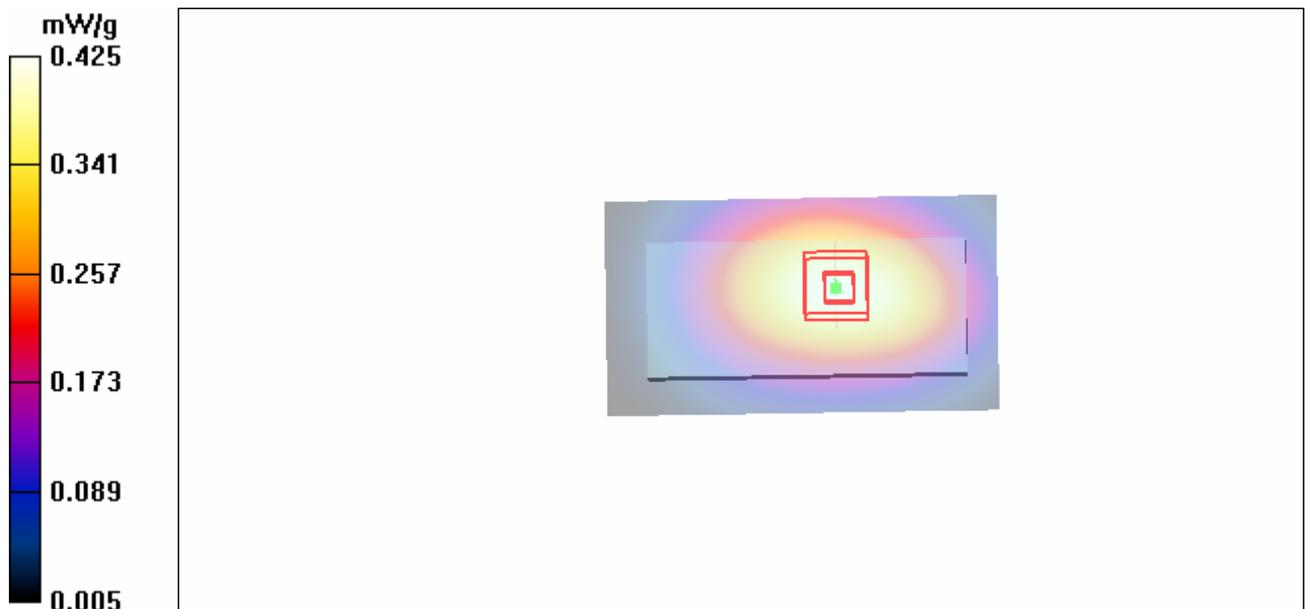


Figure 22 Body, Towards Phantom, CDMA Cellular Channel 384

CDMA PCS Left Cheek High

Date/Time: 2/2/2010 3:32:58 PM

Communication System: CDMA PCS; Frequency: 1908.75 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1908.75$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.19 mW/g

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

Reference Value = 10.6 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.635 mW/g

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

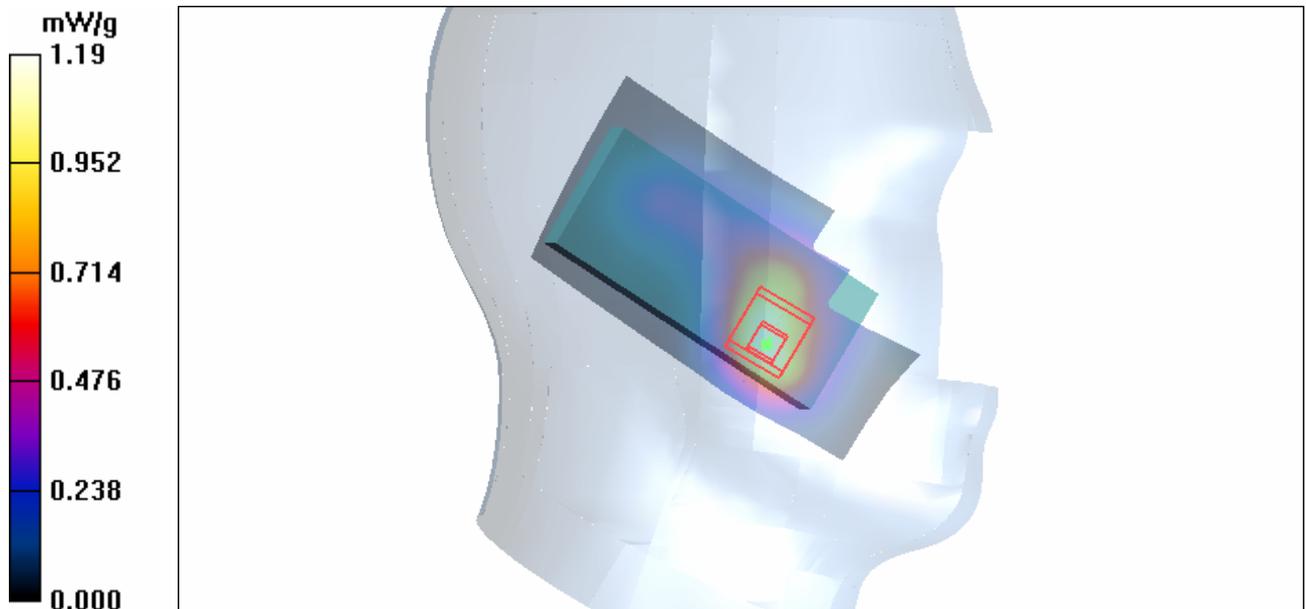


Figure 23 Left Hand Touch Cheek CDMA PCS Channel 1175

CDMA PCS Left Cheek Middle

Date/Time: 2/2/2010 6:46:25 PM

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

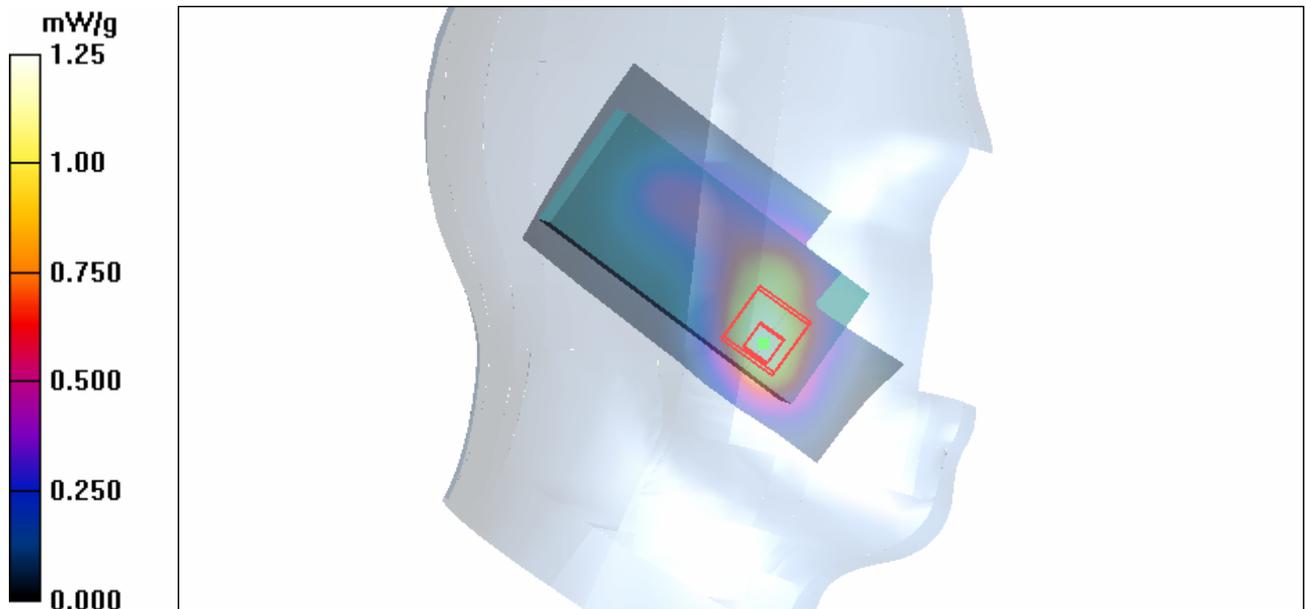
Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.46 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 2.05 W/kg

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.678 mW/g

Maximum value of SAR (measured) = 1.37 mW/g



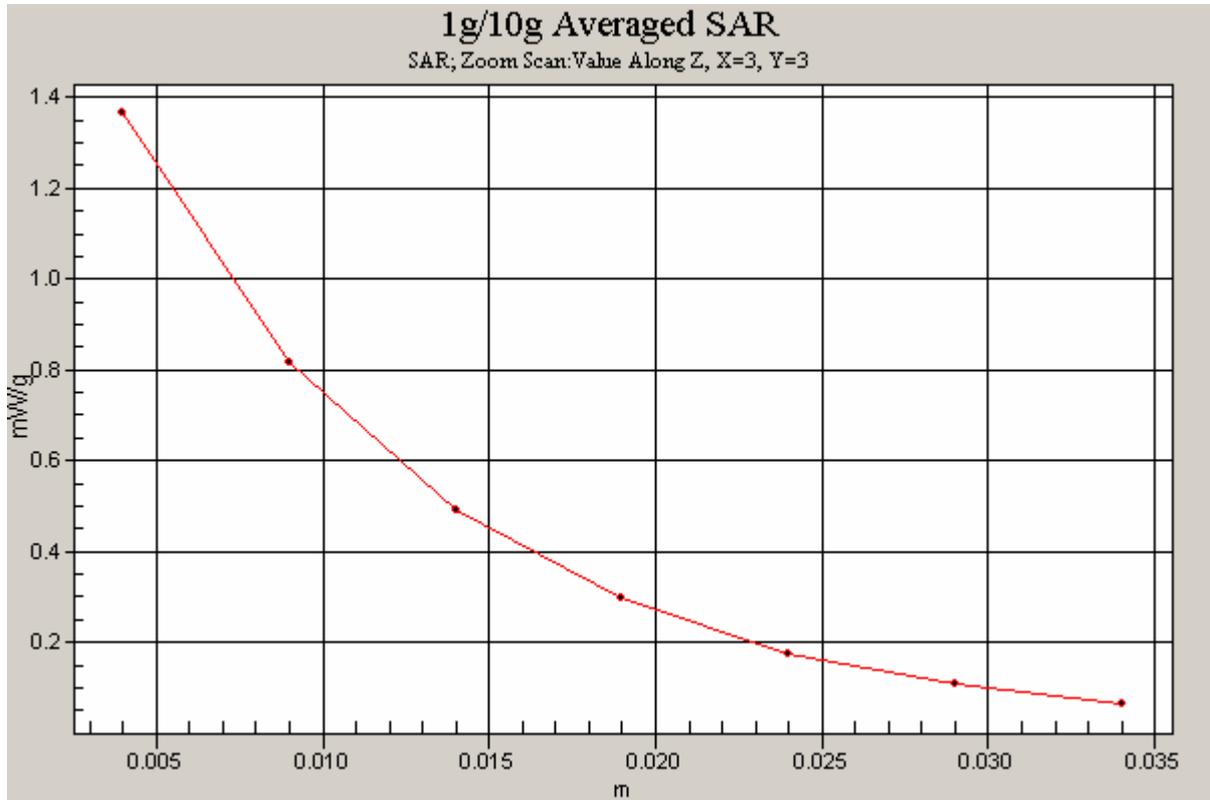


Figure 24 Left Hand Touch Cheek CDMA PCS Channel 600

CDMA PCS Left Cheek Low

Date/Time: 2/2/2010 9:45:33 AM

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1852$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 8.31 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.580 mW/g

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

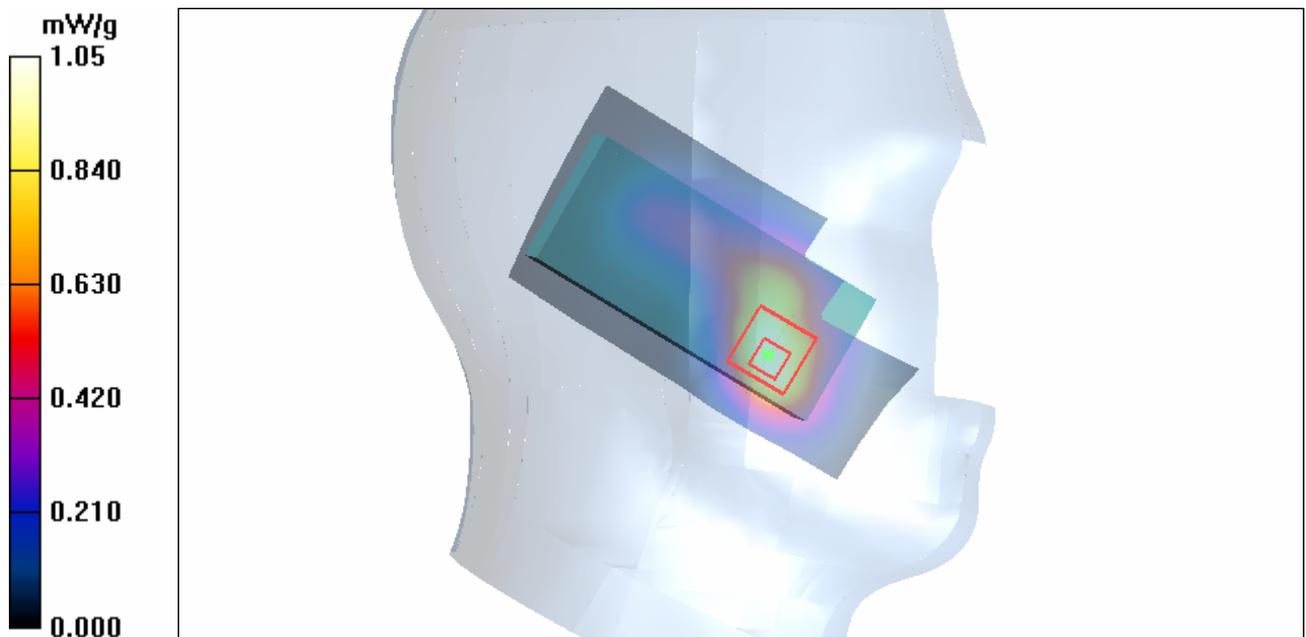


Figure 25 Left Hand Touch Cheek CDMA PCS Channel 25

CDMA PCS Left Tilt Middle

Date/Time: 2/2/2010 4:15:08 PM

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.491 mW/g

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

Reference Value = 16.7 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.671 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.482 mW/g

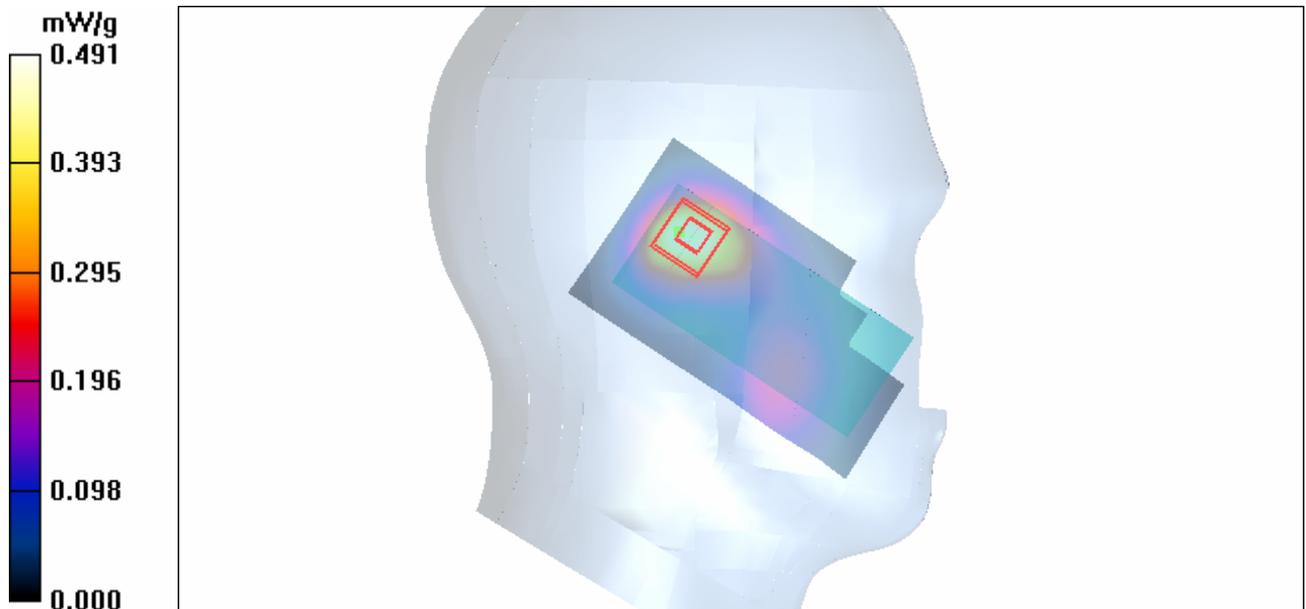


Figure 26 Left Hand Tilt 15° CDMA PCS Channel 600

CDMA PCS Right Cheek High

Date/Time: 2/2/2010 9:34:16 AM

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1908.75$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 11.3 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.567 mW/g

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

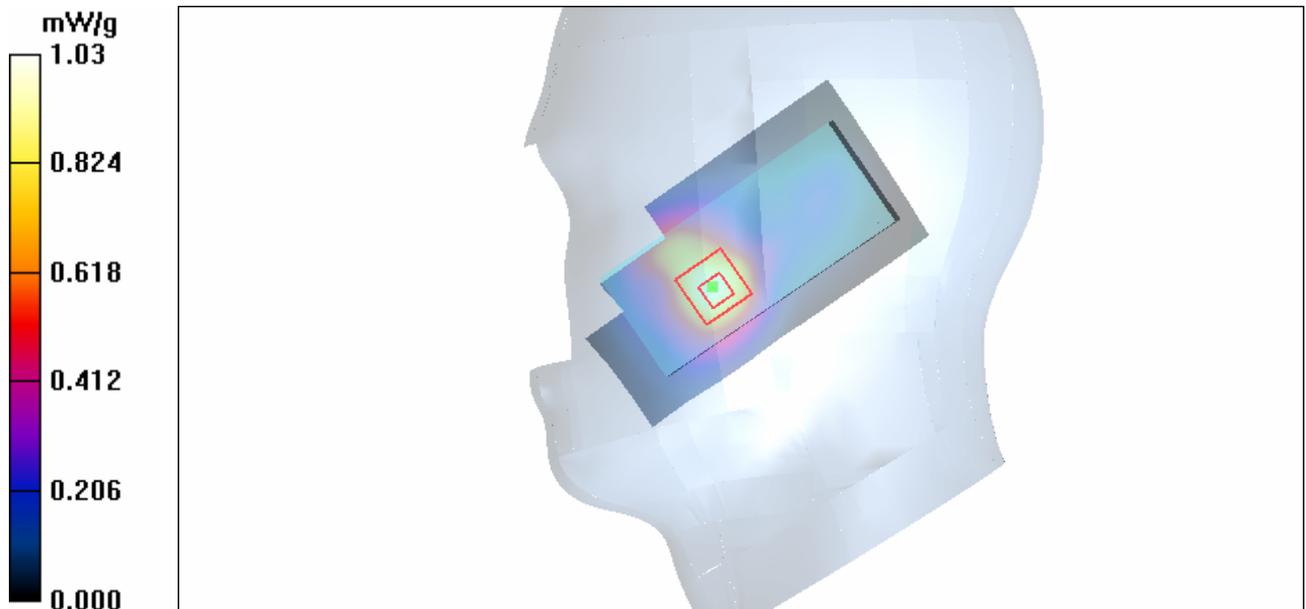


Figure 27 Right Hand Touch Cheek CDMA PCS Channel 1175

CDMA PCS Right Cheek Middle

Date/Time: 2/2/2010 2:53:28 PM

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 11.8 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.707 mW/g

Maximum value of SAR (measured) = 1.30 mW/g

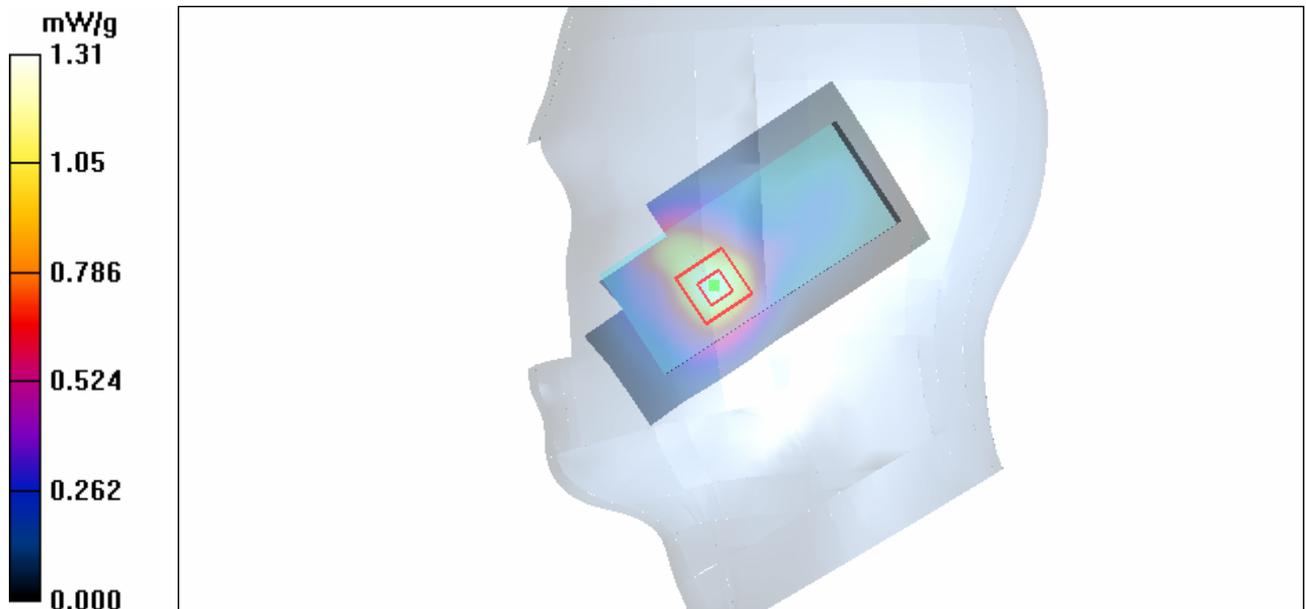


Figure 28 Right Hand Touch Cheek CDMA PCS Channel 600

CDMA PCS Right Cheek Low

Date/Time: 2/2/2010 9:14:19 AM

Communication System: CDMA PCS; Frequency: 1851.25 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1852$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 10.7 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.886 mW/g; SAR(10 g) = 0.541 mW/g

Maximum value of SAR (measured) = 0.985 mW/g

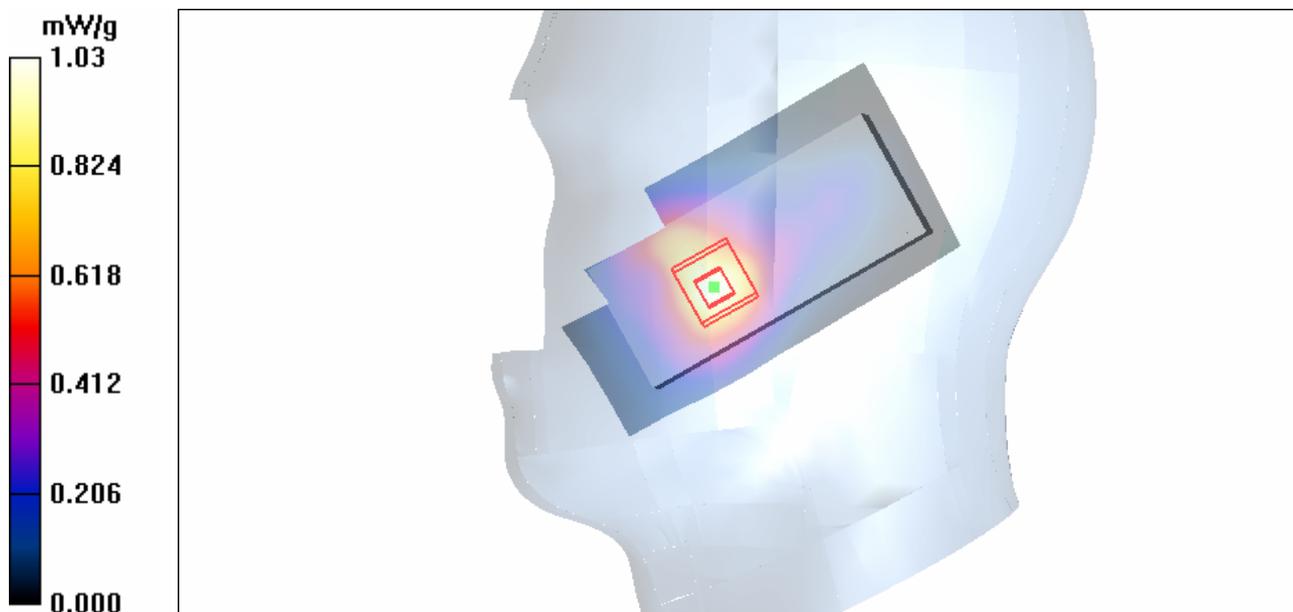


Figure 29 Right Hand Touch Cheek CDMA PCS Channel 25

CDMA PCS Right Tilt Middle

Date/Time: 2/2/2010 3:12:53 PM

Communication System: CDMA PCS; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqid Temperature: 21.5°C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.53, 7.53, 7.53); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.419 mW/g

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

Reference Value = 16.4 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 0.502 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.214 mW/g

Maximum value of SAR (measured) = 0.372 mW/g

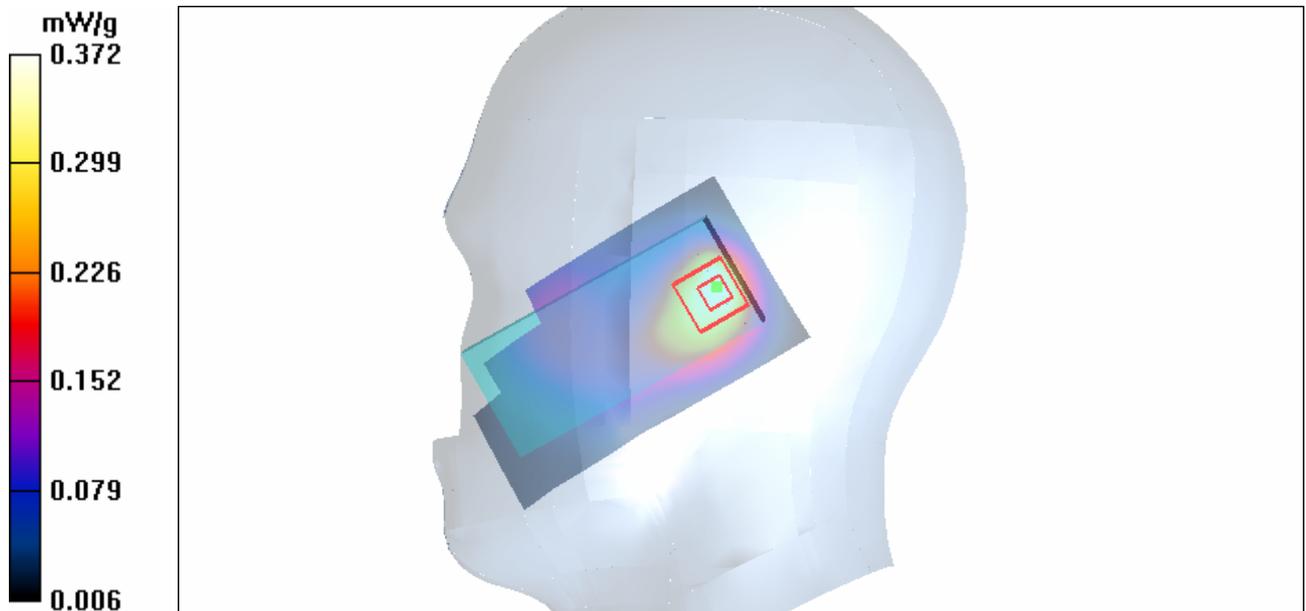


Figure 30 Right Hand Tilt 15° CDMA PCS Channel 600

CDMA PCS Towards Ground High

Date/Time: 2/1/2010 5:33:06 PM

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1908.75$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.693 mW/g

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

Reference Value = 9.74 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.977 W/kg

SAR(1 g) = 0.620 mW/g; SAR(10 g) = 0.391 mW/g

Maximum value of SAR (measured) = 0.668 mW/g

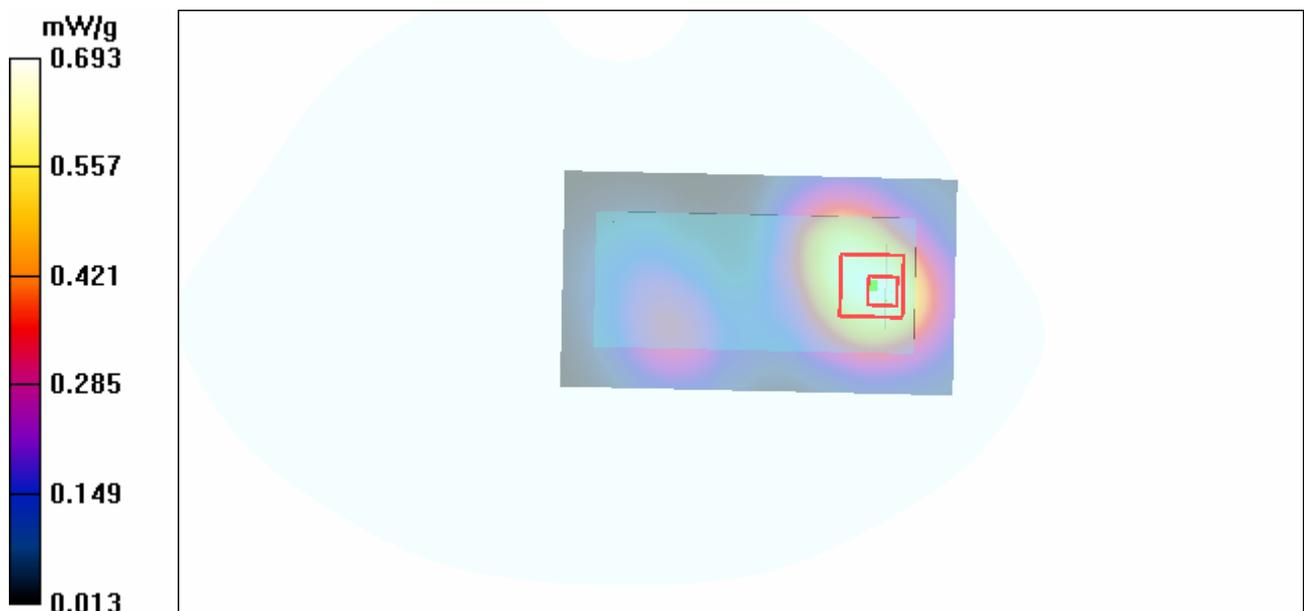


Figure 31 Body, Towards Ground, CDMA PCS Channel 1175

CDMA PCS Towards Ground Middle

Date/Time: 2/1/2010 4:57:22 PM

Communication System: CDMA PCS; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.746 mW/g

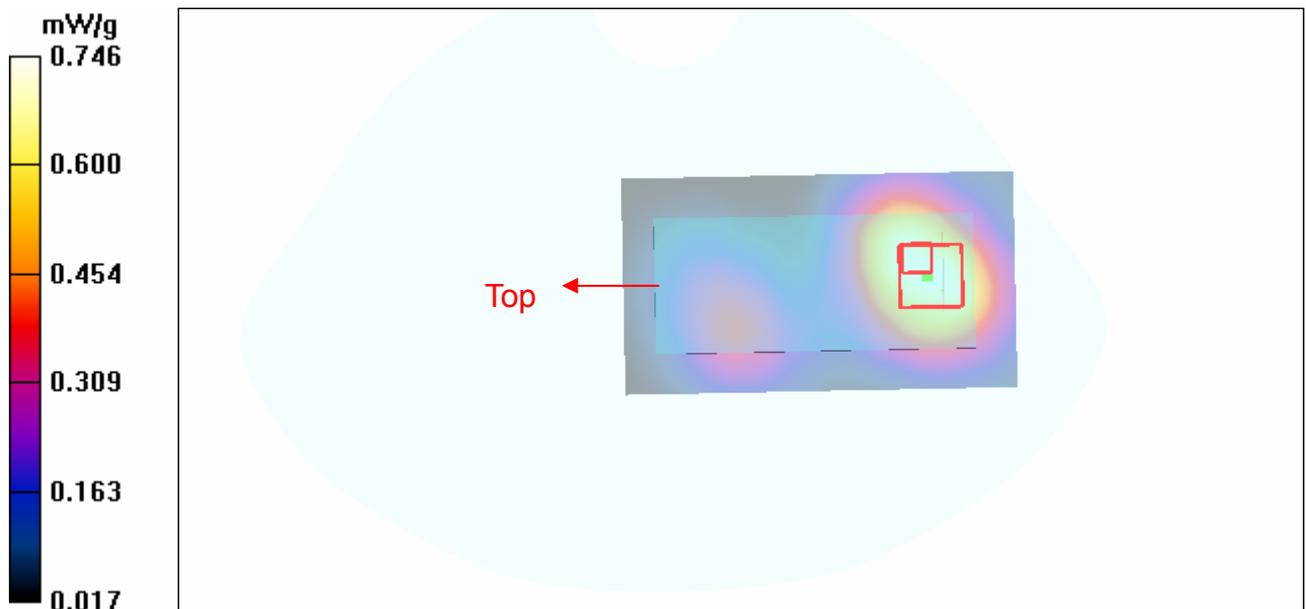
Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = 0.095 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.663 mW/g; SAR(10 g) = 0.425 mW/g

Maximum value of SAR (measured) = 0.710 mW/g



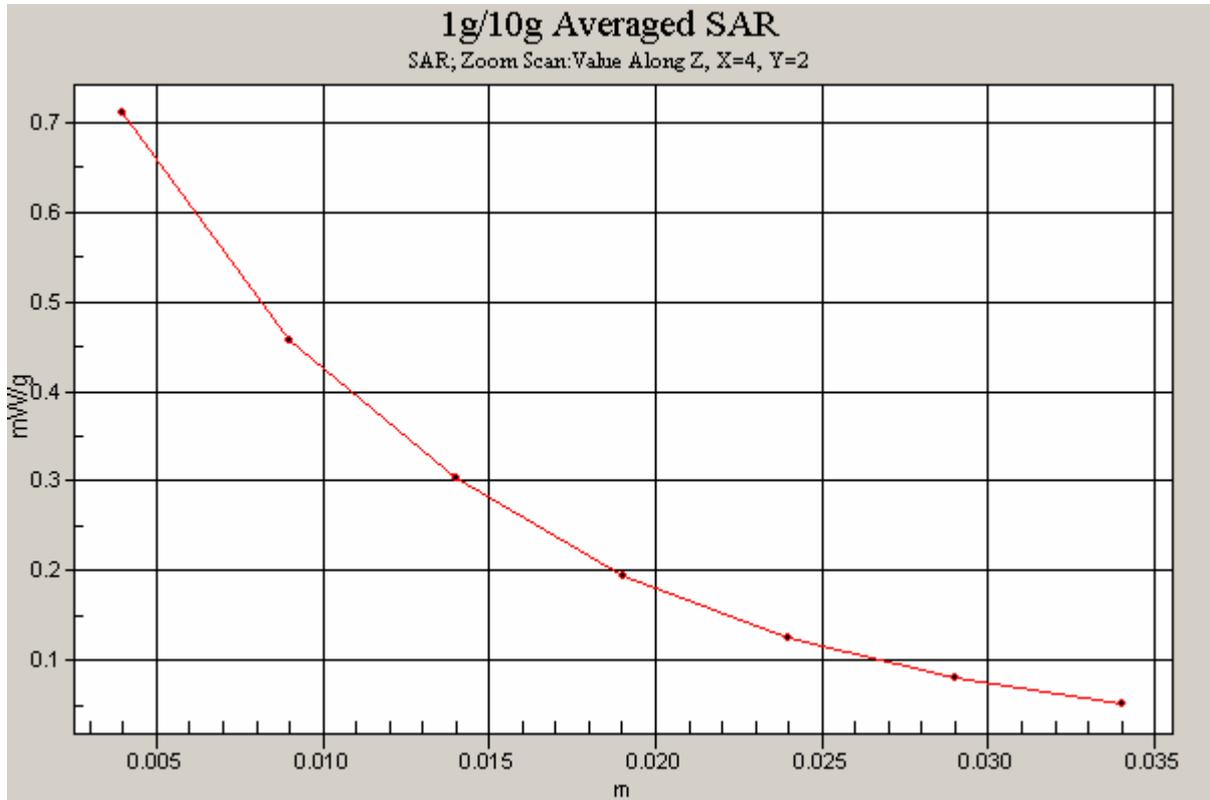


Figure 32 Body, Towards Ground, CDMA PCS Channel 600

CDMA PCS Towards Ground Low

Date/Time: 2/1/2010 5:15:11 PM

Communication System: CDMA PCS; Frequency: 1851.25 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1852$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.602 mW/g

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

Reference Value = 10.0 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.561 mW/g; SAR(10 g) = 0.349 mW/g

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

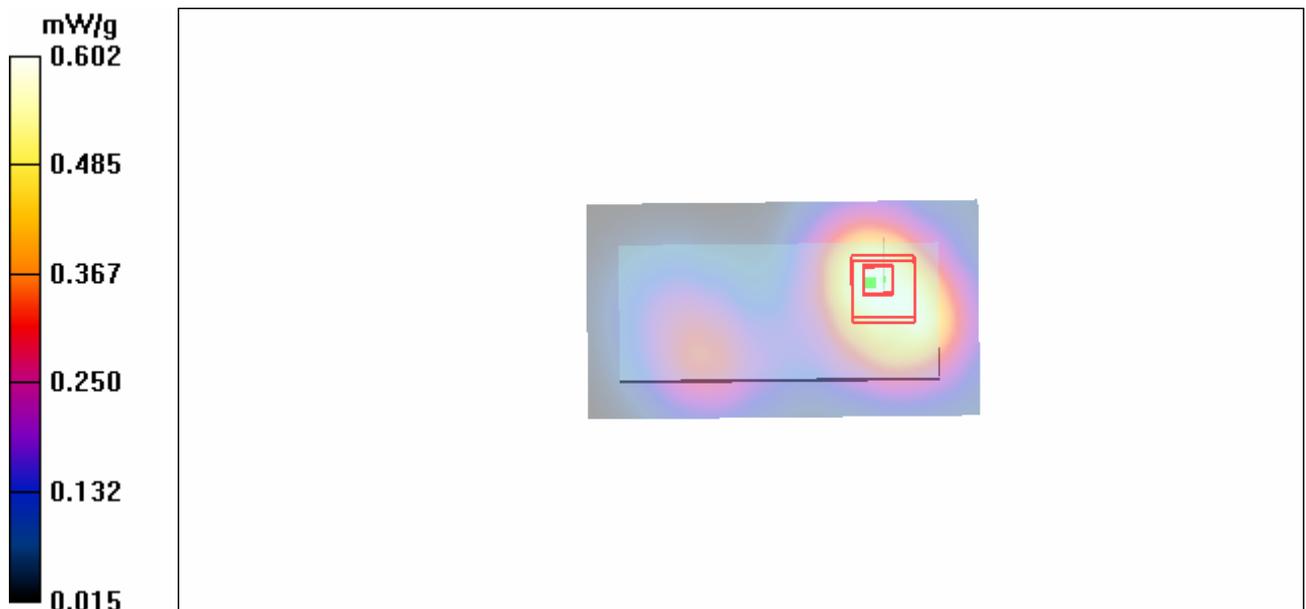


Figure 33 Body, Towards Ground, CDMA PCS Channel 25

CDMA PCS Towards Phantom Middle

Date/Time: 2/1/2010 4:38:43 PM

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.573 mW/g

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

Reference Value = 9.65 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.303 mW/g

Maximum value of SAR (measured) = 0.565 mW/g

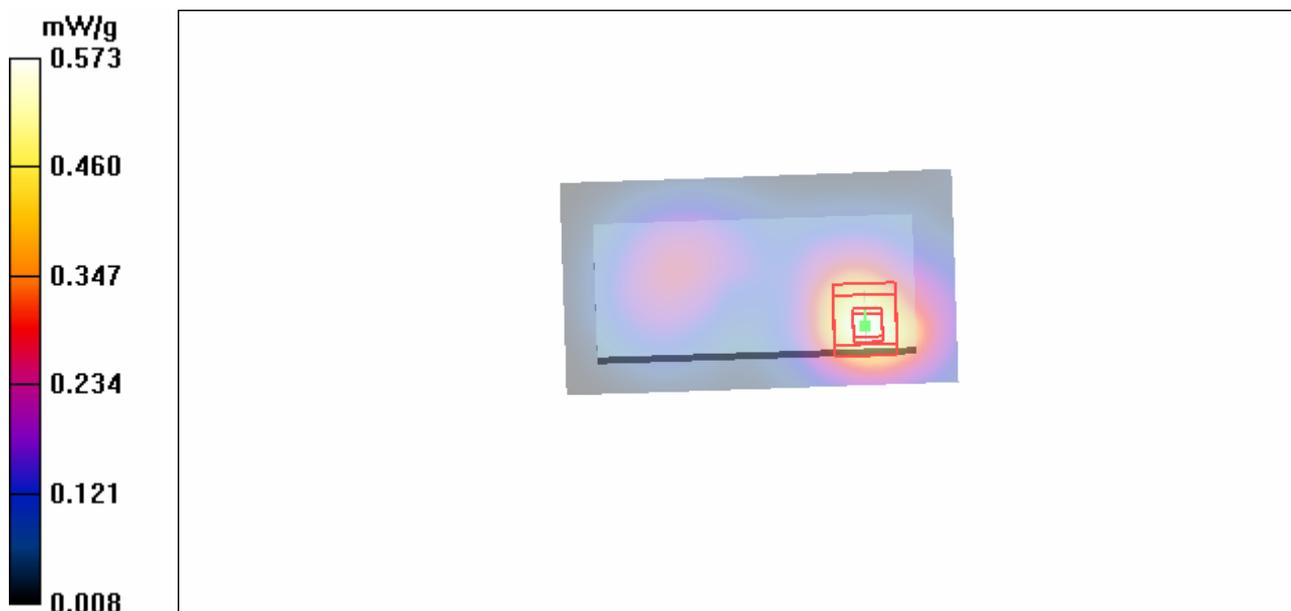


Figure 34 Body, Towards Phantom, CDMA PCS Channel 600

CDMA AWS Left Cheek High

Date/Time: 2/1/2010 2:04:15 PM

Communication System: CDMA AWS; Frequency: 1752.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1752.5$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.18 mW/g

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

Reference Value = 9.72 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 1.92 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.644 mW/g

Maximum value of SAR (measured) = 1.30 mW/g

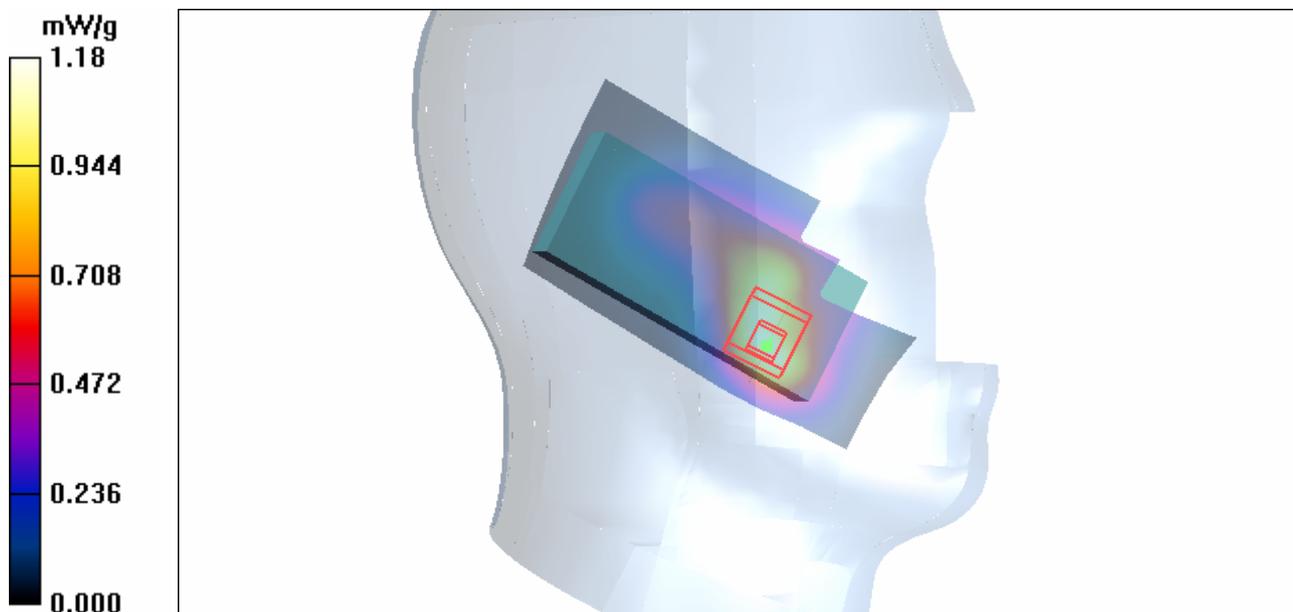


Figure 35 Left Hand Touch Cheek CDMA AWS Channel 850

CDMA AWS Left Cheek Middle

Date/Time: 2/1/2010 1:44:51 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

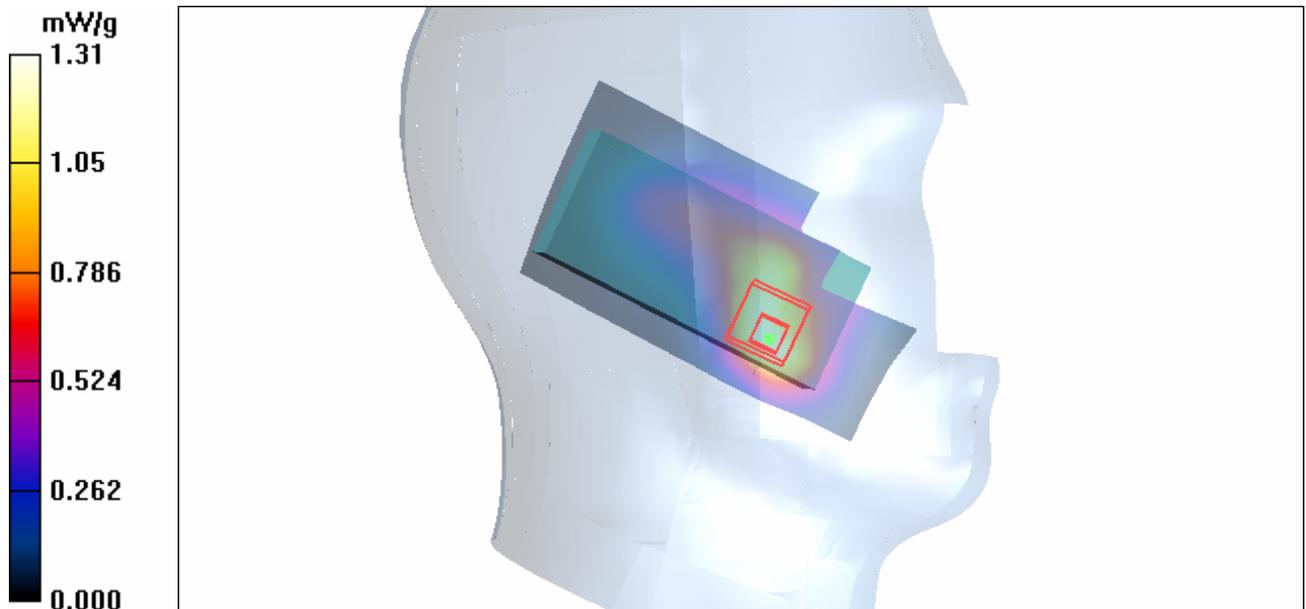
Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 2.08 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.692 mW/g

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



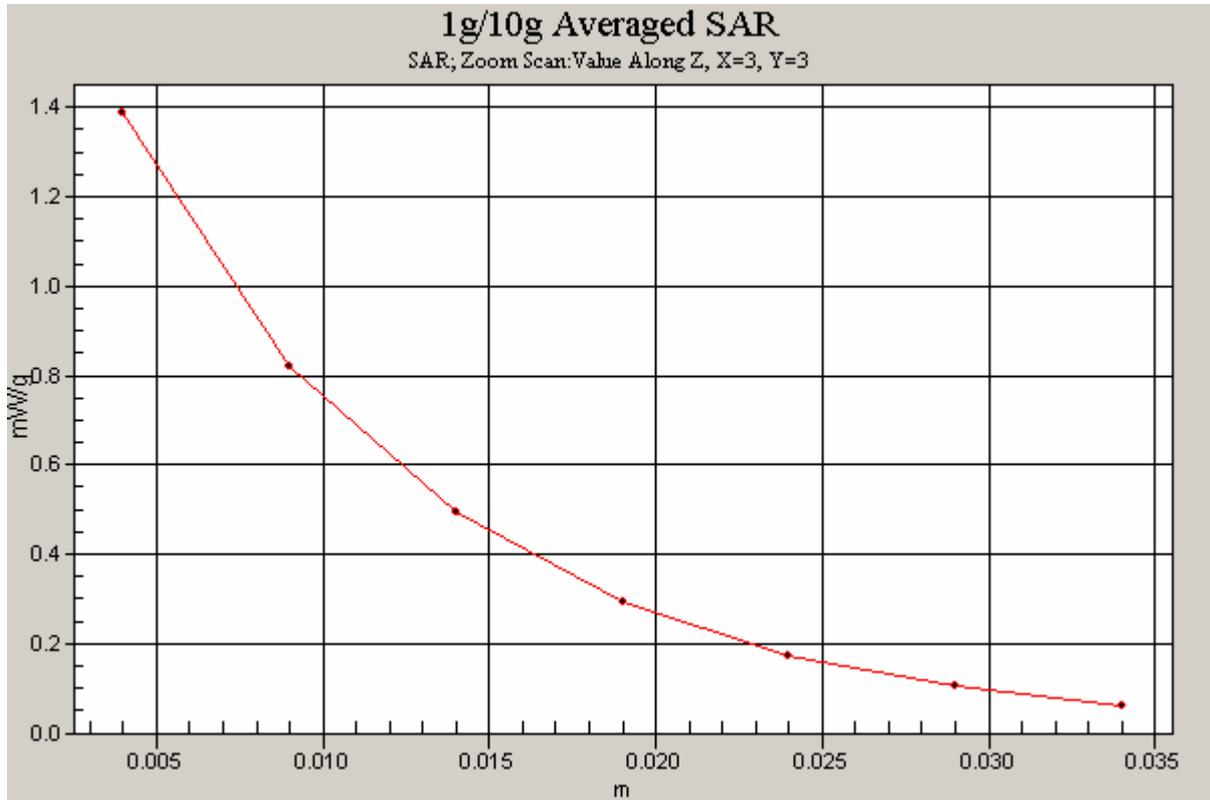


Figure 36 Left Hand Touch Cheek CDMA AWS Channel 450

CDMA AWS Left Cheek Low

Date/Time: 2/1/2010 2:22:55 PM

Communication System: CDMA AWS; Frequency: 1711.25 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1712$ MHz; $\sigma = 1.31$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.28 mW/g

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

Reference Value = 9.25 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 1.99 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.690 mW/g

Maximum value of SAR (measured) = 1.36 mW/g

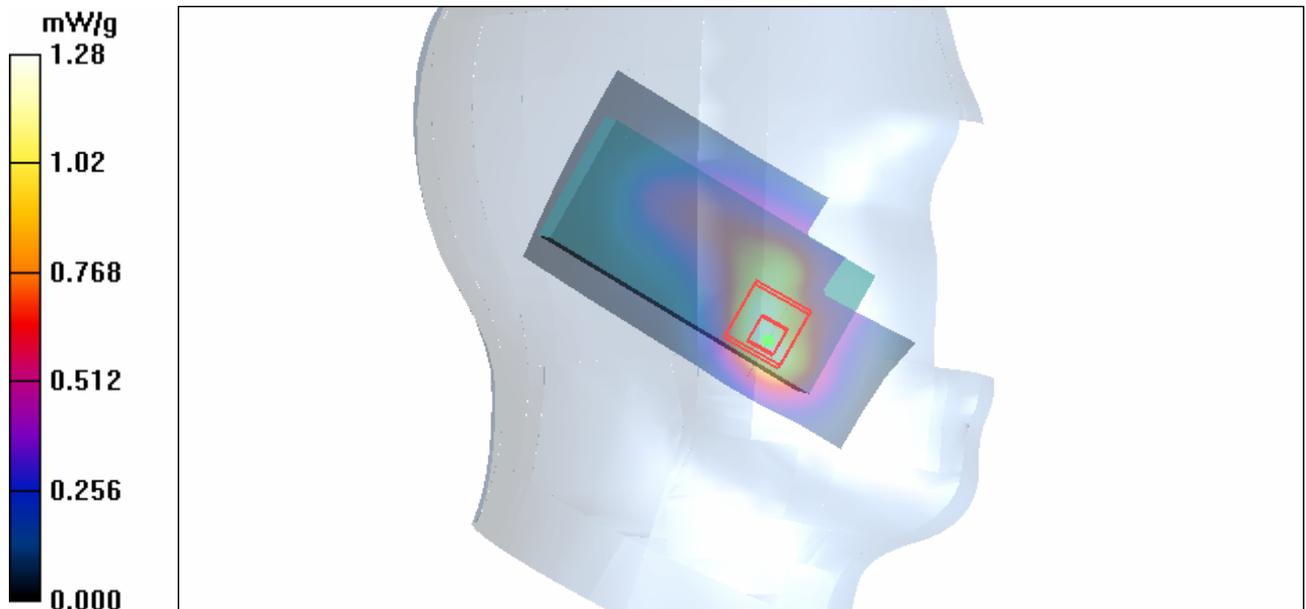


Figure 37 Left Hand Touch Cheek CDMA AWS Channel 25

CDMA AWS Left Tilt Middle

Date/Time: 2/1/2010 2:44:31 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 17.4 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.762 W/kg

SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.317 mW/g

Maximum value of SAR (measured) = 0.562 mW/g

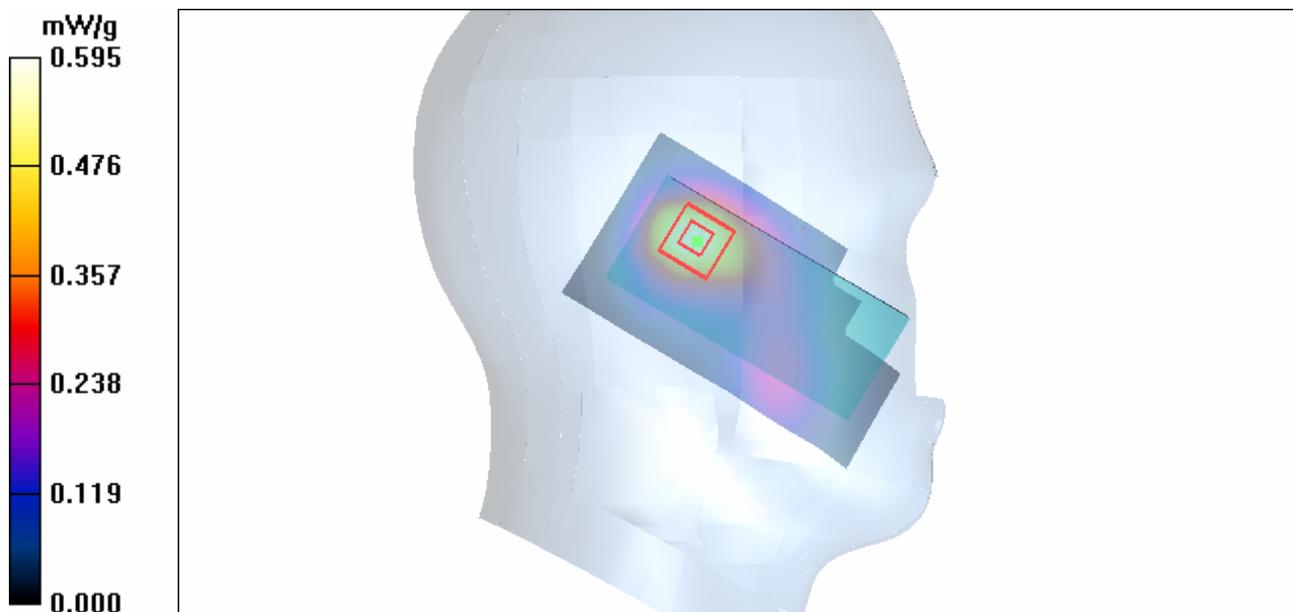


Figure 38 Left Hand Tilt 15° CDMA AWS Channel 450

CDMA AWS Right Cheek High

Date/Time: 2/1/2010 3:44:19 PM

Communication System: CDMA AWS; Frequency: 1752.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1752.5$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.14 mW/g

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

Reference Value = 10.6 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.620 mW/g

Maximum value of SAR (measured) = 1.13 mW/g

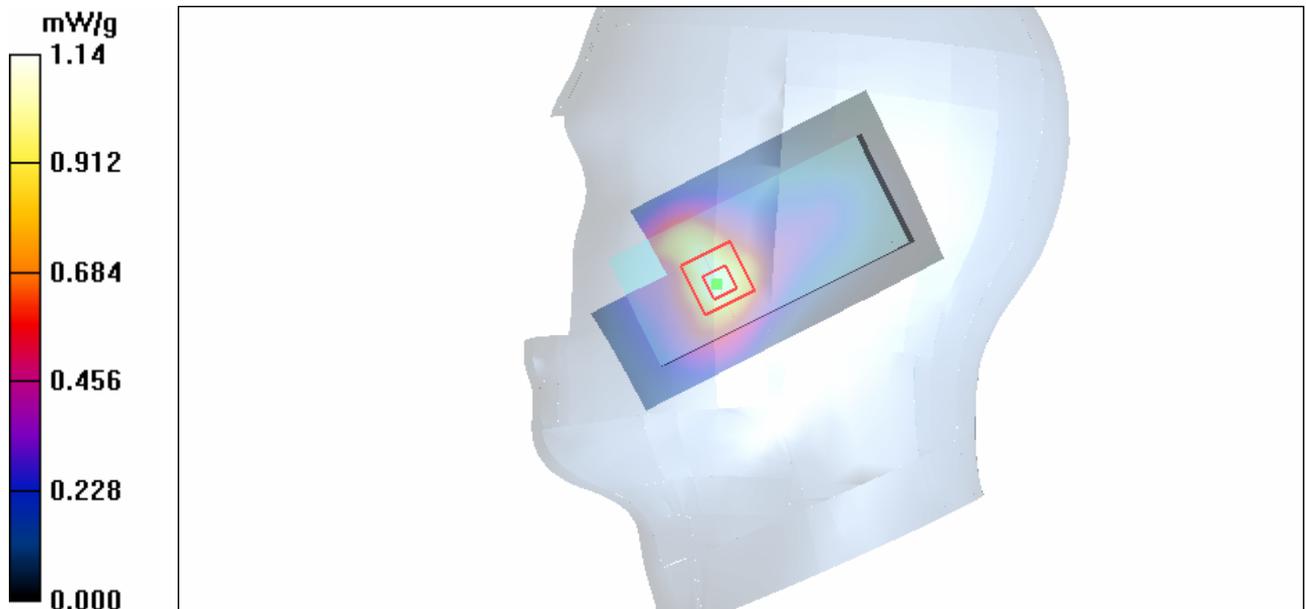


Figure 39 Right Hand Touch Cheek CDMA AWS Channel 850

CDMA AWS Right Cheek Middle

Date/Time: 2/1/2010 3:06:24 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.19 mW/g

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

Reference Value = 11.1 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.646 mW/g

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

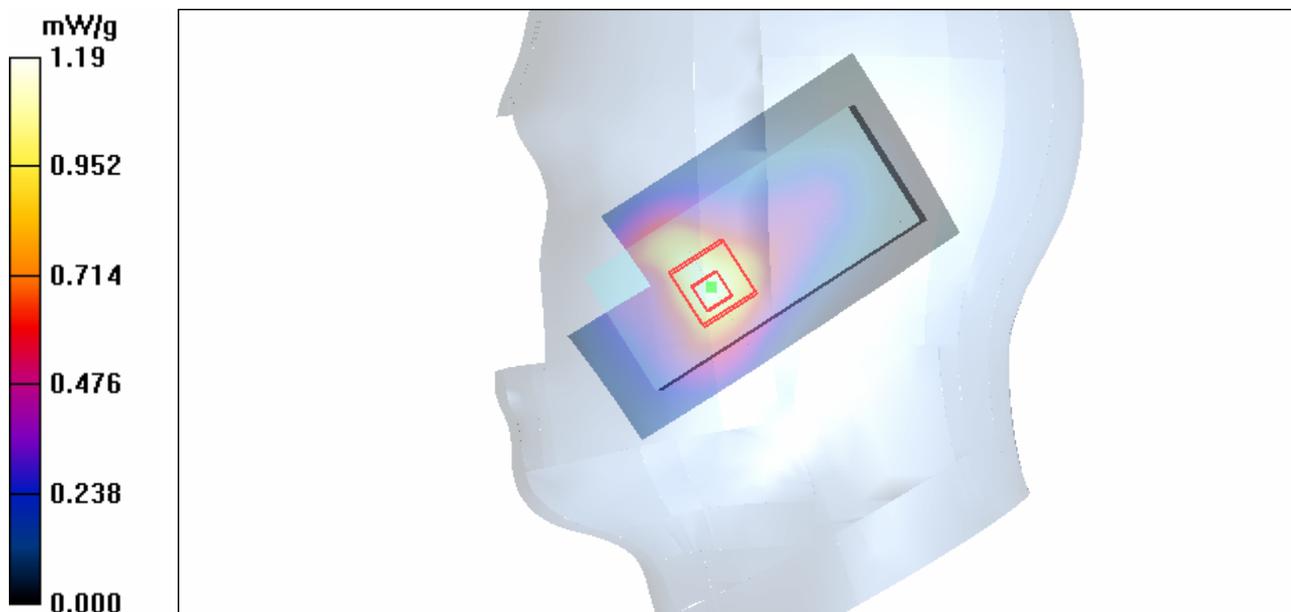


Figure 40 Right Hand Touch Cheek CDMA AWS Channel 450

CDMA AWS Right Cheek Low

Date/Time: 2/1/2010 3:24:59 PM

Communication System: CDMA AWS; Frequency: 1711.25 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1712$ MHz; $\sigma = 1.31$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.19 mW/g

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

Reference Value = 11.2 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.655 mW/g

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

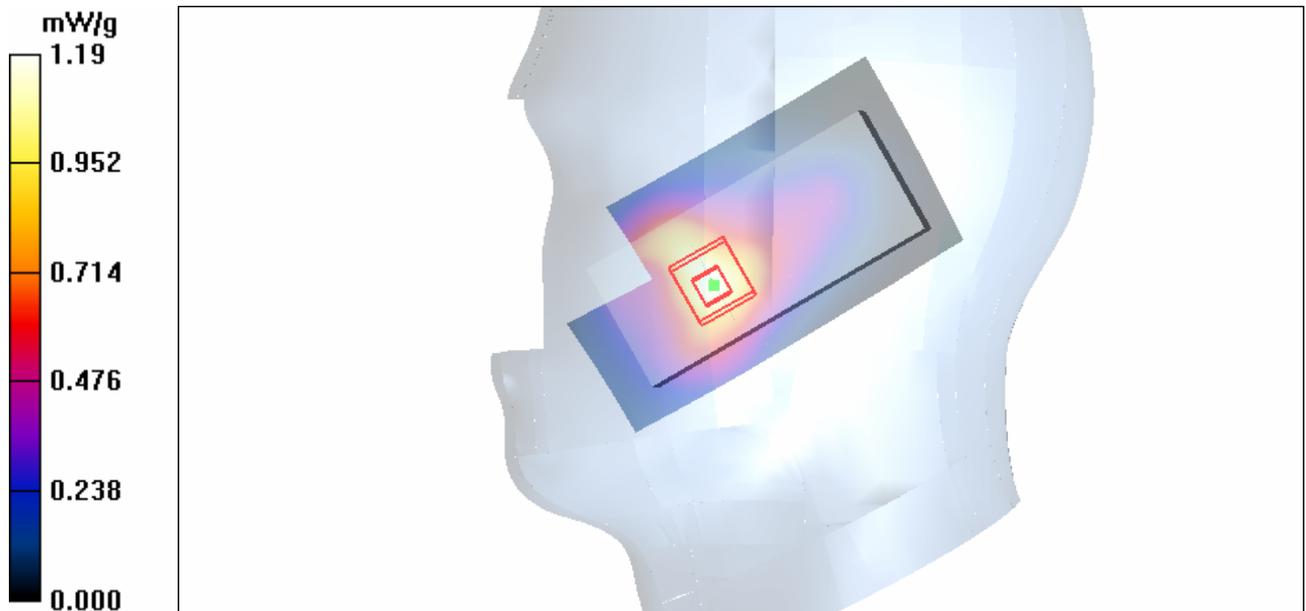


Figure 41 Right Hand Touch Cheek CDMA AWS Channel 25

CDMA AWS Right Tilt Middle

Date/Time: 2/1/2010 4:03:40 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.33$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(8.04, 8.04, 8.04); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.426 mW/g

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

Reference Value = 16.6 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 0.529 W/kg

SAR(1 g) = 0.377 mW/g; SAR(10 g) = 0.240 mW/g

Maximum value of SAR (measured) = 0.410 mW/g

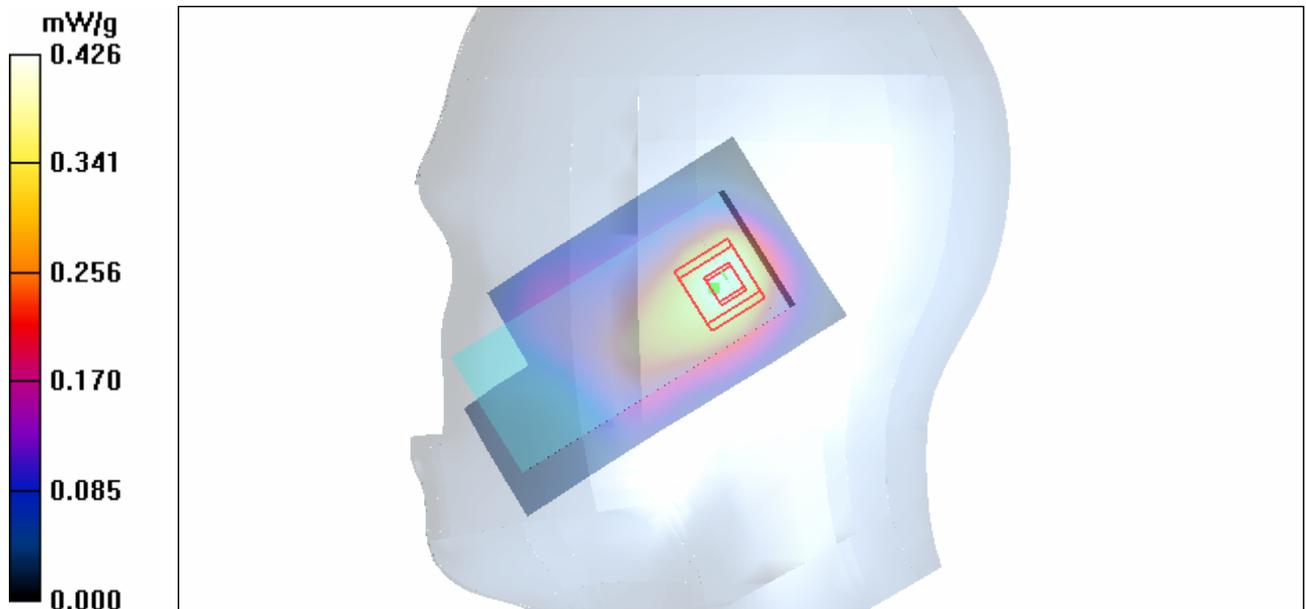


Figure 42 Right Hand Tilt 15° CDMA AWS Channel 450

CDMA AWS Towards Ground High

Date/Time: 1/31/2010 1:16:57 PM

Communication System: CDMA AWS; Frequency: 1752.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1752.5$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.7, 7.7, 7.7); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.756 mW/g

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

Reference Value = 11.9 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.688 mW/g; SAR(10 g) = 0.408 mW/g

Maximum value of SAR (measured) = 0.750 mW/g

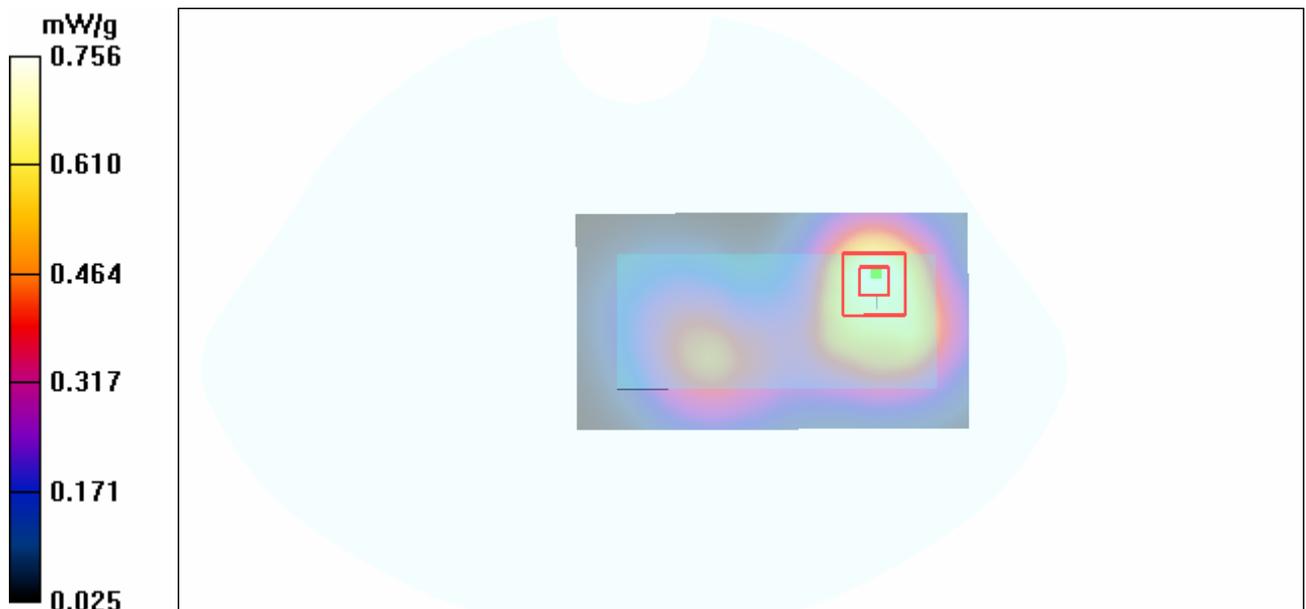


Figure 43 Body, Towards Ground, CDMA AWS Channel 850

CDMA AWS Towards Ground Middle

Date/Time: 1/31/2010 12:28:57 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.7, 7.7, 7.7); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.839 mW/g

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

Reference Value = 13.0 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.436 mW/g

Maximum value of SAR (measured) = 0.802 mW/g

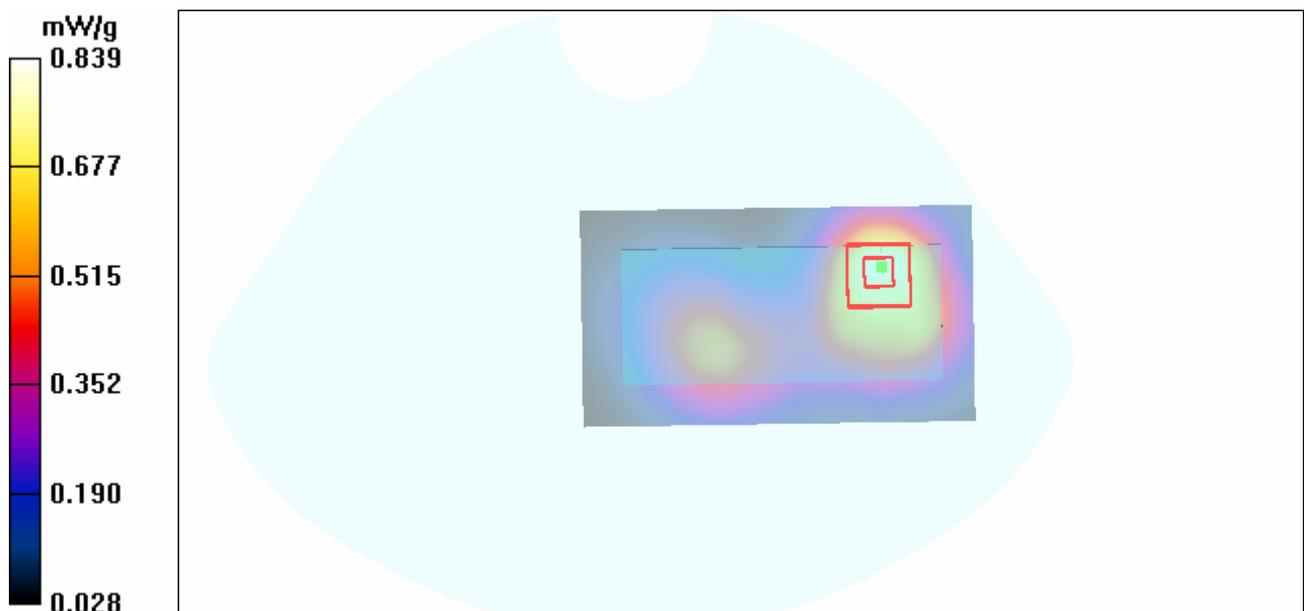


Figure 44 Body, Towards Ground, CDMA AWS Channel 450

CDMA AWS Towards Ground Low

Date/Time: 1/31/2010 12:47:36 PM

Communication System: CDMA AWS; Frequency: 1711.25 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1712$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.7, 7.7, 7.7); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.858 mW/g

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

Reference Value = 13.4 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.771 mW/g; SAR(10 g) = 0.455 mW/g

Maximum value of SAR (measured) = 0.835 mW/g

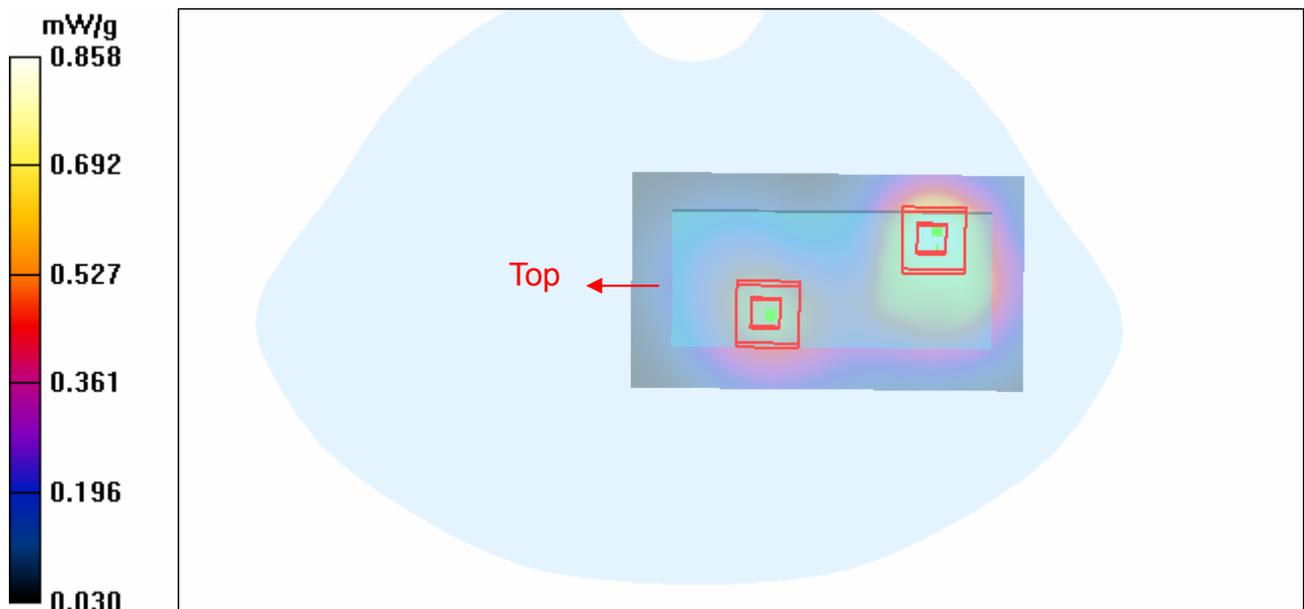
Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.4 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.761 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.333 mW/g

Maximum value of SAR (measured) = 0.552 mW/g



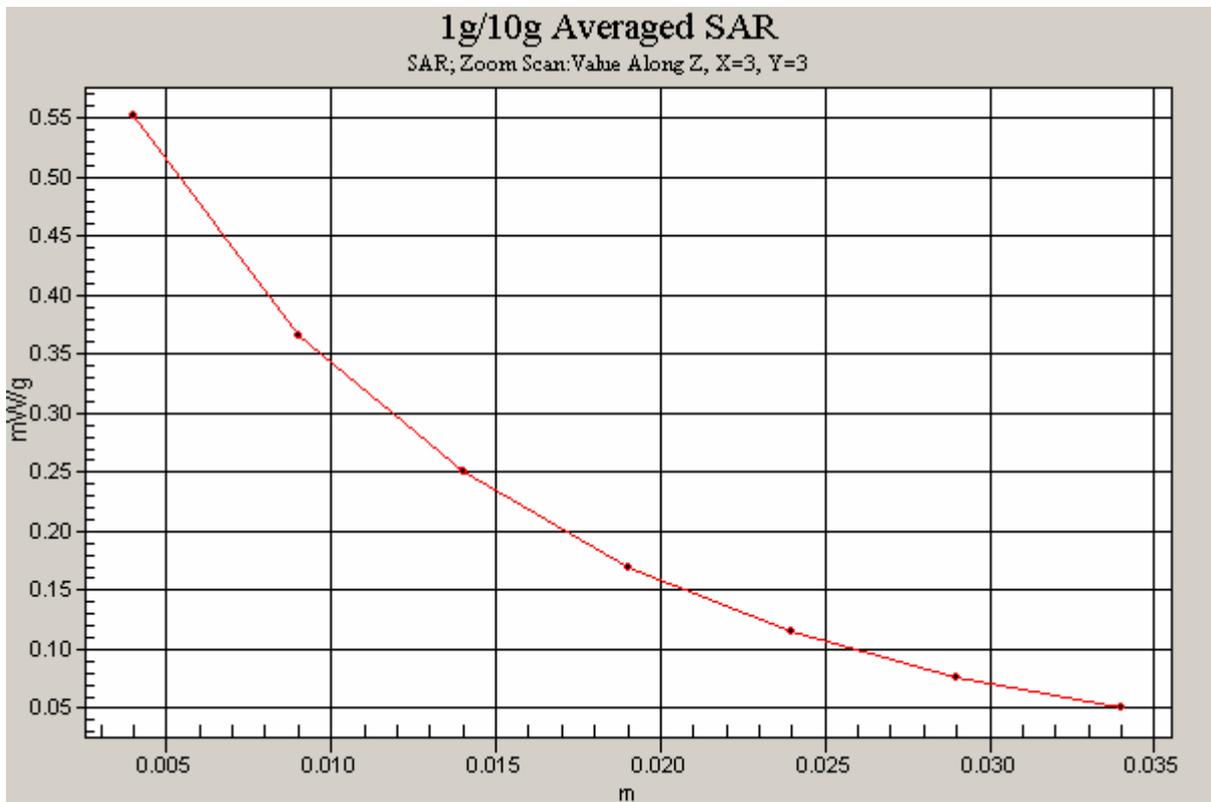
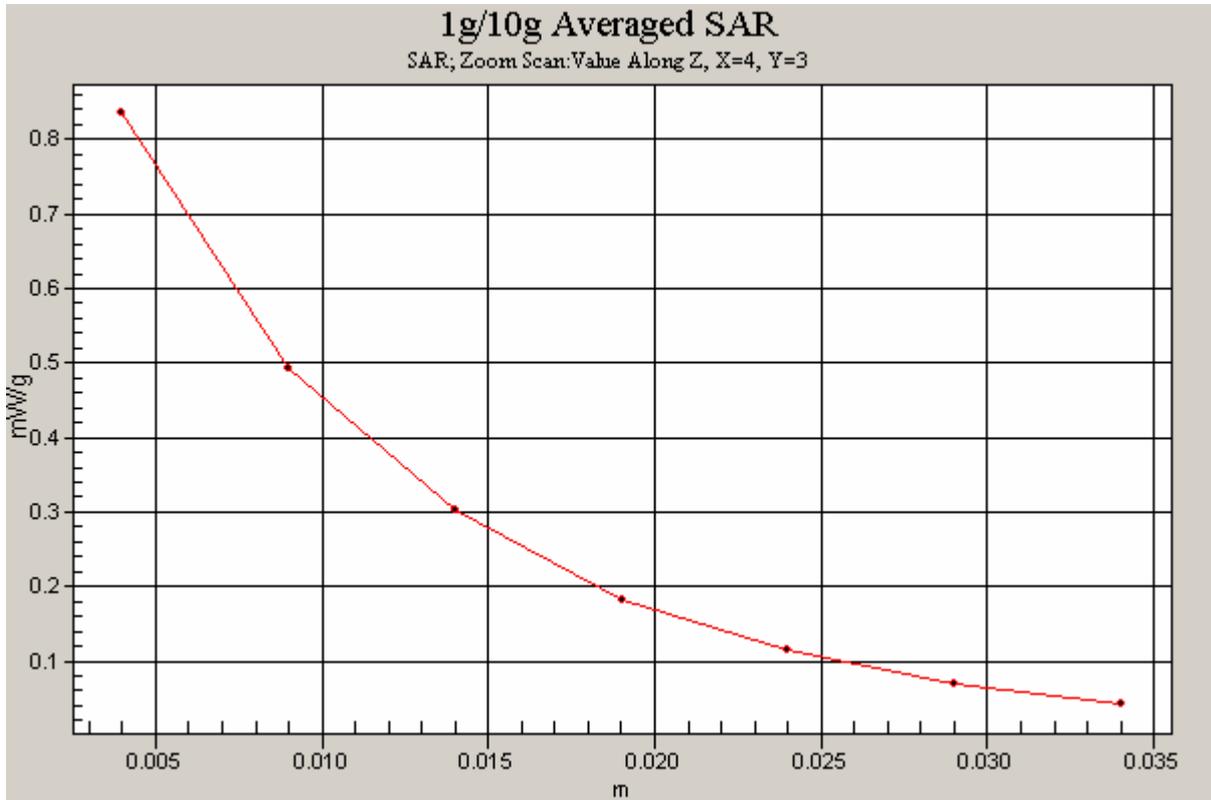


Figure 45 Body, Towards Ground, CDMA AWS Channel 25

CDMA AWS Towards Phantom Middle

Date/Time: 1/31/2010 1:35:29 PM

Communication System: CDMA AWS; Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.7, 7.7, 7.7); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 10.2 V/m; Power Drift = -0.054 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.718 mW/g; SAR(10 g) = 0.421 mW/g

Maximum value of SAR (measured) = 0.795 mW/g

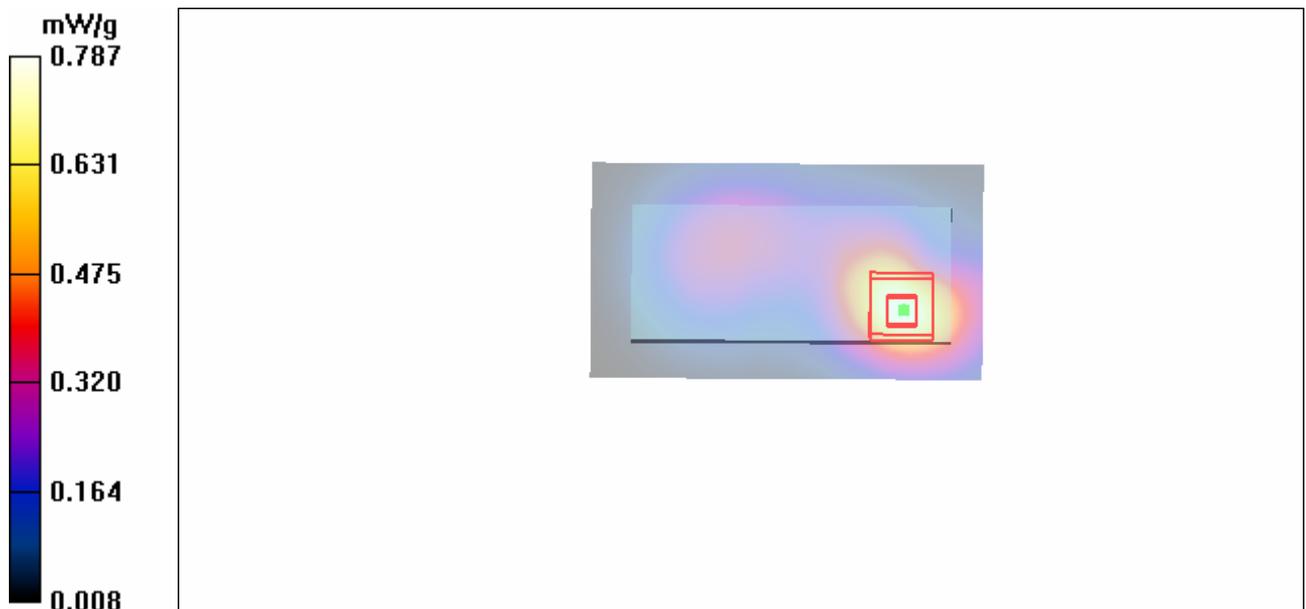


Figure 46 Body, Towards Phantom, CDMA AWS Channel 450