Report No.: RZA2010-1029FCC

TESTING
No. L2264

OET 65

TEST REPORT

Product Name	HUAWEI IDEOS SERIES;HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth;IDEOS
Model	U8150-B
FCC ID	QISU8150-B
Client	Huawei Technologies Co., Ltd

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Product Name	HUAWEI IDEOS SERIES; HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth; IDEOS	**Model**	U8150-B
FCC ID	QISU8150-B		
Report No.	RZA2010-1029FCC		
Client	Huawei Technologies Co., Ltd		
Manufacturer	Huawei Technologies Co., Ltd		
Reference Standard(s)	**IEEE Std C95.1, 1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. **IEEE Std 1528™-2003:** IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques. **SUPPLEMENT C Edition 01-01 to OET BULLETIN 65 Edition 97-01 June 2001 including DA 02-1438, published June 2002:** Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radio frequency Emissions. **941225 D04** Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode		
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 7 of this test report are below limits specified in the relevant standards. General Judgment: **Pass** (Stamp) **Date of issue: July 28th, 2010**		
Comment	The test result only responds to the measured sample.		

Approved by 杨伟中 Yang Weizhong **Revised by** 凌敏宝 Ling Minbao **Performed by** 薛超峰 Xue Chaofeng

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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.

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1.4. Manufacturer Information

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1.5. Information of EUT

General Information

Device Type :	Portable Device		
Exposure Category:	Uncontrolled Environment / General Population		
Product Name:	HUAWEI IDEOS SERIES; HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth;IDEOS		
IMEI or SN:	3526080400004570		
Device Operating Configurations :			
Supporting Mode(s):	GSM 850; (tested) GSM 1900; (tested) WCDMA Band II; (tested) WCDMA Band V; (tested) WiFi (tested); Bluetooth;		
Test Modulation:	(GSM) GMSK; (WCDMA)QPSK		
GPRS Multislot Class:	10		
EGPRS Multislot Class:	10		
DTM Multislot Class:	11		
HSDPA UE Category:	8		
Operating Frequency Range(s):	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824.2 ~ 848.8	869.2 ~ 893.8
	GSM 1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8
	WCDMA Band II	1852.4 ~ 1907.6	1932.4 ~ 1987.6
	WCDMA Band V	826.4 ~ 846.6	871.4 ~ 891.6
Power Class:	GSM 850: 4, tested with power level 5		
	GSM 1900: 1, tested with power level 0		
	WCDMA Band II: 3, tested with power control all up bits		
	WCDMA Band V: 3, tested with power control all up bits		
Test Channel: (Low - Middle - High)	128 - 190 - 251 (GSM850) (tested) 512 - 661 - 810 (GSM1900) (tested) 9262 - 9400 - 9538 (WCDMA Band II) (tested) 4132 - 4183 - 4233 (WCDMA Band V) (tested)		
Hardware Version:	HD1U815M		
Software Version:	U8150V100R001C126B804		
Antenna Type:	Internal Antenna		

Auxiliary Equipment Details

AE1:Battery

Model:	HB4J1H
Manufacturer:	Huawei Technologies Co., Ltd
SN:	/

AE2:Travel Adapter

Model:	HW-050100U1W
Manufacturer:	Huawei Technologies Co., Ltd
SN:	/

Equipment Under Test (EUT) is a model of HUAWEI IDEOS SERIES;
HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth; IDEOS with internal antenna. It is class A (GSM/(E) GPRS device, it can operate in Dual transfer Mode (DTM) can transmit simultaneously using both circuit switched (CS) and packet switched (PS) connections according to the DTM multislot class. The detail about Mobile phone, Lithium Battery and AC/DC Adapter is in in chapter 1.5 in this report. SAR is tested for GSM 850, GSM 1900, WCDMA Band II and WCDMA Band V. The EUT has GPRS (class 10), EGPRS (class 10), DTM (Class 11), WCDMA and HSDPA functions.

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 July 19, 2010 to July 25, 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 128, 190 and 251 in the case of GSM 850, to 512, 661 and 810 in the case of GSM 1900, to 9262, 9400 and 9538 in the case of WCDMA Band II, to 4132, 4183 and 4233 in the case of WCDMA Band V. 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. Using E5515C the power lever is set to “5” in SAR of GSM 850, set to “0” in SAR of GSM 1900, power control is set “All Up Bits” of WCDMA. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. 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. GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a System Simulator (SS) by air link. Using E5515C the power lever is set to “5” in SAR of GSM 850, set to “0” in SAR of GSM 1900. The test in the band of GSM 850 and GSM 1900 are performed in the mode of speech transfer function and GPRS, EGPRS function. Since the GPRS class is 10 for this EUT, it has at most 2 timeslots in uplink. The EGPRS class is 10 for this EUT; it has at most 2 timeslots in uplink.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Table 1: The allowed power reduction in the multi-slot configuration

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power,(dB)
1	0
2	0 to 3,0

2.3. DTM Test Configuration

SAR for DTM may be evaluated either with the device operating in DTM using one CS plus the maximum PS timeslots or by summing the single timeslot CS and multislot PS SAR. A communication testset with DTM support is necessary to configure the test device for DTM SAR measurements. Alternatively, the single slot CS GSM/GMSK voice-mode SAR for head and body-worn use should be added respectively to the PS (E)GPRS multislot data-mode SAR applicable to such head and body operating

conditions to demonstrate SAR compliance for DTM1. Unless it is clearly explained in the SAR report that DTM is not feasible or does not apply in certain specific operating modes or exposure configurations, DTM SAR results for head and/or body are expected for Class A GSM/(E)GPRS devices to demonstrate SAR compliance

In this SAR report , we use summing the single timeslot CS and multislot PS 1g SAR.

2.4. WCDMA Test Configuration

2.4.1. Output Power Verification

Maximum output power is verified on the High, Middle and Low channel according to the procedures described in section 5.2 of 3GPP TS 34. 121, using the appropriate RMC or AMR with TPC(transmit power control) set to all “1’s” for WCDMA/HSDPA or applying the required inner loop power control procedures to the maximum output power while HSUPA is active. Results for all applicable physical channel configuration (DPCCH, $DPDCH_n$ and spreading codes, HSDPA, HSPA) should be tabulated in the SAR report. All configuration that are not supported by the DUT or can not be measured due to technical or equipment limitations should be clearly identified.

2.4.2. Head SAR Measurements

SAR for head exposure configurations in voice mode is measured using a 12.2kbps RMC with TPC bits configured to all “1’s”. SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2kbps AMR is less than 1/4 dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2kbps AMR with a 3.4 kbps SRB(Signaling radio bearer) using the exposure configuration that results in the highest SAR in 12.2kbps RMC for that RF channel.

2.4.3. Body SAR Measurements

SAR for body exposure configurations in voice and data modes is measured using 12.2kbps RMC with TPC bits configured to all “1’s”. SAR for other spreading codes and multiple $DPDCH_n$, when supported by the DUT, are not required when the maximum average output of each RF channel, for each spreading code and $DPDCH_n$ configuration, are less than 1/4 dB higher than those measured in 12.2kbps RMC. Otherwise, SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or $DPDCH_n$ using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 $DPDCH_n$ are supported by the DUT, it may be necessary to configure additional $DPDCH_n$ for a DUT using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

2.5. HSDPA Test Configuration

SAR for body exposure configurations is measured according to the ‘Body SAR Measurements’ procedures of that section. In addition,body SAR is also measured for HSDPA when the maximum average output of each RF channel with HSDPA active is at least ¼ dB higher than that measured without HSDPA using 12.2 kbps RMC or the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit.30 Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.
HSDPA should be configured according to the UE category of a test device.The number of HSDSCH/ HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should

be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) should be set according to values indicated in the Table below.32 The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Table 2: Subtests for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1)	CM(dB) (note 2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 (note 3)	15/15 (note 3)	64	12/15 (note 3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5
Note 1: ΔACK, ΔNACK and ΔCQI = 8 ⇔ Ahs = βhs/βc = 30/15 ⇔ βhs= 30/15 *βc Note 2: CM = 1 for βc/βd =12/15, βhs/βc=24/15. Note 3: For subtest 2 the βc/βd ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to βc = 11/15 and βd = 15/15.						

Table 3: Settings of required H-Set 1 QPSK in HSDPA mode

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	534
Inter-TTI Distance	TTI's	3
Number of HARQ Processes	Processes	2
Information Bit Payload (N_{INF})	Bits	3202
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	4800
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	9600
Coding Rate	/	0.67
Number of Physical Channel Codes	Codes	5
Modulation	/	QPSK

Table 4: HSDPA UE category

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	Maximum Transport Bits/HS-DSCH	Total Channel
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

Table 5: UE maximum output powers with HS-DPCCH (Release 5 Only)

Ratio of β_c to β_d for all values of β_{hs}	Power Class 3		Power Class 4	
	Power (dBm)	Tolerance (dB)	Power (dBm)	Tolerance (dB)
$1/15 \le \beta_c/\beta_d \le 12/15$	+24	+1/-3	+21	+2/-2
$13/15 \le \beta_c/\beta_d \le 15/8$	+23	+2/-3	+20	+3/-2
$15/7 \le \beta_c/\beta_d \le 15/0$	+22	+3/-3	+19	+4/-2

2.6. WIFI Test Configuration

For the 802.11b/g SAR tests, a communication link is set up with the test mode software for WIFI mode test. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 6 and 11 respectively in the case of 2450 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate.

802.11b/g operating modes are tested independently according to the service requirements in each frequency band.802.11b/g modes are tested on channels1,6,11;however,if output power reduction is necessary for channels 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels must be tested instead.

SAR is not required for 802.11g channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels. When the maximum average output channel in each frequency band is not included in the “default test channels”, the maximum channel should be tested instead of an adjacent “default test channels”, these are referred to as the “required test channels” and are illustrated in table 1.

And according to the “3 dB rule” FCC Public Notice, DA 02-1948, June 19.2002 **“If the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s)”**. Then The Absolute Radio Frequency Channel Number (ARFCN) is firstly allocated to 2437 respectively in the case of 802.11b/g.

Table 6: “Default Test Channels”

Mode	GHz	Channel	Turbo Channel	“Default Test Channels”			
				15.247		UNII	
				802.11b	802.11g		
802.11b/g	2.412	1#		√	*		
	2.437	6	6	√	*		
	2.462	11#		√	*		

Note: #=when output power is reduced for channel 1 and /or 11to meet restricted band requirements the highest out put channels closet to each of these channels should be tested.

√= “default test channels”

* =possible 802.11g channels with maximum average output 0.25dB>=the “default test channels”

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.

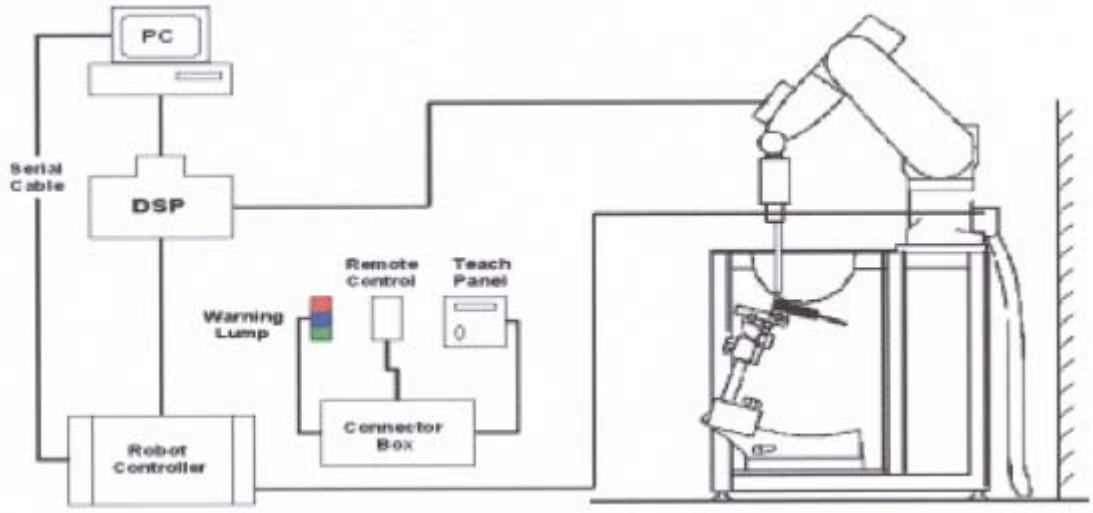

Figure 1 SAR Lab Test Measurement Set-up

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	ISO/IEC 17025 calibration service available
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 μW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 μW/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 ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.
E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

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

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

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

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

3.3. Other Test Equipment

3.3.1. Device Holder for Transmitters

The DASY device holder is designed to cope with the die rent 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 l000 x 500 mm (H x L x W)
Aailable	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. ± 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 ± 0.1mm). 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 ± 30°.)

- 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, ai_0, 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.

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.

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

with $\boldsymbol{SAR}$ = local specific absorption rate in mW/g

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

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

ρ = equivalent tissue density in g/cm^3

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.

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

with P_{pwe} = equivalent power density of a plane wave in mW/cm^2

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

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

3.6. System Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulates, 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 13 and table 14.

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

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

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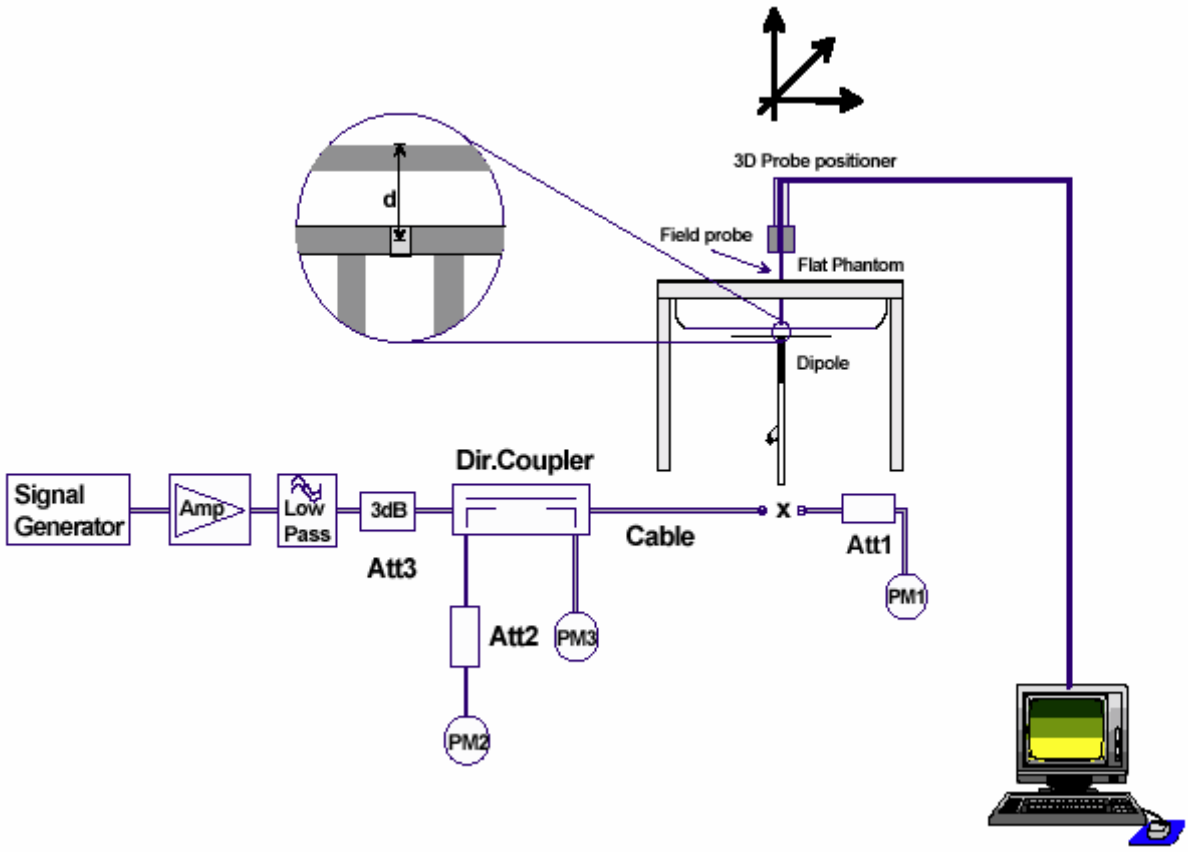


Figure 6 System Check Set-up

3.7. Equivalent Tissues

The liquid is consisted of water, salt, Glycol, Sugar, Preventol and Cellulose.The liquid has previously been proven to be suited for worst-case. The Table 7 and Table 8 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

Table 7: 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 ε=41.5 σ=0.9

MIXTURE%	FREQUENCY(Brain)1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz ε=40.0 σ=1.40

MIXTURE%	FREQUENCY(Brain) 2450MHz
Water	62.7
Glycol	36.8
Salt	0.5
Dielectric Parameters Target Value	f=2450MHz ε=39.20 σ=1.80

Table 8: 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 ε=55.2 σ=0.97

MIXTURE%	FREQUENCY (Body) 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52

MIXTURE%	FREQUENCY(Body) 2450MHz
Water	73.2
Glycol	26.7
Salt	0.1
Dielectric Parameters Target Value	f=2450MHz ε=52.70 σ=1.95

4. Laboratory Environment

Table 9: 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

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

5.2. Applicable Measurement Standards

IEEE Std 1528™-2003: IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

SUPPLEMENT C Edition 01-01 to OET BULLETIN 65 Edition 97-01 June 2001 including DA 02-1438, published June 2002: Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radio frequency Emissions.

941225 D04 Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode.

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 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 10: Conducted Power Measurement Results

GSM 850		**Conducted Power(dBm)**		
		Channel 128	Channel 190	Channel 251
Before Test		32.24	32.13	32.22
After Test		32.23	32.11	32.16
GSM 850 +GPRS(GMSK)		**Conducted Power(dBm)**		
		Channel 128	Channel 190	Channel 251
1solt	Before Test	32.23	32.12	32.21
	After Test	32.22	32.11	32.15
2solts	Before Test	29.54	29.58	29.49
	After Test	29.54	29.45	29.46
GSM 850 +EGPRS(GMSK)		**Conducted Power(dBm)**		
		Channel 128	Channel 190	Channel 251
1solt	Before Test	32.22	32.11	32.20
	After Test	32.21	32.10	32.14
2solts	Before Test	29.53	29.57	29.48
	After Test	29.53	29.44	29.45
GSM 850 +EGPRS(8PSK)		**Conducted Power(dBm)**		
		Channel 128	Channel 190	Channel 251
1solt	Before Test	29.51	29.56	29.46
	After Test	29.50	29.43	29.44
2solts	Before Test	28.04	28.19	28.20
	After Test	28.06	28.22	28.17
GSM 1900		**Conducted Power(dBm)**		
		Channel 512	Channel 661	Channel 810
Before Test		30.18	30.10	30.15
After Test		30.17	30.15	30.14
GSM 1900 +GPRS		**Conducted Power(dBm)**		

		Channel 512	Channel 661	Channel 810
1solt	Before Test	30.17	30.11	30.14
	After Test	30.16	30.14	30.13
2solts	Before Test	28.18	28.16	28.16
	After Test	28.20	28.17	28.19
GSM 1900 +EGPRS(GMSK)		**Conducted Power(dBm)**		
		Channel 512	Channel 661	Channel 810
1solt	Before Test	30.16	30.10	30.13
	After Test	30.15	30.13	30.12
2solts	Before Test	28.16	28.15	28.15
	After Test	28.18	28.16	28.18
GSM 1900 +EGPRS(8PSK)		**Conducted Power(dBm)**		
		Channel 512	Channel 661	Channel 810
1solt	Before Test	28.17	28.14	28.14
	After Test	28.16	28.15	28.16
2solts	Before Test	26.76	26.85	26.65
	After Test	26.73	26.81	26.63
WCDMA Band II		**Conducted Power(dBm)**		
		Channel 9262	Channel 9400	Channel 9538
12.2kbps	Before Test	23.59	23.53	23.44
	After Test	23.56	23.55	23.48
64kbps	Before Test	23.51	23.50	23.40
	After Test	23.53	23.53	23.43
144kbps	Before Test	23.55	23.45	23.43
	After Test	23.56	23.46	23.39
384kbps	Before Test	23.50	23.48	23.40
	After Test	23.53	23.46	23.43
WCDMA Band II+HSDPA		**Conducted Power(dBm)**		
		Channel 9262	Channel 9400	Channel 9538
Sub - Test 1	Before Test	23.42	23.30	23.30
	After Test	23.46	23.33	23.30
Sub - Test 2	Before Test	22.52	22.30	22.22
	After Test	22.53	22.33	22.21
Sub - Test 3	Before Test	21.98	21.77	21.74
	After Test	21.94	21.76	21.70
Sub - Test 4	Before Test	21.78	21.70	21.63
	After Test	21.77	21.66	21.60
WCDMA Band V		**Conducted Power(dBm)**		

		Channel 4132	Channel 4183	Channel 4233
12.2kbps	Before Test	24.54	24.63	24.70
	After Test	24.56	24.67	24.68
64kbps	Before Test	24.55	24.61	24.66
	After Test	24.58	24.63	24.63
144kbps	Before Test	24.43	24.55	24.60
	After Test	24.47	24.56	24.63
384kbps	Before Test	24.46	24.49	24.60
	After Test	24.45	24.52	24.57
WCDMA Band V+HSDPA		**Conducted Power(dBm)**		
		Channel 4132	Channel 4183	Channel 4233
Sub - Test 1	Before Test	24.26	24.33	24.45
	After Test	24.26	24.36	24.41
Sub - Test 2	Before Test	22.36	22.40	22.47
	After Test	22.37	22.38	22.46
Sub - Test 3	Before Test	21.62	21.71	21.71
	After Test	21.66	21.74	21.68
Sub - Test 4	Before Test	21.55	21.57	21.60
	After Test	21.56	21.54	21.57

7. Test Results

7.1. Dielectric Performance

Table 11: Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp ℃
		ε_r	σ(s/m)	
835MHz (head)	Target value ± 5% window	41.50 39.43 — 43.58	0.90 0.86 — 0.95	/
	Measurement value 2010-7-19	42.82	0.91	21.8
1900MHz (head)	Target value ±5% window	40.00 38.00 — 42.00	1.40 1.33 — 1.47	/
	Measurement value 2010-7-23	40.20	1.41	21.9
2450MHz (head)	Target value ±5% window	39.20 37.24 — 41.16	1.80 1.71 — 1.89	/
	Measurement value 2010-7-24	38.81	1.79	21.9

Table 12: 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 2010-7-19	54.92	1.00	21.8
1900MHz (body)	Target value ±5% window	53.30 50.64 — 55.97	1.52 1.44 — 1.60	/
	Measurement value 2010-7-22	53.01	1.56	21.9
2450MHz (body)	Target value ±5% window	52.70 50.07 — 55.34	1.95 1.85 — 2.05	/
	Measurement value 2010-7-24	51.83	1.92	21.9

7.2. System Check Results

Table 13: System Check for Head Tissue Simulating Liquid

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ε_r	σ(s/m)	℃
835MHz	Recommended result ±10% window	1.56 1.40 — 1.72	2.39 2.15 — 2.63	41.2	0.89	/
	Measurement value 2010-7-19	1.62	2.48	42.82	0.91	21.8
1900MHz	Recommended result ±10% window	5.22 4.70 – 5.74	10.00 9.00 - 11.00	39.5	1.44	/
	Measurement value 2010-7-23	5.46	10.6	40.20	1.41	21.9
2450 MHz	Recommended result ±10% window	6.24 5.62 — 6.86	13.3 11.97—14.63	38.7	1.77	/
	Measurement value 2010-7-24	6.50	14.05	38.81	1.79	21.9

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 14: System Check for Body Tissue Simulating Liquid

Frequency	Description	SAR(W/kg)		Dielectric Parameters		Temp
		10g	1g	ε_r	σ(s/m)	℃
835MHz	Recommended result ±10% window	1.63 1.47 - 1.79	2.49 2.24 - 2.74	54.6	0.98	/
	Measurement value 2010-7-19	1.68	2.56	54.92	1.00	21.8
1900 MHz	Recommended result ±10% window	5.52 4.97 - 6.57	10.30 9.27- 11.33	53.5	1.54	/
	Measurement value 2010-7-22	5.17	9.73	53.01	1.56	21.9
2450 MHz	Recommended result ±10% window	5.97 5.37 — 6.57	13 11.7—14.3	51.8	2.01	/
	Measurement value 2010-7-24	6.46	14.00	51.83	1.92	21.9

Note: 1. The graph results see ANNEX B.

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

7.3. Summary of Measurement Results

7.3.1. GSM 850(GPRS/EGPRS)

Table 15: SAR Values [GSM 850(GPRS/EGPRS)]

Limit of SAR		10 g Average	1 g Average	Power Drift	Graph Results
		2.0 W/kg	1.6 W/kg	± 0.21 dB	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Test Position of Head (CS Mode)					
Left Hand, Touch Cheek	Middle	0.299	0.411	-0.020	Figure 13
Left Hand, Tilt 15 Degree	Middle	0.244	0.362	-0.020	Figure 14
Right Hand, Touch Cheek	High	0.344	0.532	0.004	Figure 15
	Middle	0.296	0.460	-0.082	Figure 16
	Low	0.229	0.357	-0.018	Figure 17
Right Hand, Tilt 15 Degree	Middle	0.276	0.442	-0.019	Figure 18
Test Position of Head with GPRS (1Up)					
Left Hand, Touch Cheek	Middle	0.304	0.417	0.013	Figure 19
Left Hand, Tilt 15 Degree	Middle	0.237	0.353	-0.067	Figure 20
Right Hand, Touch Cheek	High	0.325	0.504	-0.066	Figure 21
	Middle	0.285	0.442	-0.007	Figure 22
	Low	0.212	0.335	0.022	Figure 23
Right Hand, Tilt 15 Degree	Middle	0.265	0.423	0.012	Figure 24
Test Position of Head with GPRS (2Up)					
Right Hand, Touch Cheek	Middle	0.231	0.354	0.022	Figure 25
Test Position of Body (Distance 15mm, CS Mode)					
Towards Ground	High	0.459	0.656	-0.016	Figure 26
	Middle	0.499	0.709	-0.073	Figure 27
	Low	0.440	0.623	0.027	Figure 28
Towards Phantom	Middle	0.165	0.229	-0.005	Figure 29
Worst Case Position of Body with Earphone (Distance 15mm)					
Towards Ground	Middle	0.357	0.513	-0.032	Figure 30

Worst Case Position of Body with GPRS (1Up, Distance 15mm)					
Towards Ground	High	0.429	0.613	0.027	Figure 31
	Middle	0.512	0.727	-0.097	Figure 32
	Low	0.403	0.576	-0.007	Figure 33
Towards Phantom	Middle	0.177	0.249	0.113	Figure 34
Worst Case Position of Body with GPRS (2Up, Distance 15mm)					
Towards Ground	Middle	0.424	0.601	-0.043	Figure 35
Worst Case Position of Body with EGPRS (GMSK)(1Up, Distance 15mm)					
Towards Ground	Middle	0.525	0.746	0.024	Figure 36

Note: 1.The value with blue color is the maximum SAR Value of 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 limit (< 0.8W/kg), testing at the high and low channels is optional.
4. When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

Table 16: SAR Values (GSM850 with DTM Mode)

Limit of SAR		CS	1-slot GPRS	Combined SAR Values CS+GPRS
Different Test Position	**Channel**	**1 g Average**	**1 g Average**	**1 g Average**
Test Position of Head				
Left Hand, Touch Cheek	Middle	0.411	0.417	0.828
Left Hand, Tilt 15 Degree	Middle	0.362	0.353	0.715
Right Hand, Touch Cheek	High	0.532	0.504	1.036
	Middle	0.460	0.442	0.902
	Low	0.357	0.335	0.692
Right Hand, Tilt 15 Degree	Middle	0.442	0.423	0.865
Test Position of Body (Distance 15mm)				
Towards Ground	High	0.656	0.613	1.269
	Middle	0.709	0.727	1.436
	Low	0.623	0.576	1.199
Towards Phantom	Middle	0.229	0.249	0.478

Note: 1. The value with blue color is the maximum SAR Value of each test band.
2. SAR values of DTM mode are the sum of CS mode and GPRS mode.

Table 17: Extrapolated SAR Values of highest measured SAR [GSM 850 (GPRS/EGPRS)]

Limit of SAR			Conducted Power	1g Average 1.6 W/kg	Tune-up procedures Power(dBm)	1g Average 1.6
Test Case			Measurement Result (dBm)	Measurement Result (W/kg)		Extrapolated Result (W/kg)
Different Test Position	**Different Timeslots**	**Channel**				
Towards Ground	1 timeslot	Middle	32.11	0.746	32.6	0.835

7.3.2. GSM 1900(GPRS/EGPRS)

Table 18: SAR Values [GSM 1900(GPRS/EGPRS)]

Limit of SAR		10 g Average	1 g Average	Power Drift	Graph Results
		2.0 W/kg	1.6 W/kg	± 0.21 dB	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift (dB)	
		10 g Average	1 g Average		
Test Position of Head (CS Mode)					
Left hand, Touch cheek	Middle	0.051	0.082	0.054	Figure 37
Left hand, Tilt 15 Degree	Middle	0.068	0.114	-0.088	Figure 38
Right hand, Touch cheek	High	0.069	0.126	0.103	Figure 39
	Middle	0.087	0.156	0.020	Figure 40
	Low	0.087	0.153	-0.081	Figure 41
Right hand, Tilt 15 Degree	Middle	0.086	0.152	-0.042	Figure 42
Test Position of Head with GPRS (2Up)					
Left hand, Touch cheek	Middle	0.066(max.cube)	0.113(max.cube)	0.084	Figure 43
Left hand, Tilt 15 Degree	Middle	0.081	0.136	-0.070	Figure 44
Right hand, Touch cheek	Middle	0.098	0.180	0.051	Figure 45
Right hand, Tilt 15 Degree	High	0.090	0.160	0.090	Figure 46
	Middle	0.109	0.193	0.051	Figure 47
	Low	0.103	0.180	0.195	Figure 48
Test Position of Body (Distance 15mm)					
Towards Ground	High	0.290	0.512	0.006	Figure 49
	Middle	0.287	0.498	0.123	Figure 50
	Low	0.237	0.407	0.030	Figure 51
Towards Phantom	Middle	0.024	0.038	0.143	Figure 52
Worst Case Position of Body with Earphone (Distance 15mm)					
Towards Ground	High	0.321	0.573	-0.020	Figure 53
Worst Case Position of Body with GPRS (2Up, Distance 15mm)					
Towards Ground	High	0.346	0.615	0.014	Figure 54
	Middle	0.351	0.608	-0.025	Figure 55
	Low	0.285	0.487	-0.049	Figure 56
Towards Phantom	Middle	0.029	0.046	0.017	Figure 57
Worst Case Position of Body with EGPRS (GMSK) (2Up, Distance 15mm)					
Towards Ground	High	0.344	0.608	-0.066	Figure 58

Note: 1.The value with blue color is the maximum SAR Value of 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 limit (< 0.8W/kg), testing at the high and low channels is optional.
4. 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).
5. When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

Table 19: SAR Values (GSM1900 with DTM Mode)

Limit of SAR		CS	2-slot GPRS	Combined SAR Values CS+GPRS
Different Test Position	**Channel**	**1 g Average**	**1 g Average**	**1 g Average**
Test Position of Head				
Left Hand, Touch Cheek	Middle	0.082	0.113	0.195
Left Hand, Tilt 15 Degree	Middle	0.114	0.136	0.250
Right Hand, Touch Cheek	Middle	0.156	0.180	0.336
Right Hand, Tilt 15 Degree	Middle	0.152	0.193	0.345
Test Position of Body (Distance 15mm)				
Towards Ground	High	0.512	0.615	1.127
	Middle	0.498	0.608	1.106
	Low	0.407	0.487	0.894
Towards Phantom	Middle	0.038	0.046	0.084

Note: 1. The value with blue color is the maximum SAR Value of each test band.

2. SAR values of DTM mode are the sum of CS mode and GPRS mode.

3.Because GSM 1900 PS 1-slot conduct power is equal to CS. So 1-slot PS SAR is not required.

Table 20: Extrapolated SAR Values of highest measured SAR [GSM 1900 (GPRS/EGPRS)]

Limit of SAR			Conducted Power	1g Average 1.6 W/kg	Tune-up procedures Power(dBm)	1g Average 1.6
Test Case			Measurement Result (dBm)	Measurement Result (W/kg)		Extrapolated Result (W/kg)
Different Test Position	**Different Timeslots**	**Channel**				
Towards Ground	2 timeslots	High	28.19	0.615	28.70	0.692

7.3.3. WCDMA Band II (WCDMA/HSDPA)

Table 21: SAR Values [WCDMA Band II (WCDMA/HSDPA)]

Limit of SAR		10 g Average	1 g Average	Power Drift	Graph Results
		2.0 W/kg	1.6 W/kg	± 0.21 dB	
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	0.100(max.cube)	0.167(max.cube)	0.056	Figure 59
Left Hand, Tilt 15 Degree	Middle	0.124	0.205	0.097	Figure 60
Right Hand, Touch Cheek	Middle	0.148	0.260	0.081	Figure 61
Right Hand, Tilt 15 Degree	High	0.152	0.264	0.043	Figure 62
	Middle	0.163	0.292	0.037	Figure 63
	Low	0.145	0.253	0.074	Figure 64
Test Position of Body (Distance 15mm)					
Towards Ground	High	0.633	1.110	0.076	Figure 65
	Middle	0.617	1.080	0.151	Figure 66
	Low	0.458	0.779	0.027	Figure 67
Towards Phantom	Middle	0.047	0.074	0.009	Figure 68
Worst Case Position of Body with Earphone (Distance 15mm)					
Towards Ground	High	0.667	1.170	0.033	Figure 69
Worst Case Position of Body with HSDPA (Distance 15mm)					
Towards Ground	High	0.400	0.693	0.156	Figure 70

Note: 1.The value with blue color is the maximum SAR Value of 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 limit (< 0.8W/kg), testing at the high and low channels is optional.
4. 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).

Table 22: Extrapolated SAR Values of highest measured SAR [WCDMA Band II (WCDMA/HSDPA)]

Limit of SAR		Conducted Power	1g Average	Tune-up procedures Power(dBm)	1g Average
			1.6 W/kg		1.6
Test Case		Measurement Result (dBm)	Measurement Result (W/kg)		Extrapolated Result (W/kg)
Different Test Position	Channel				
Towards Ground	High	23.48	1.17	24.20	1.381

7.3.4. WCDMA Band V (WCDMA/HSDPA)

Table 23: SAR Values [WCDMA Band V (WCDMA/HSDPA)]

Limit of SAR		10 g Average	1 g Average	Power Drift	Graph Results
		2.0 W/kg	1.6 W/kg	± 0.21 dB	
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	0.409	0.566	-0.062	Figure 71
Left Hand, Tilt 15 Degree	Middle	0.324	0.483	0.062	Figure 72
Right Hand, Touch Cheek	High	0.385	0.597	-0.034	Figure 73
	Middle	0.420	0.647	-0.045	Figure 74
	Low	0.386	0.593	0.113	Figure 75
Right Hand, Tilt 15 Degree	Middle	0.371	0.591	-0.186	Figure 76
Test Position of Body (Distance 15mm)					
Towards Ground	High	0.568	0.809	-0.022	Figure 77
	Middle	0.582	0.823	-0.030	Figure 78
	Low	0.632	0.893	0.055	Figure 79
Towards Phantom	Middle	0.260	0.361	-0.105	Figure 80
Worst Case Position of Body with Earphone (Distance 15mm)					
Towards Ground	Low	0.498	0.707	-0.014	Figure 81
Worst Case Position of Body with HSDPA (Distance 15mm)					
Towards Ground	Low	0.423	0.598	-0.082	Figure 82

Note: 1.The value with blue color is the maximum SAR Value of each test band.

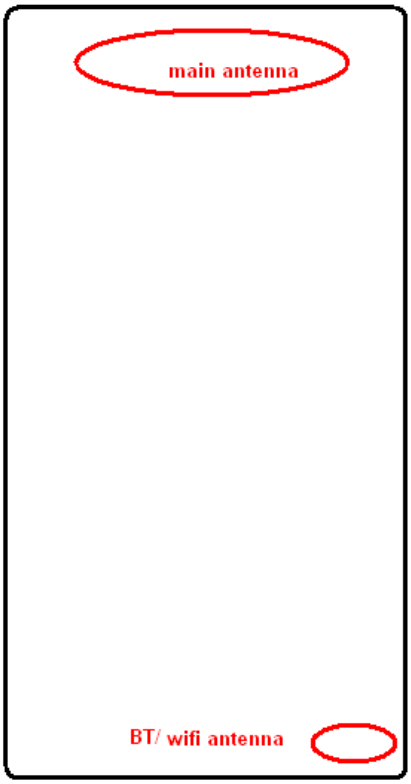
2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8W/kg), testing at the high and low channels is optional.

Table 24: Extrapolated SAR Values of highest measured SAR [WCDMA Band II (WCDMA/HSDPA)]

Limit of SAR		Conducted Power	1g Average	Tune-up procedures Power(dBm)	1g Average
			1.6 W/kg		1.6
Test Case		Measurement Result (dBm)	Measurement Result (W/kg)		Extrapolated Result (W/kg)
Different Test Position	Channel				
Towards Ground	Low	24.56	0.893	25.00	0.988

7.3.5 BT/WIFI function

The distance between BT/WIFI antenna and main antenna is >5cm. The location of the antennas inside mobile phone is shown below:



The output power of BT antenna is as following:

Channel	Ch 0	Ch 39	Ch 78
Bluetooth (dBm)	7.25	8.03	9.33

The output power of WIFI antenna is as following:

Channel		Channel 1	Channel 6	Channel 11
802.11b	Before Test (dBm)	13.63	13.72	13.57
	After Test (dBm)	13.66	13.74	13.60
802.11g	Before Test (dBm)	8.85	8.70	8.73
	After Test (dBm)	8.86	8.68	8.76
802.11n	Before Test (dBm)	8.31	7.08	8.73
	After Test (dBm)	8.33	7.11	8.76

Stand-alone SAR

According to the output power measurement result and the distance between BT antenna and main antenna we can draw the conclusion that: stand-alone SAR are not required for BT, because the output power of WIFI transmitter is $\leqslant 2P_{Ref}$ and its antenna is 5cm from other antenna.

Table 25: SAR Values (WiFi)

Limit of SAR		10 g Average	1 g Average	Power Drift	Graph Results
		2.0 W/kg	1.6 W/kg	± 0.21 dB	
Different Test Position	Channel	Measurement Result(W/kg)		Power Drift (dB)	
		10 g Average	1g Average		
Test position of Head(802.11b)					
Left hand, Touch cheek	High	0.008	0.018	-0.090	Figure 83
	Middle	0.012	0.029	-0.064	Figure 84
	Low	0.014	0.031	0.028	Figure 85
Left hand, Tilt 15 Degree	Middle	0.002	0.005	0.036	Figure 86
Right hand, Touch cheek	Middle	0.007	0.014	0.023	Figure 87
Right hand, Tilt 15 Degree	Middle	0.004	0.008	0.020	Figure 88
Test position of Body (802.11b Distance 15mm)					
Towards Ground	Middle	0.002	0.005	-0.040	Figure 89
Towards phantom	High	0.003	0.006	-0.086	Figure 90
	Middle	0.004	0.008	-0.040	Figure 91
	Low	0.003	0.007	-0.060	Figure 92
Worst case position of Body with Earphone (802.11b Distance 15mm)					
Towards phantom	Middle	0.004	0.008	-0.069	Figure 93

Note: 1.The value with blue color is the maximum SAR Value of 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 limit (< 1.0W/kg), testing at the high and low channels is optional.
4. SAR is not required for 802.11g/n channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

Simultaneous SAR

About BT, because stand-alone SAR are not required for BT, so Simultaneous SAR are not required for BT,

About wifi, because the output power of WIFI antenna is >5cm from other antenna. (main antenna SAR_{MAX})1.436+ (wifi antenna SAR_{MAX})0.031=1.467<1.6, so Simultaneous SAR are not required for wifi,

8. Measurement Uncertainty

No.	source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard ncertainty $u_i^{'}$ (%)	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								

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	

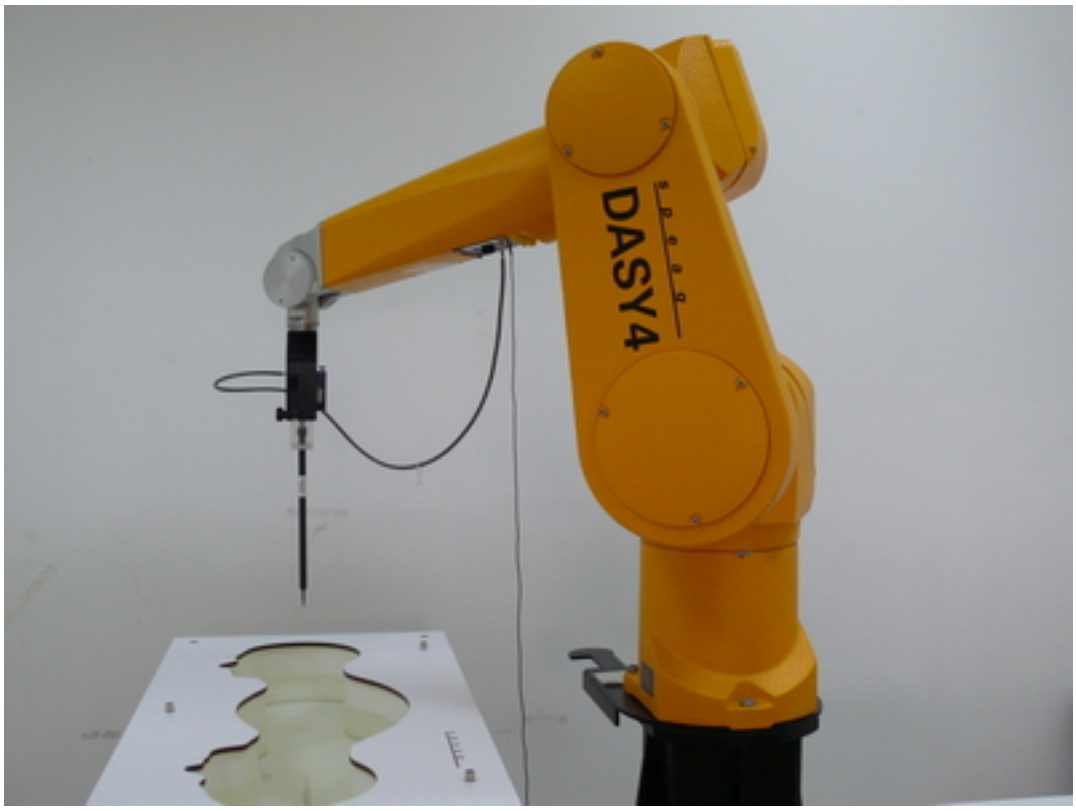
9. Main Test Instruments

Table 26: 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 13, 2010	One year
04	Power sensor	Agilent 8481H	MY41091316	March 26, 2010	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	3661	December 30, 2009	One year
09	DAE	DAE4	871	November 11, 2009	One year
10	Validation Kit 835MHz	D835V2	4d092	January 14, 2010	One year
11	Validation Kit 1900MHz	D1900V2	5d018	June 15, 2010	One year
12	Validation Kit 2450MHz	D2450V2	712	February 19, 2010	One year

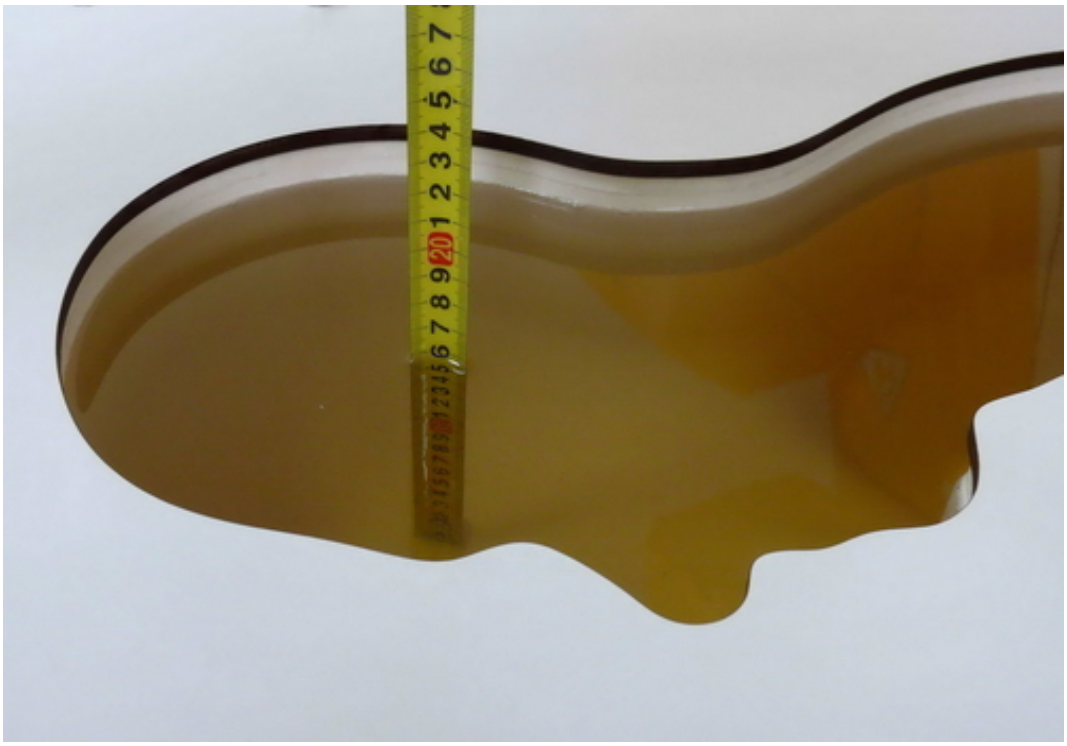
*******END OF REPORT BODY*******

ANNEX A: Test Layout

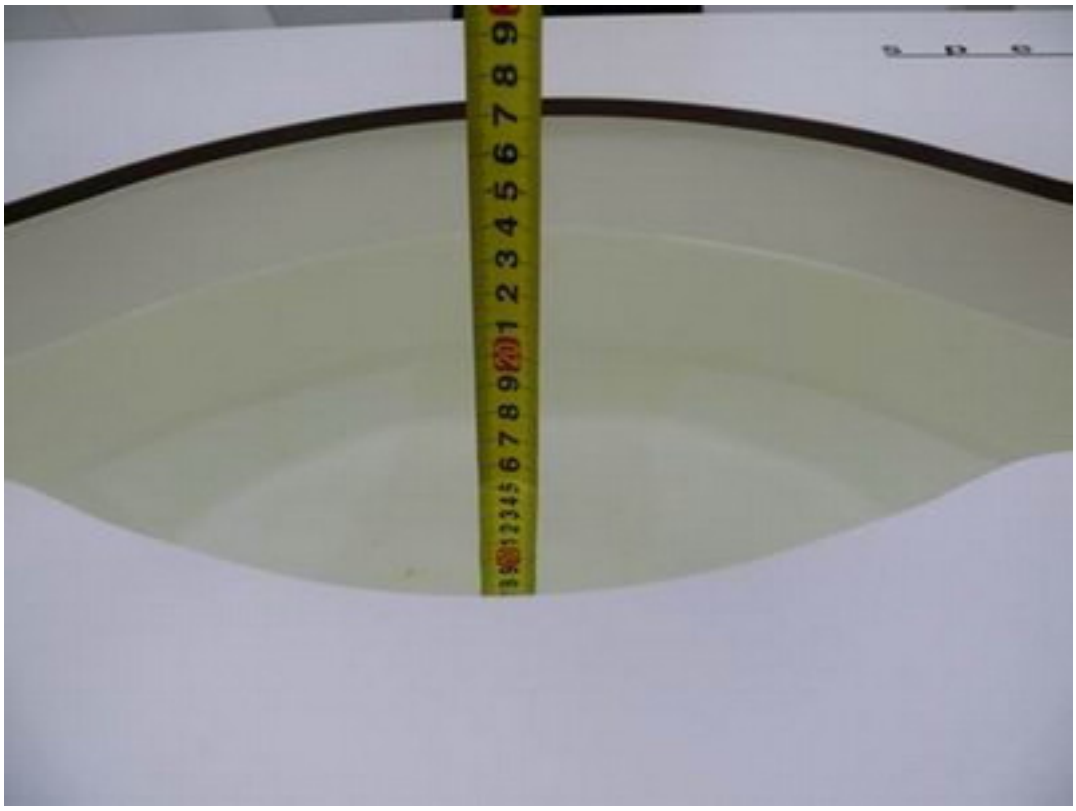


Picture 1: Specific Absorption Rate Test Layout

Picture 2: Liquid depth in the flat Phantom (835MHz, 15.4cm depth)

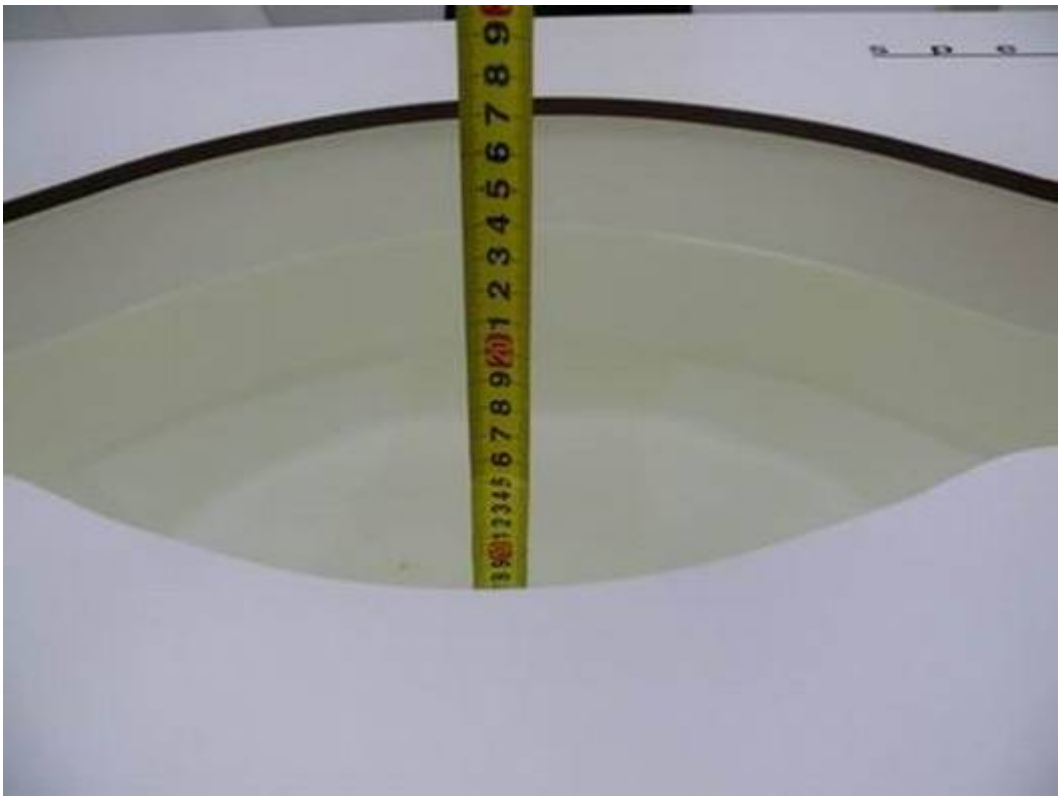


Picture 3: Liquid depth in the head Phantom (835MHz, 15.3cm depth)



Picture 4: Liquid depth in the flat Phantom (1900 MHz, 15.2cm depth)

Picture 5: liquid depth in the head Phantom (1900 MHz, 15.3cm depth)



Picture 6: Liquid depth in the flat Phantom (2450 MHz, 15.4cm depth)

Picture 7: Liquid depth in the head Phantom (2450 MHz, 15.4cm depth)

ANNEX B: System Check Results

System Performance Check at 835 MHz Head TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d092

Date/Time: 7/19/2010 10:08:23 PM

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

Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 42.82; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=15mm, Pin=250mW/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

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

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

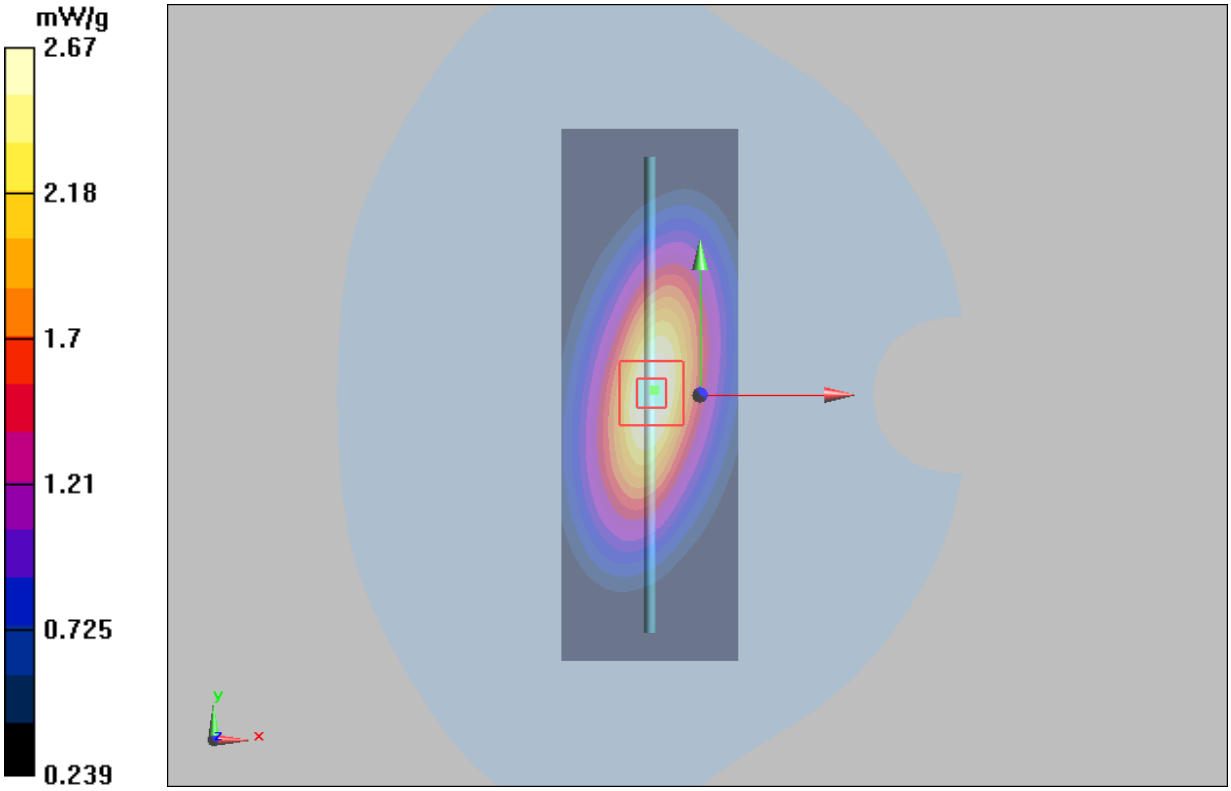


Figure 7 System Performance Check 835MHz 250mW

System Performance Check at 835 MHz Body TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d092

Date/Time: 7/19/2010 7:19:49 PM

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

Medium parameters used: f = 835 MHz; σ = 1.00 mho/m; ε_r = 54.92; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

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

d=15mm, Pin=250mW /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

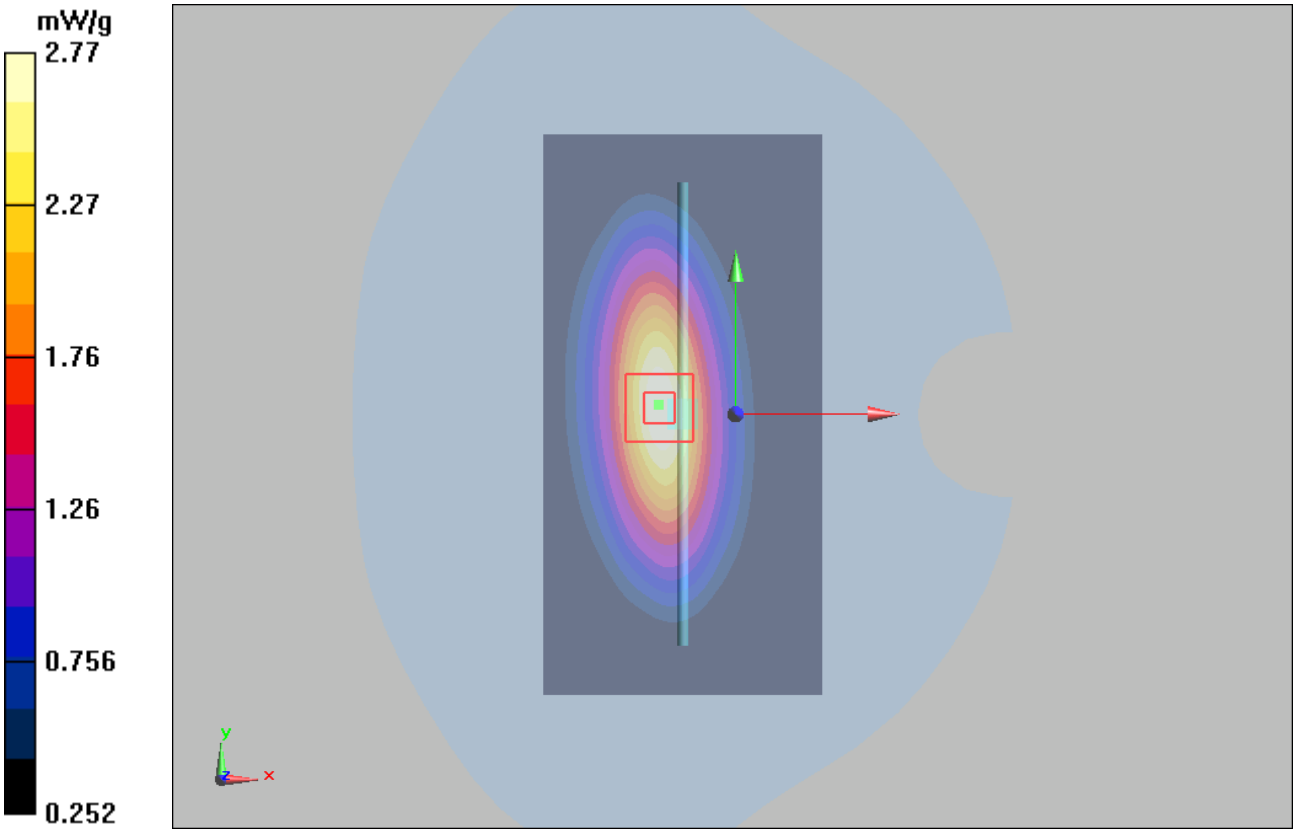


Figure 8 System Performance Check 835MHz 250mW

System Performance Check at 1900 MHz Head TSL

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

Date/Time: 7/23/2010 6:20:40 AM

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

Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

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

d=10mm, Pin=250mW/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

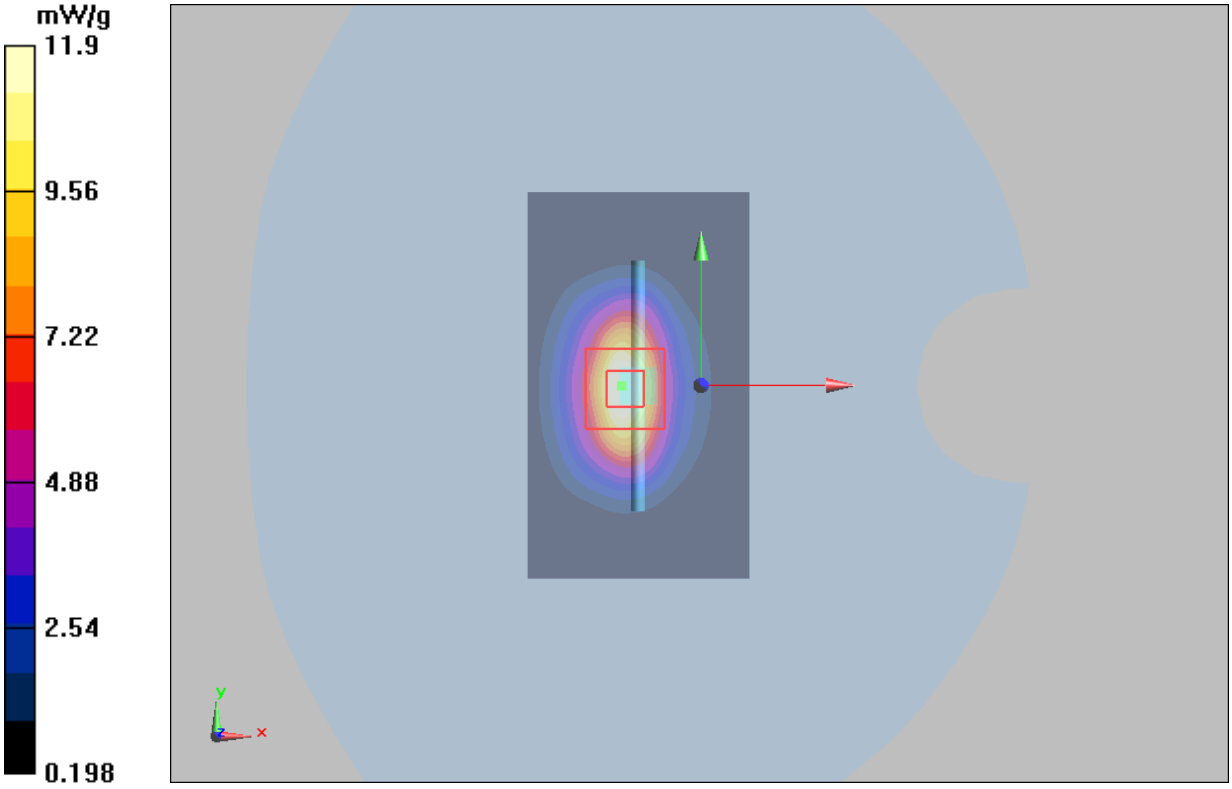


Figure 9 System Performance Check 1900MHz 250mW

System Performance Check at 1900 MHz Body TSL

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

Date/Time: 7/22/2010 5:36:49 PM

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

Medium parameters used: f = 1900 MHz; σ = 1.56 mho/m; ε_r = 53.01; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

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

d=10mm, Pin=250mW/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

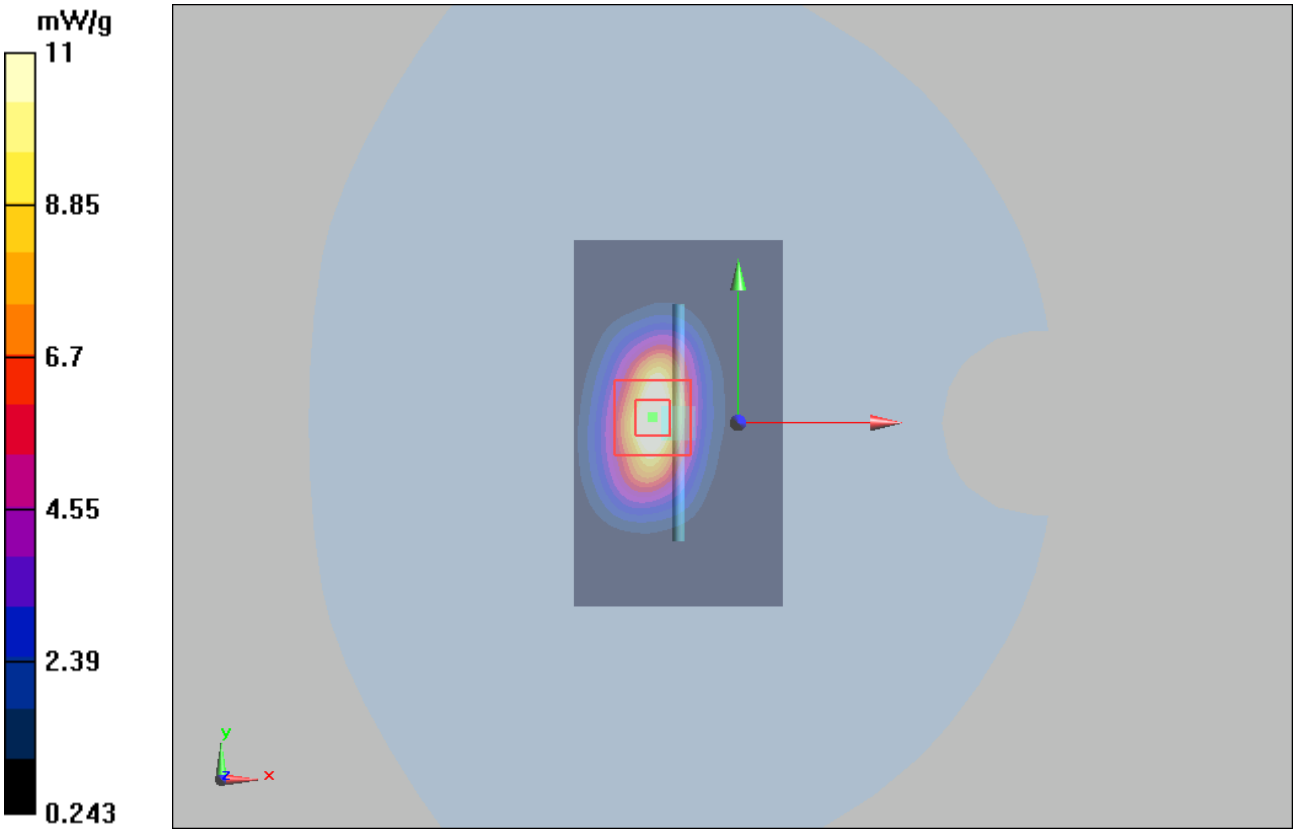


Figure 10 System Performance Check 1900MHz 250mW

System Performance Check at 2450 MHz Head TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 712

Date/Time: 7/24/2010 9:01:36 PM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.79 mho/m; ε_r = 38.81; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=10mm, Pin=250mW/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 21.4 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.0 V/m; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 14.05 mW/g; SAR(10 g) = 6.5 mW/g

Maximum value of SAR (measured) = 15.7 mW/g

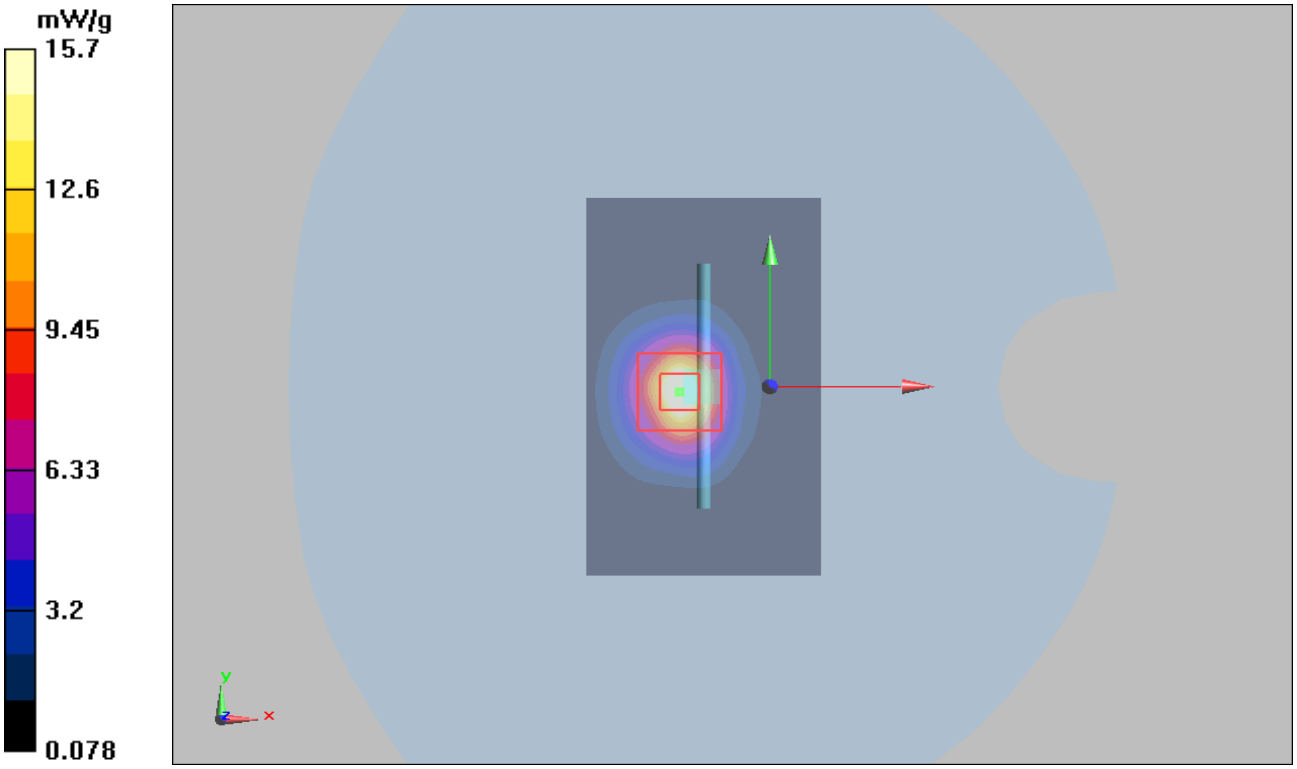


Figure 11 System Performance Check 2450MHz 250mW

System Performance Check at 2450 MHz Body TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 712

Date/Time: 7/24/2010 10:07:36 PM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.92 mho/m; ε_r = 51.83; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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

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

d=10mm, Pin=250mW/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 21.5 mW/g

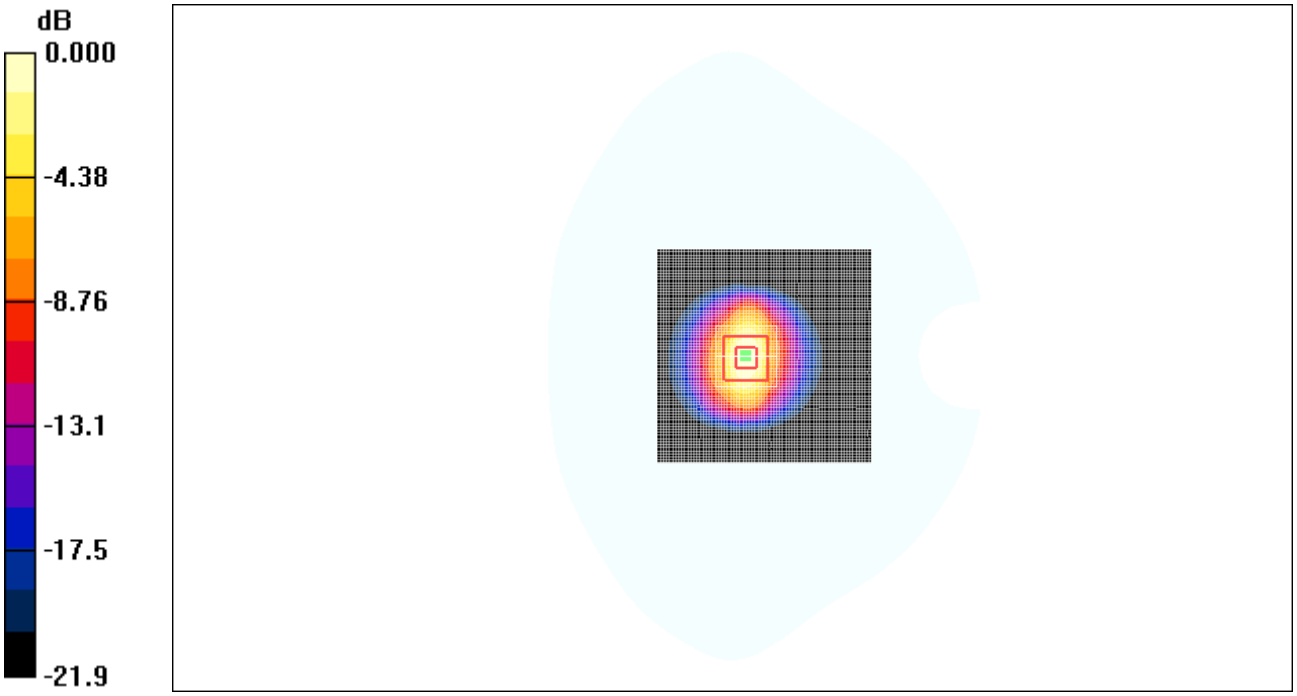
d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 71.0 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 28.2 W/kg

SAR(1 g) = 14.0 mW/g; SAR(10 g) = 6.46 mW/g

Maximum value of SAR (measured) = 19.8 mW/g



0 dB = 19.8mW/g

Figure 12 System Performance Check 2450MHz 250mW

ANNEX C: Graph Results

GSM 850 Left Cheek Middle

Date/Time: 7/23/2010 5:58:33 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.439 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.6 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.533 W/kg
SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.299 mW/g
Maximum value of SAR (measured) = 0.436 mW/g

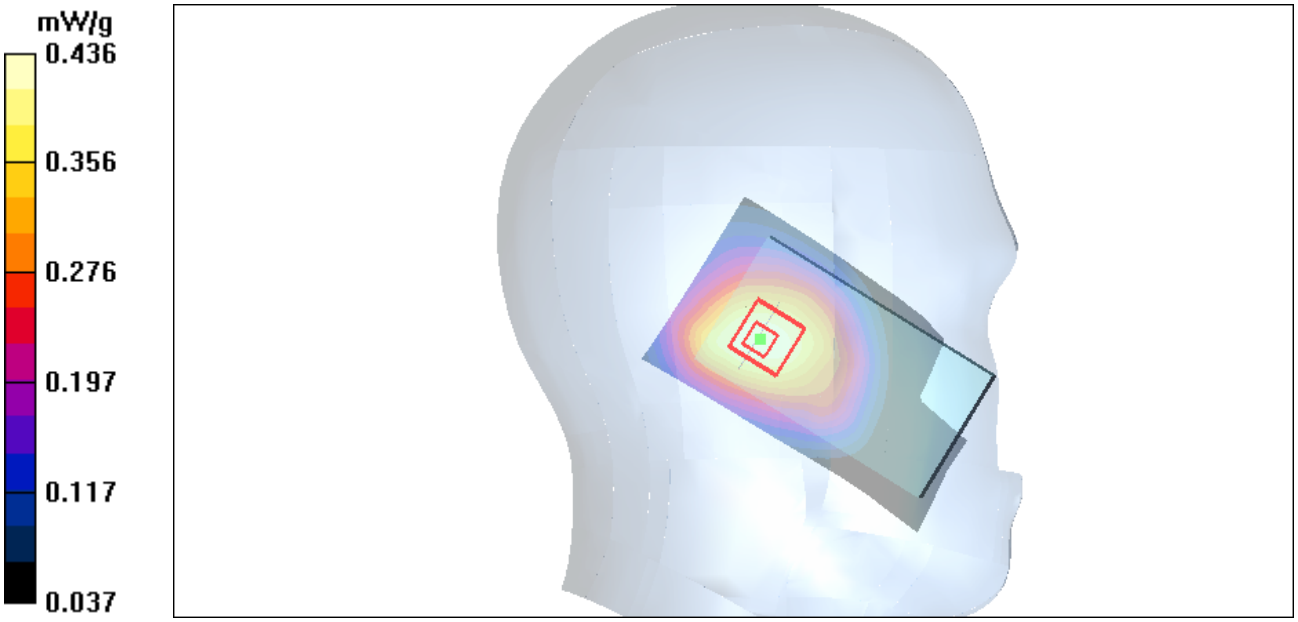


Figure 13 Left Hand Touch Cheek GSM 850 Channel 190

GSM 850 Left Tilt Middle

Date/Time: 7/23/2010 7:01:52 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.391 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.522 W/kg
SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.244 mW/g
Maximum value of SAR (measured) = 0.390 mW/g

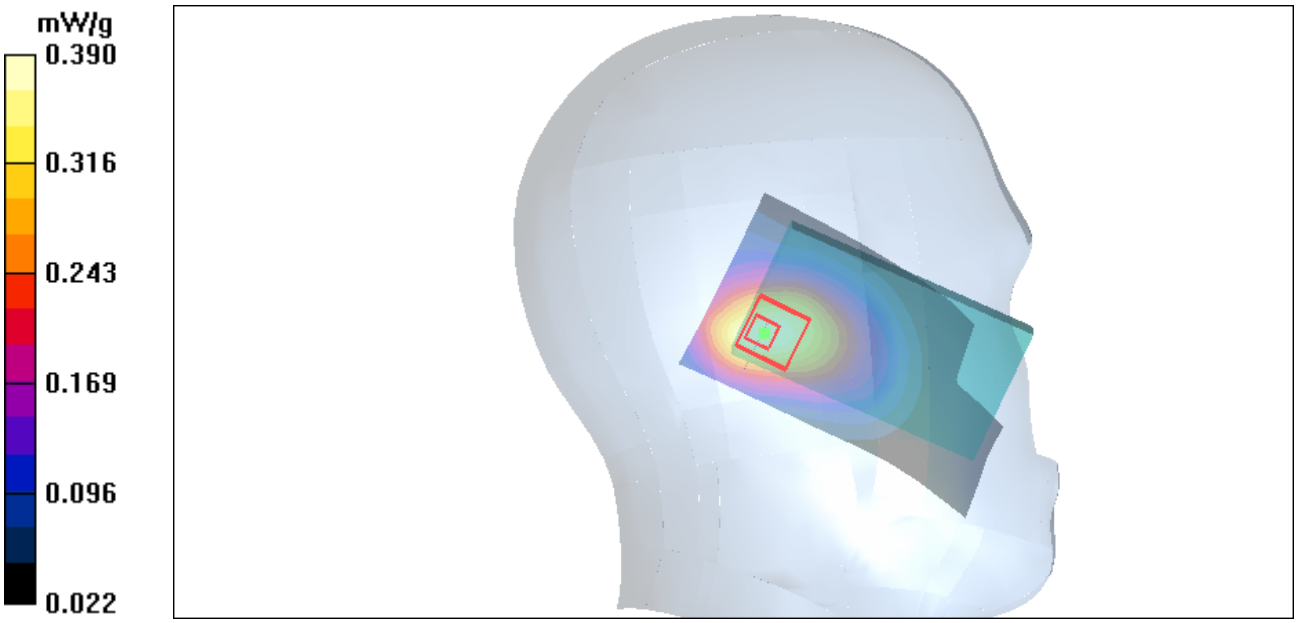


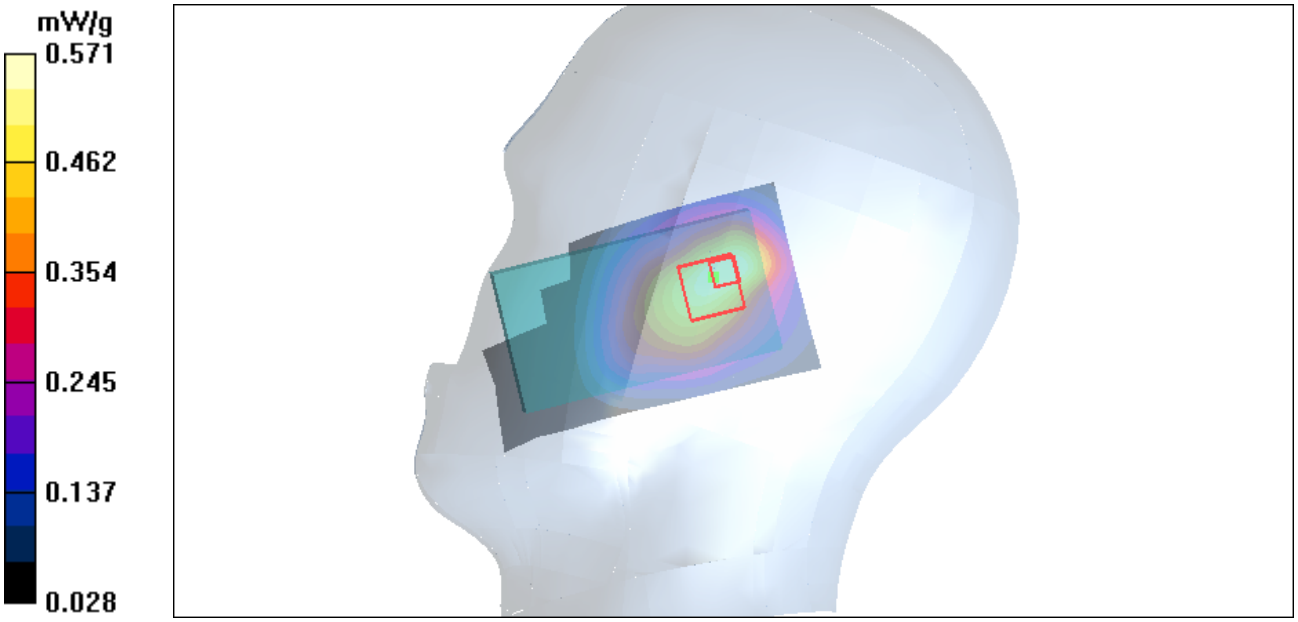
Figure 14 Left Hand Tilt 15° GSM 850 Channel 190

GSM 850 Right Cheek High

Date/Time: 7/23/2010 5:17:26 AM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.92 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.581 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.1 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.852 W/kg
SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.344 mW/g
Maximum value of SAR (measured) = 0.571 mW/g



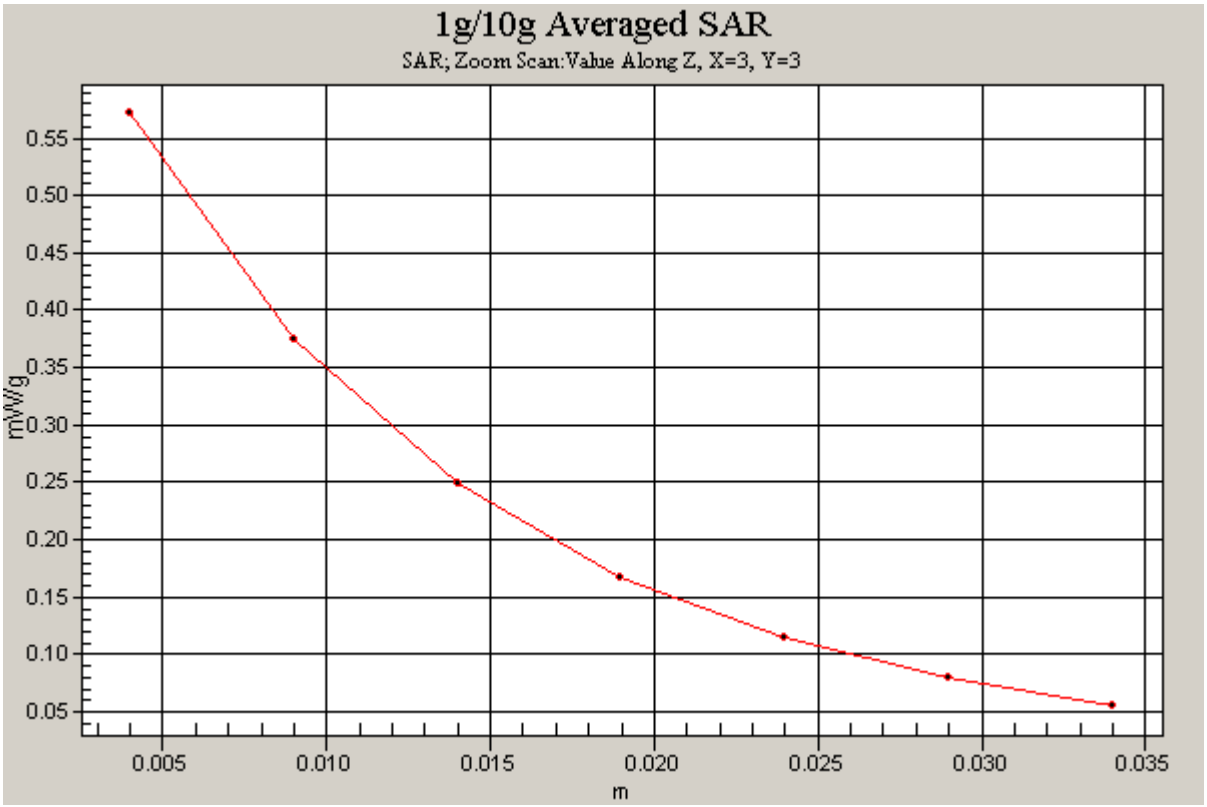


Figure 15 Right Hand Touch Cheek GSM 850 Channel 251

GSM 850 Right Cheek Middle

Date/Time: 7/23/2010 2:34:50 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.505 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.0 V/m; Power Drift = -0.082 dB
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.460 mW/g; SAR(10 g) = 0.296 mW/g
Maximum value of SAR (measured) = 0.495 mW/g

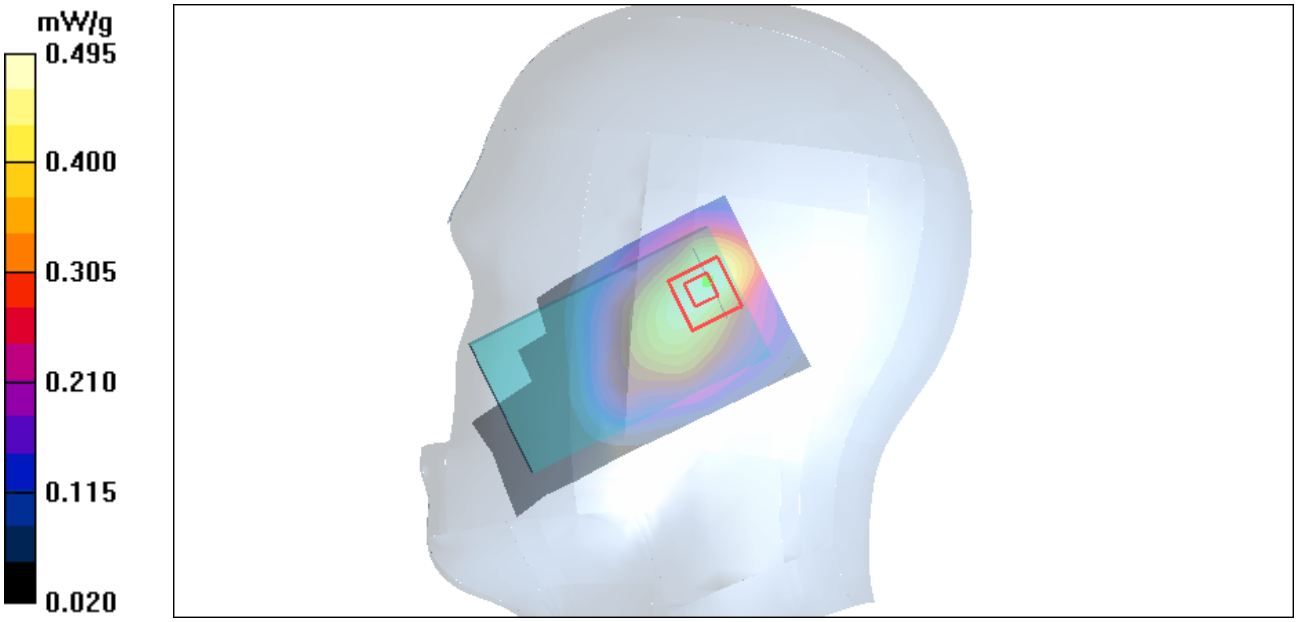


Figure 16 Right Hand Touch Cheek GSM 850 Channel 190

GSM 850 Right Cheek Low

Date/Time: 7/23/2010 4:59:08 AM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.897 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.387 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.4 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.561 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.229 mW/g
Maximum value of SAR (measured) = 0.383 mW/g

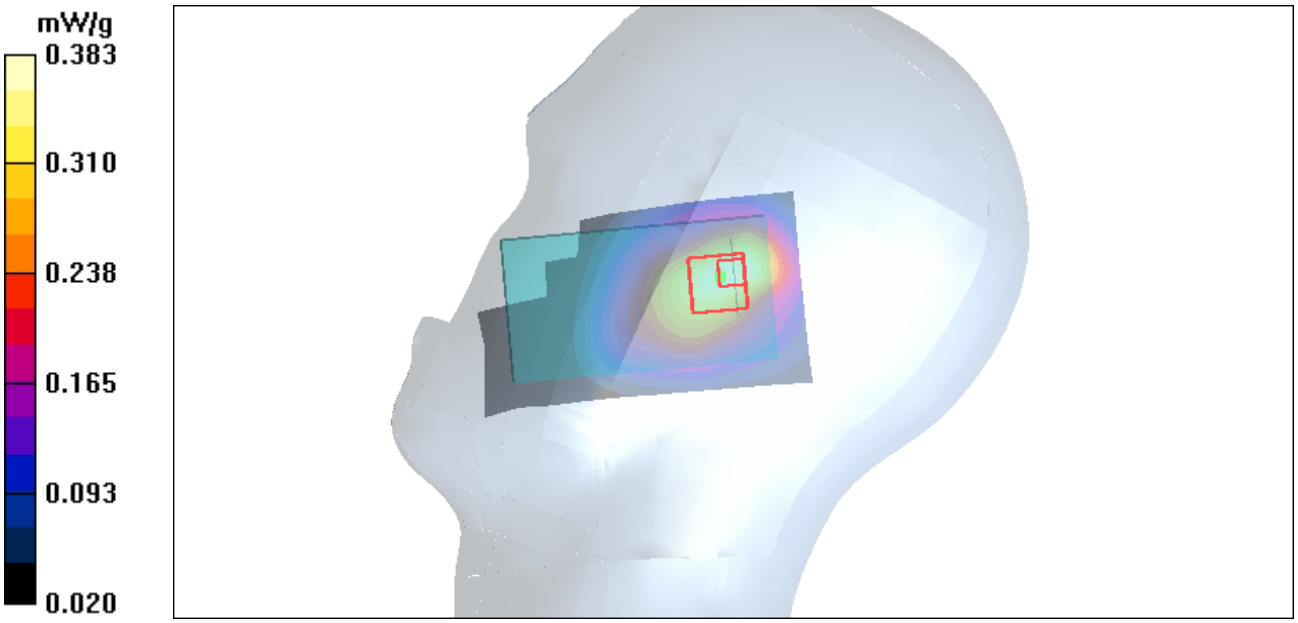


Figure 17 Right Hand Touch Cheek GSM 850 Channel 128

GSM 850 Right Tilt Middle

Date/Time: 7/23/2010 5:36:19 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.496 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.699 W/kg
SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.276 mW/g
Maximum value of SAR (measured) = 0.480 mW/g

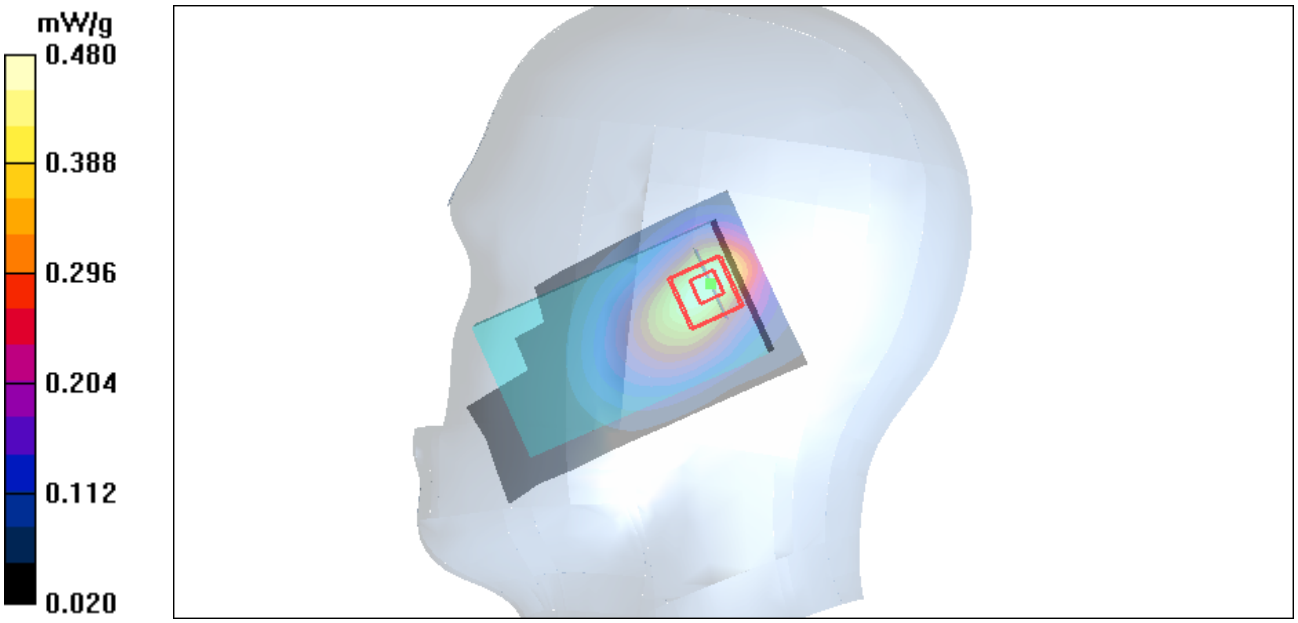


Figure 18 Right Hand Tilt 15° GSM 850 Channel 190

GSM 850 GPRS(1Up) Left Cheek Middle

Date/Time: 7/23/2010 6:22:01 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.435 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.0 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.537 W/kg
SAR(1 g) = 0.417 mW/g; SAR(10 g) = 0.304 mW/g
Maximum value of SAR (measured) = 0.440 mW/g

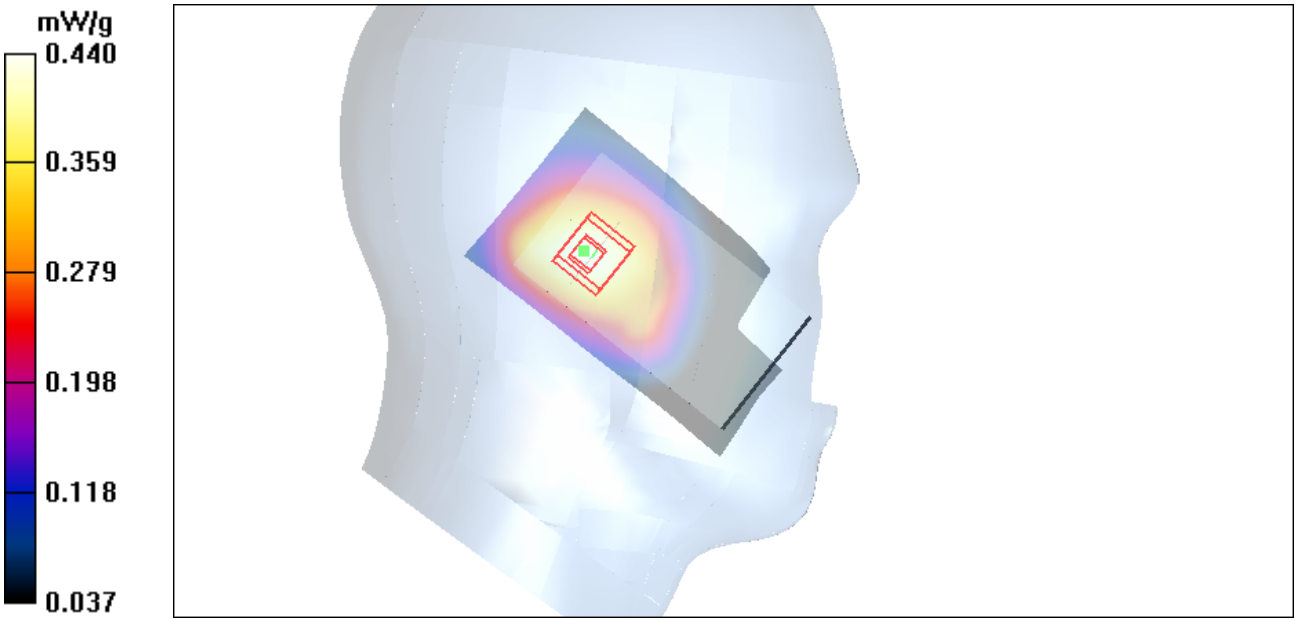


Figure 19 Left Hand Touch Cheek GSM 850 GPRS(1Up) Channel 190

GSM 850 GPRS(1Up) Left Tilt Middle

Date/Time: 7/23/2010 6:40:58 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.382 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.5 V/m; Power Drift = -0.067 dB
Peak SAR (extrapolated) = 0.495 W/kg
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.237 mW/g
Maximum value of SAR (measured) = 0.380 mW/g

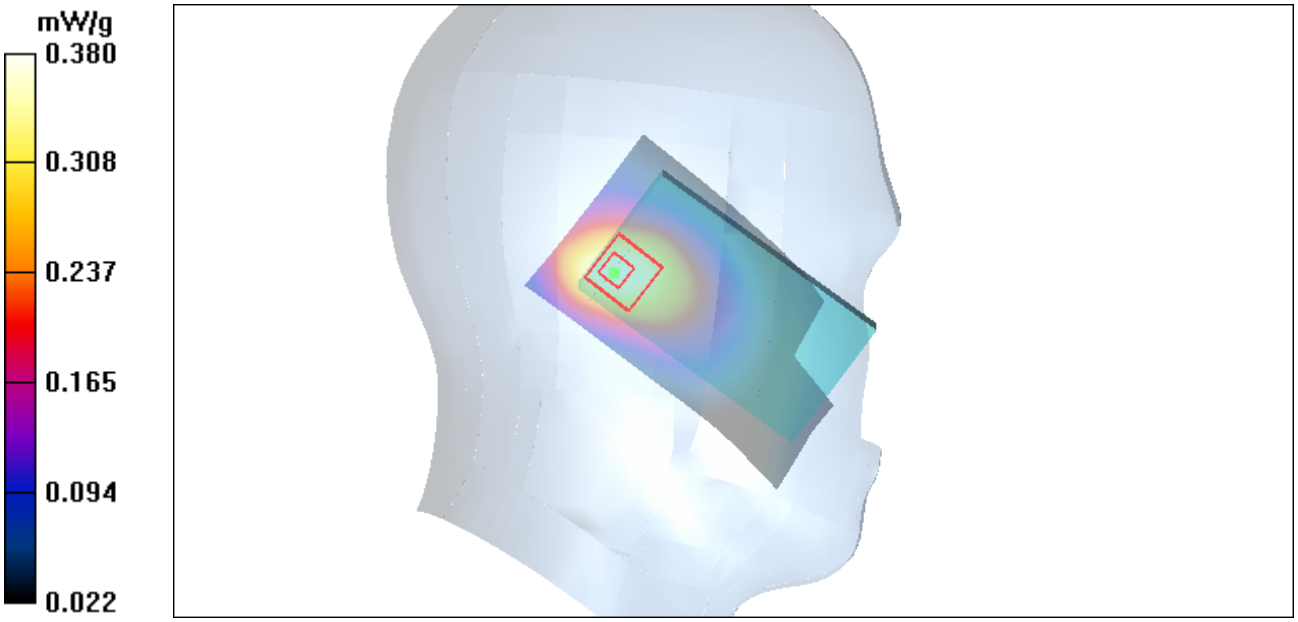


Figure 20 Left Hand Tilt 15° GSM 850 GPRS(1Up) Channel 190

GSM 850 GPRS(1Up) Right Cheek High

Date/Time: 7/23/2010 3:40:30 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 0.92 mho/m; ε_r = 42.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.549 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.4 V/m; Power Drift = -0.066 dB
Peak SAR (extrapolated) = 0.786 W/kg
SAR(1 g) = 0.504 mW/g; SAR(10 g) = 0.325 mW/g
Maximum value of SAR (measured) = 0.542 mW/g

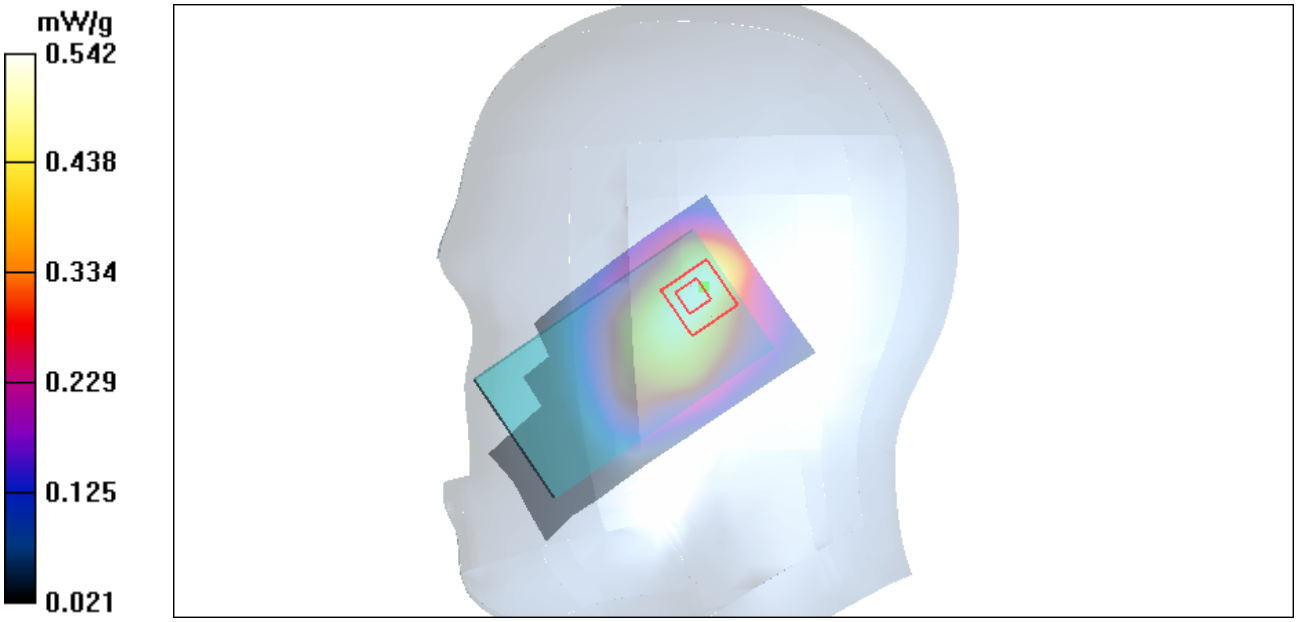


Figure 21 Right Hand Touch Cheek GSM 850 GPRS(1Up) Channel 251

GSM 850 GPRS(1Up) Right Cheek Middle

Date/Time: 7/23/2010 3:12:59 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.481 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.285 mW/g
Maximum value of SAR (measured) = 0.477 mW/g

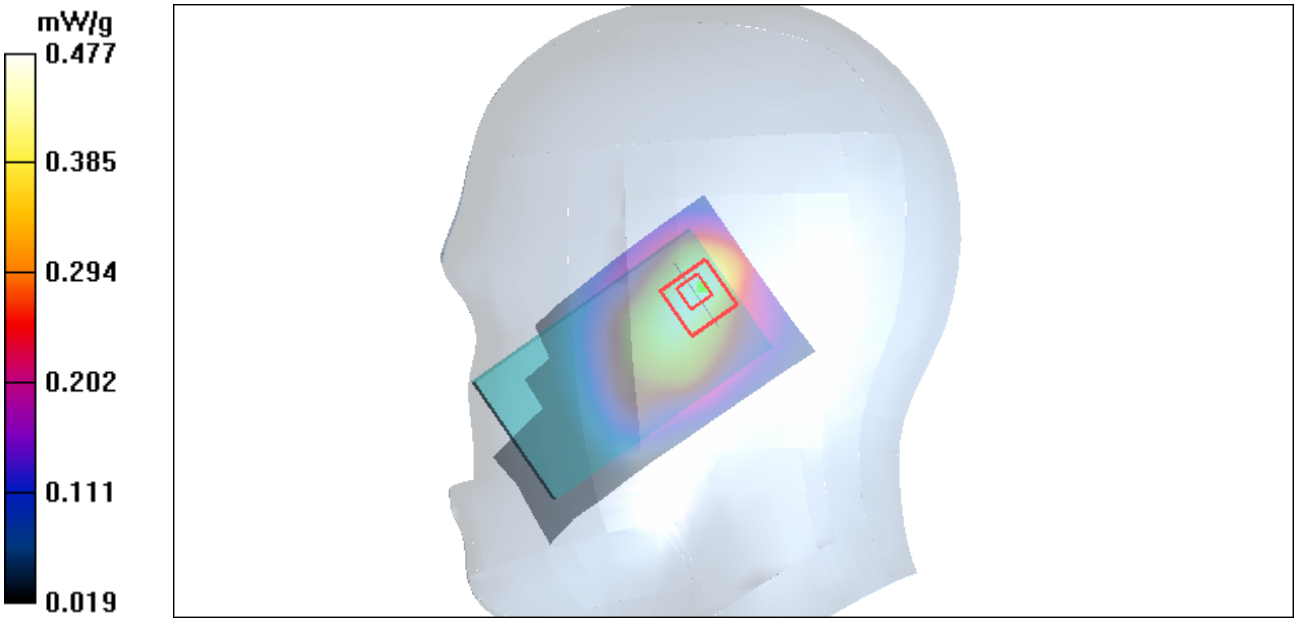


Figure 22 Right Hand Touch Cheek GSM 850 GPRS(1Up) Channel 190

GSM 850 GPRS(1Up) Right Cheek Low

Date/Time: 7/23/2010 3:58:53 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.897 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.361 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.528 W/kg
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.212 mW/g
Maximum value of SAR (measured) = 0.359 mW/g

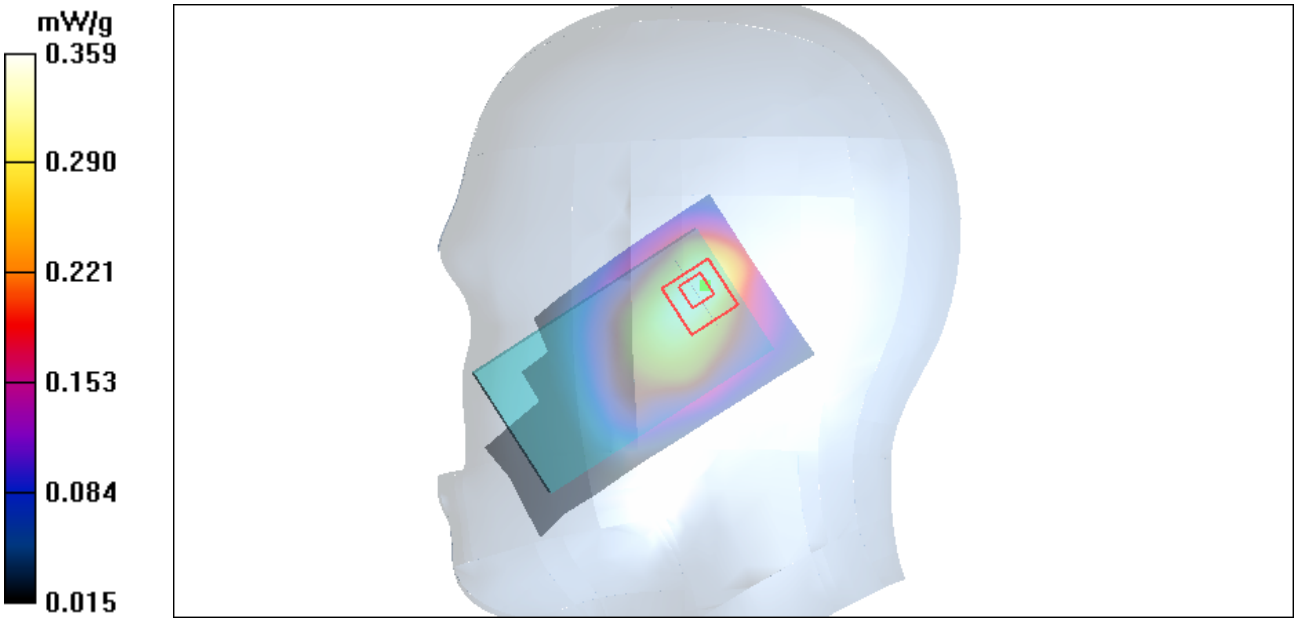


Figure 23 Right Hand Touch Cheek GSM 850 GPRS(1Up) Channel 128

GSM 850 GPRS(1Up) Right Tilt Middle

Date/Time: 7/23/2010 4:37:55 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.478 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.3 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.691 W/kg
SAR(1 g) = 0.423 mW/g; SAR(10 g) = 0.265 mW/g
Maximum value of SAR (measured) = 0.463 mW/g

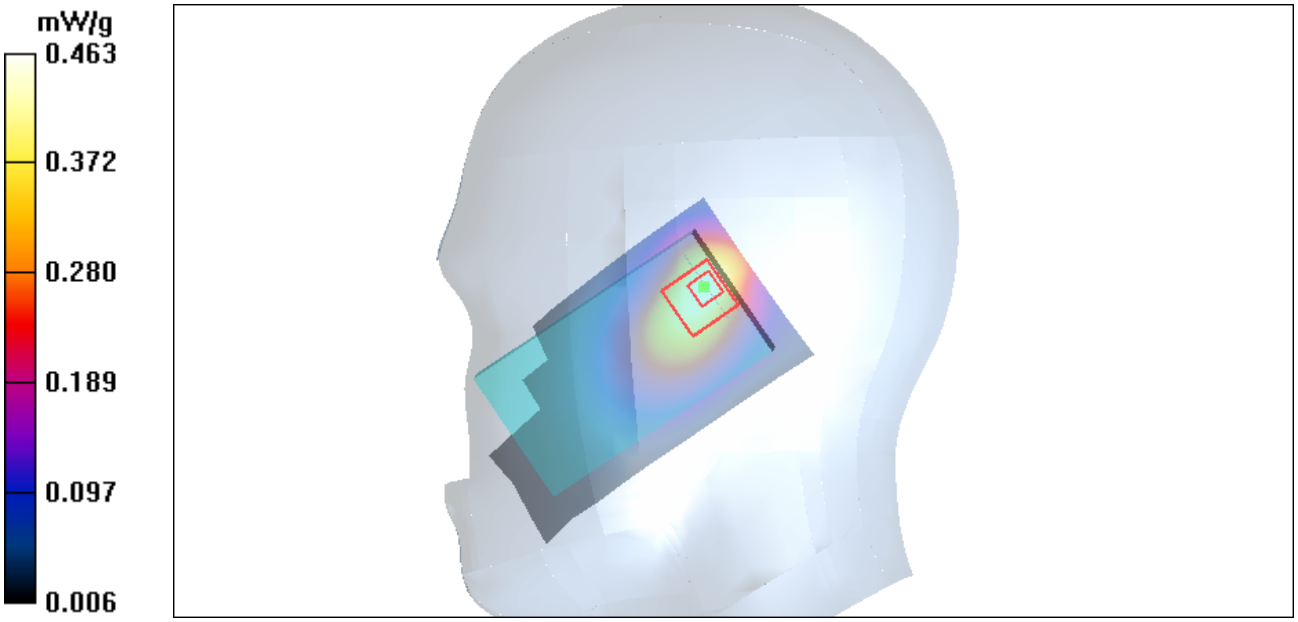


Figure 24 Right Hand Tilt 15° GSM 850 GPRS(1Up) Channel 190

GSM 850 GPRS(2Up) Right Cheek Middle

Date/Time: 7/23/2010 2:54:26 AM
Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.382 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.562 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.231 mW/g
Maximum value of SAR (measured) = 0.381 mW/g

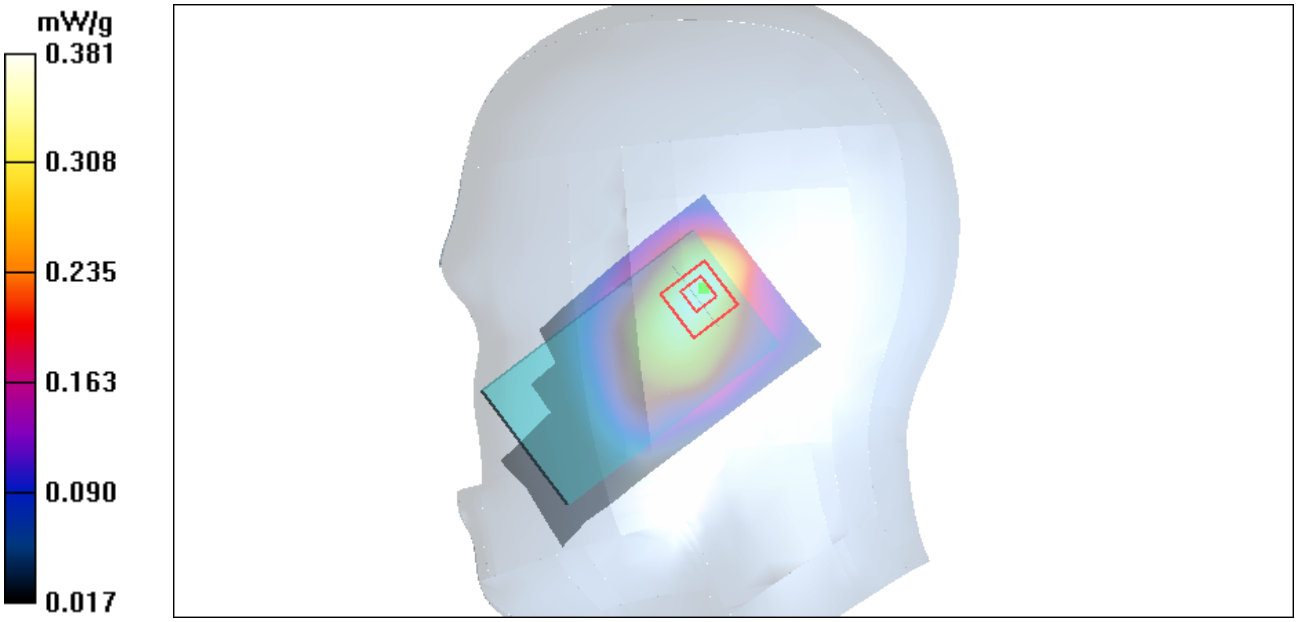


Figure 25 Right Hand Touch Cheek GSM 850 GPRS(2Up) Channel 190

GSM 850 Towards Ground High

Date/Time: 7/23/2010 1:24:29 AM
Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 1.01 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.704 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.3 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.894 W/kg
SAR(1 g) = 0.656 mW/g; SAR(10 g) = 0.459 mW/g
Maximum value of SAR (measured) = 0.701 mW/g

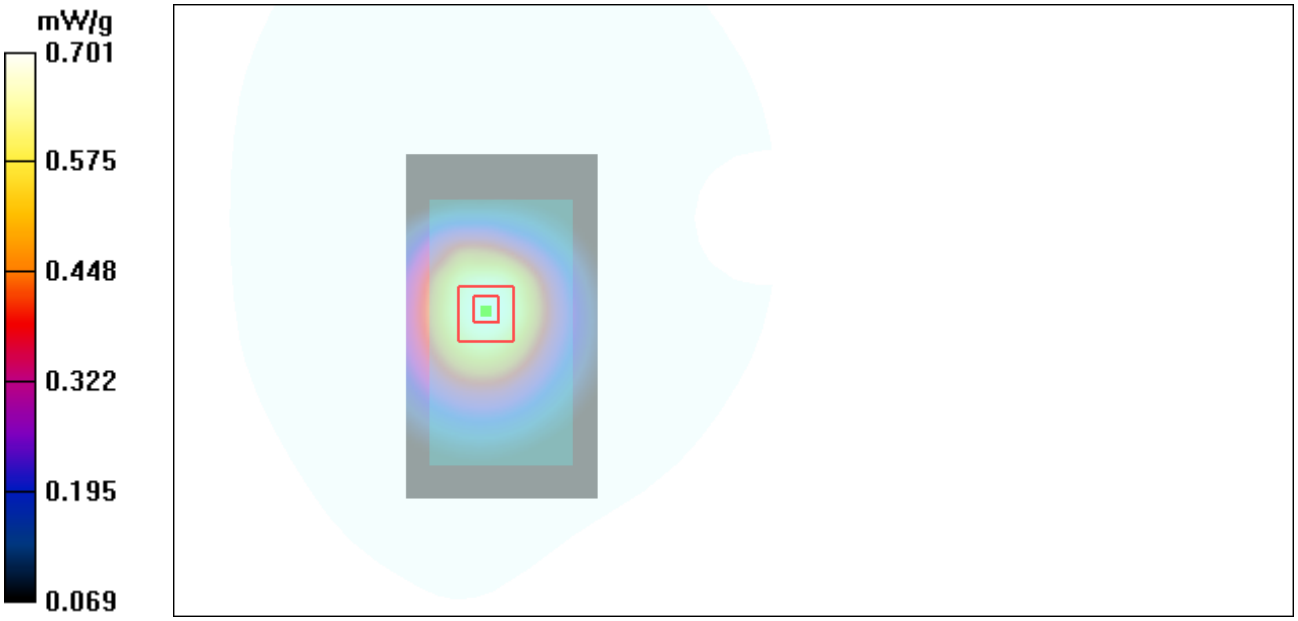


Figure 26 Body, Towards Ground, GSM 850 Channel 251

GSM 850 Towards Ground Middle

Date/Time: 7/22/2010 10:55:47 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.773 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.0 V/m; Power Drift = -0.073 dB
Peak SAR (extrapolated) = 0.955 W/kg
SAR(1 g) = 0.709 mW/g; SAR(10 g) = 0.499 mW/g
Maximum value of SAR (measured) = 0.749 mW/g

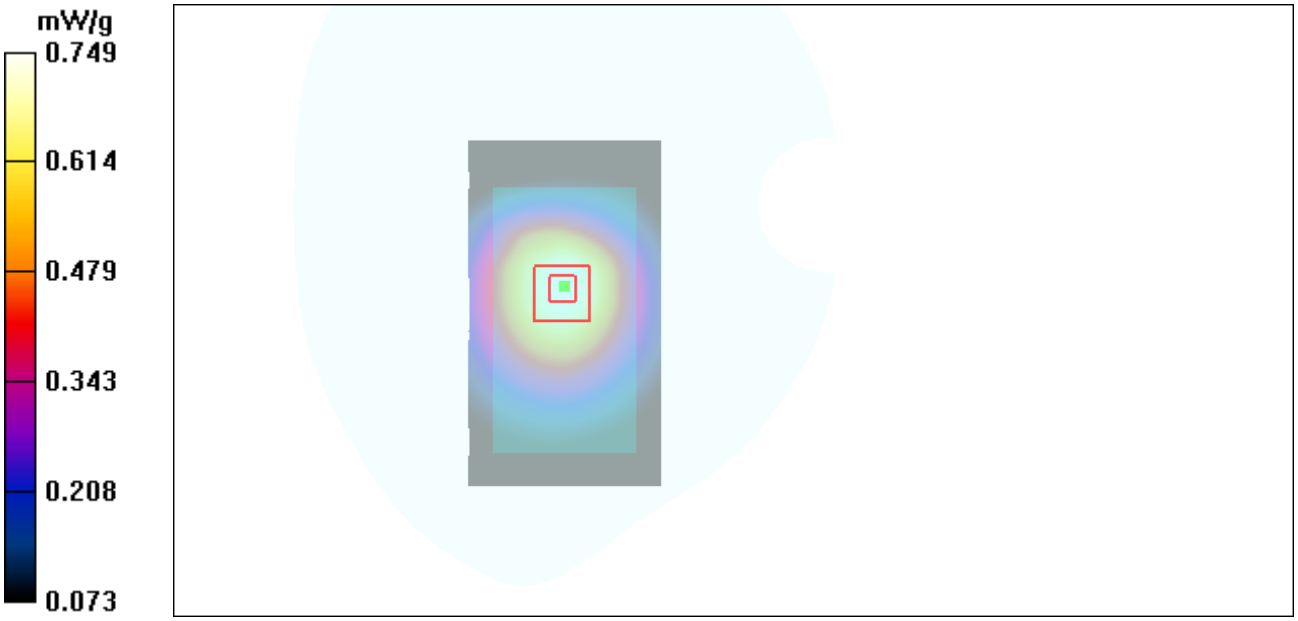


Figure 27 Body, Towards Ground, GSM 850 Channel 190

GSM 850 Towards Ground Low

Date/Time: 7/23/2010 1:42:55 AM
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.99 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.656 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = 0.027 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.623 mW/g; SAR(10 g) = 0.440 mW/g
Maximum value of SAR (measured) = 0.666 mW/g

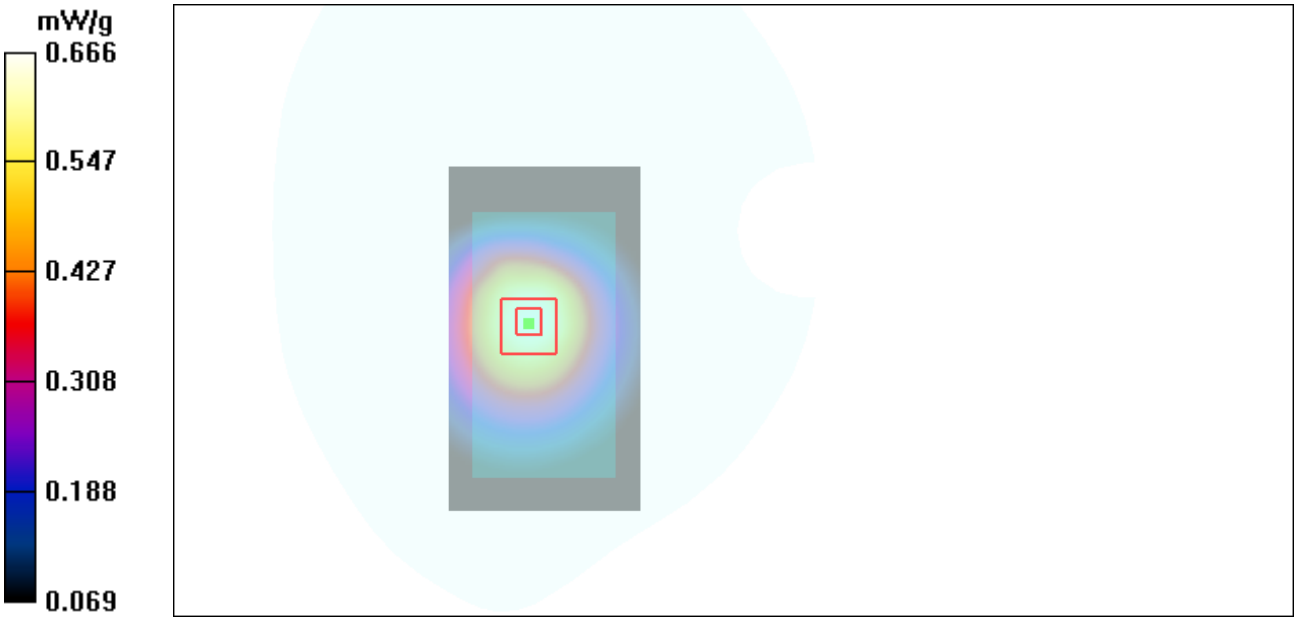


Figure 28 Body, Towards Ground, GSM 850 Channel 128

GSM 850 Towards Phantom Middle

Date/Time: 7/23/2010 2:05:23 AM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.246 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.300 W/kg
SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.165 mW/g
Maximum value of SAR (measured) = 0.244 mW/g

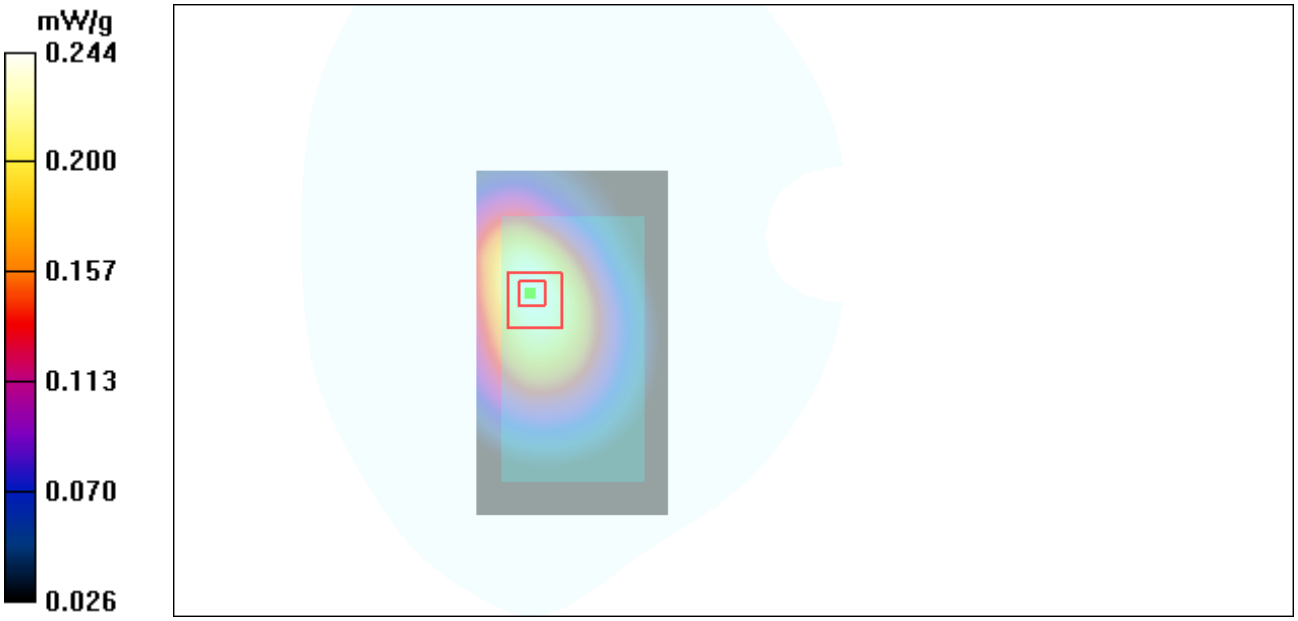


Figure 29 Body, Towards Phantom, GSM 850 Channel 190

GSM 850 with Earphone Towards Ground Middle

Date/Time: 7/23/2010 5:08:18 PM
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.554 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 0.706 W/kg
SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.357 mW/g
Maximum value of SAR (measured) = 0.550 mW/g

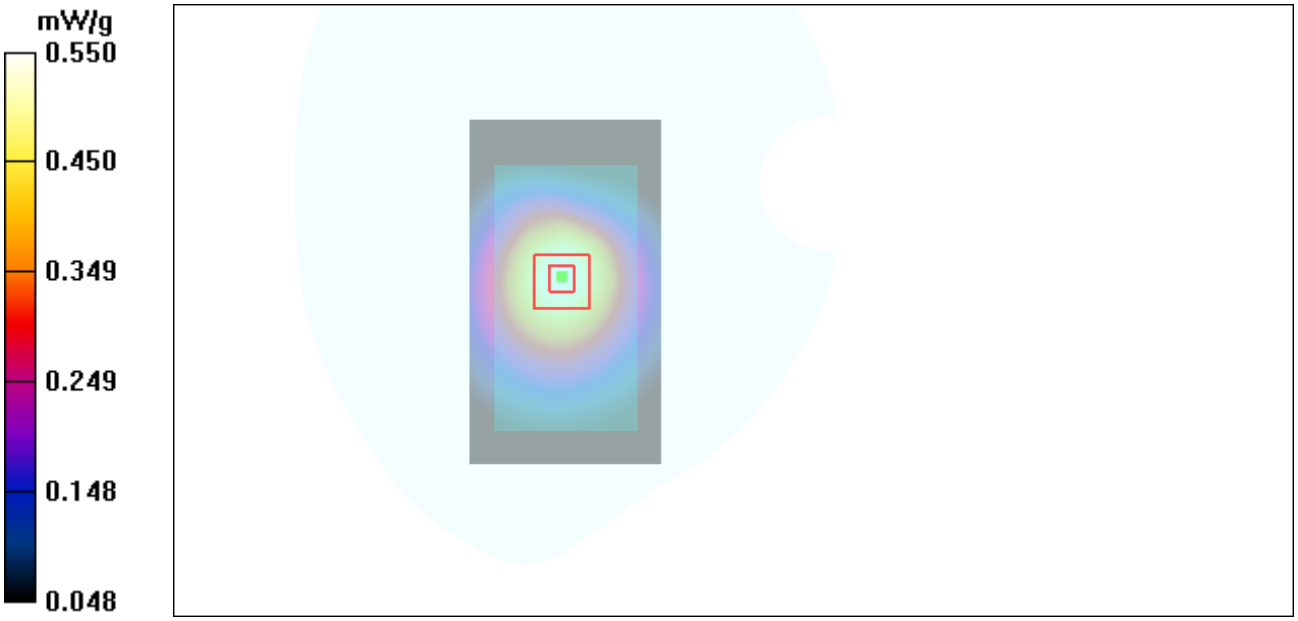


Figure 30 Body, Towards Ground, GSM 850 Channel 190

GSM 850 GPRS (1Up) Towards Ground High

Date/Time: 7/23/2010 12:55:09 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 849 MHz; σ = 1.01 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.657 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.0 V/m; Power Drift = 0.027 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.613 mW/g; SAR(10 g) = 0.429 mW/g
Maximum value of SAR (measured) = 0.653 mW/g

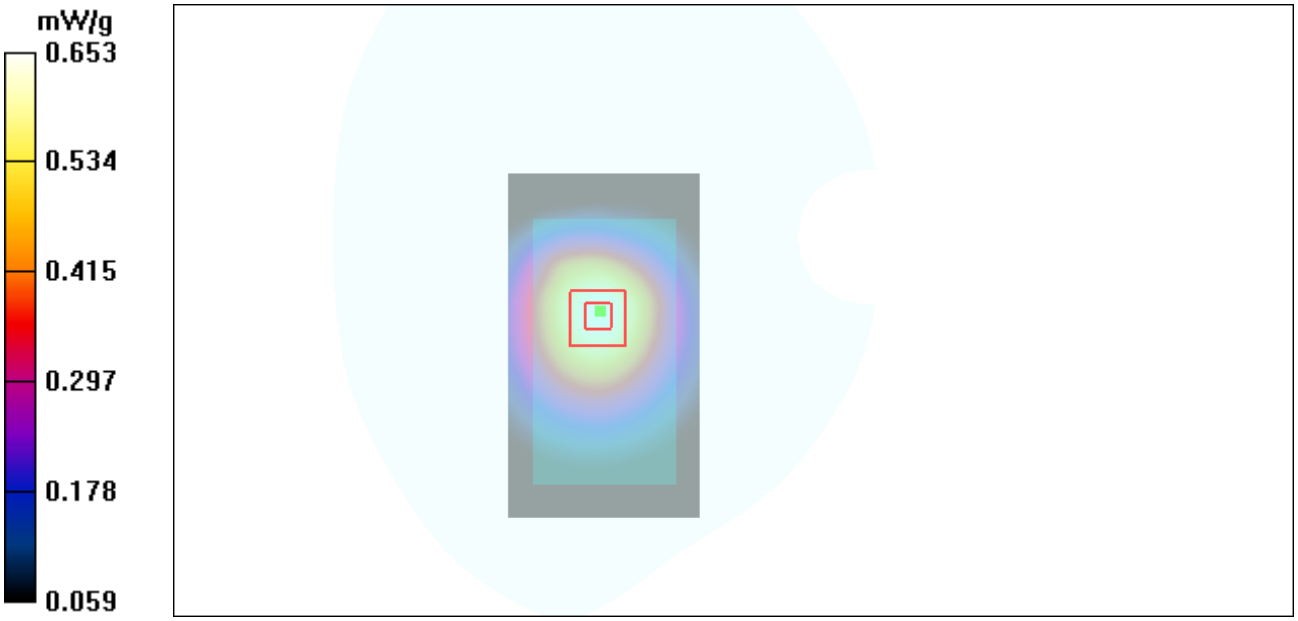


Figure 31 Body, Towards Ground, GSM 850 GPRS (1Up) Channel 251

GSM 850 GPRS (1Up) Towards Ground Middle

Date/Time: 7/22/2010 11:36:35 PM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.782 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.097 dB
Peak SAR (extrapolated) = 0.988 W/kg
SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.512 mW/g
Maximum value of SAR (measured) = 0.770 mW/g

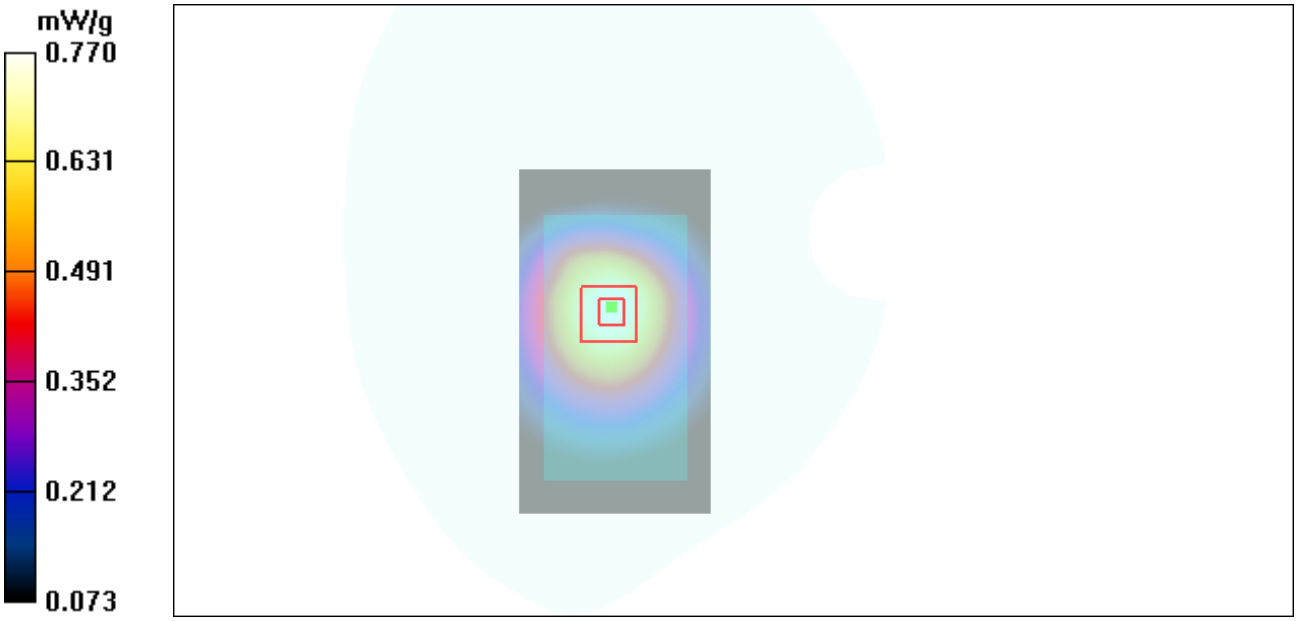


Figure 32 Body, Towards Ground, GSM 850 GPRS (1Up) Channel 190

GSM 850 GPRS (1Up) Towards Ground Low

Date/Time: 7/23/2010 12:33:58 AM
Communication System: GSM850 + GPRS(1Up); Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.99 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.628 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.0 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 0.748 W/kg
SAR(1 g) = 0.576 mW/g; SAR(10 g) = 0.403 mW/g
Maximum value of SAR (measured) = 0.633 mW/g

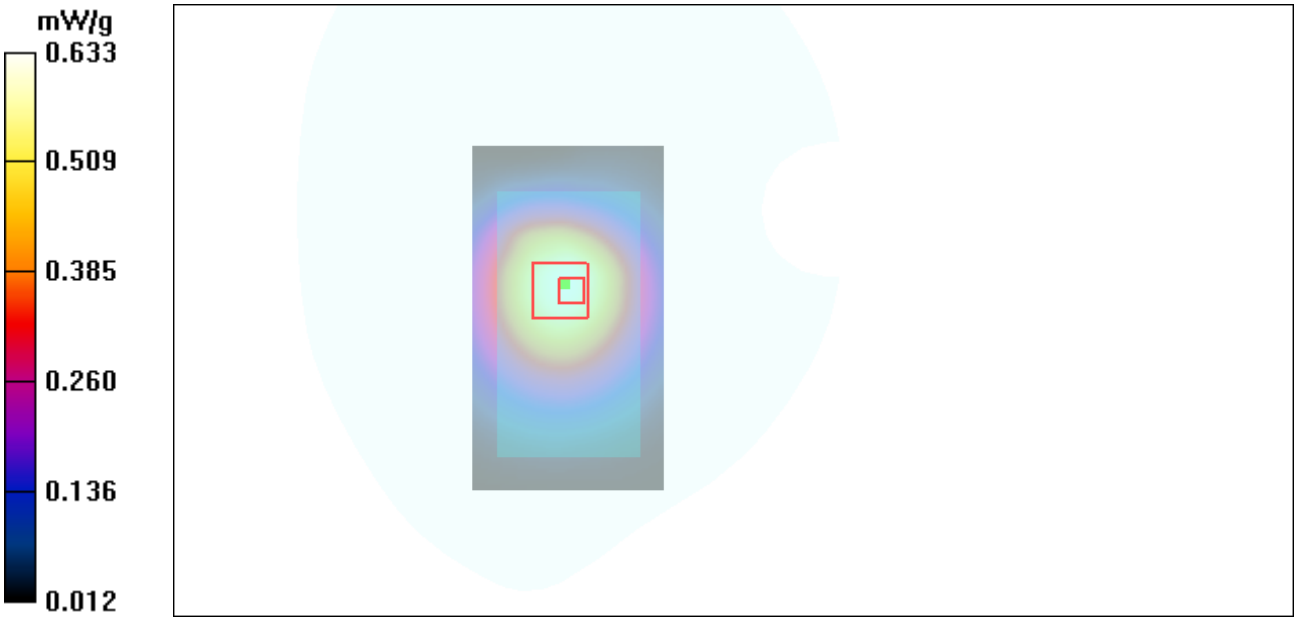


Figure 33 Body, Towards Ground, GSM 850 GPRS (1Up) Channel 128

GSM 850 GPRS (1Up) Towards Phantom Middle

Date/Time: 7/23/2010 4:25:57 PM
Communication System: GSM850 + GPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.266 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = 0.113 dB
Peak SAR (extrapolated) = 0.332 W/kg
SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.177 mW/g
Maximum value of SAR (measured) = 0.265 mW/g

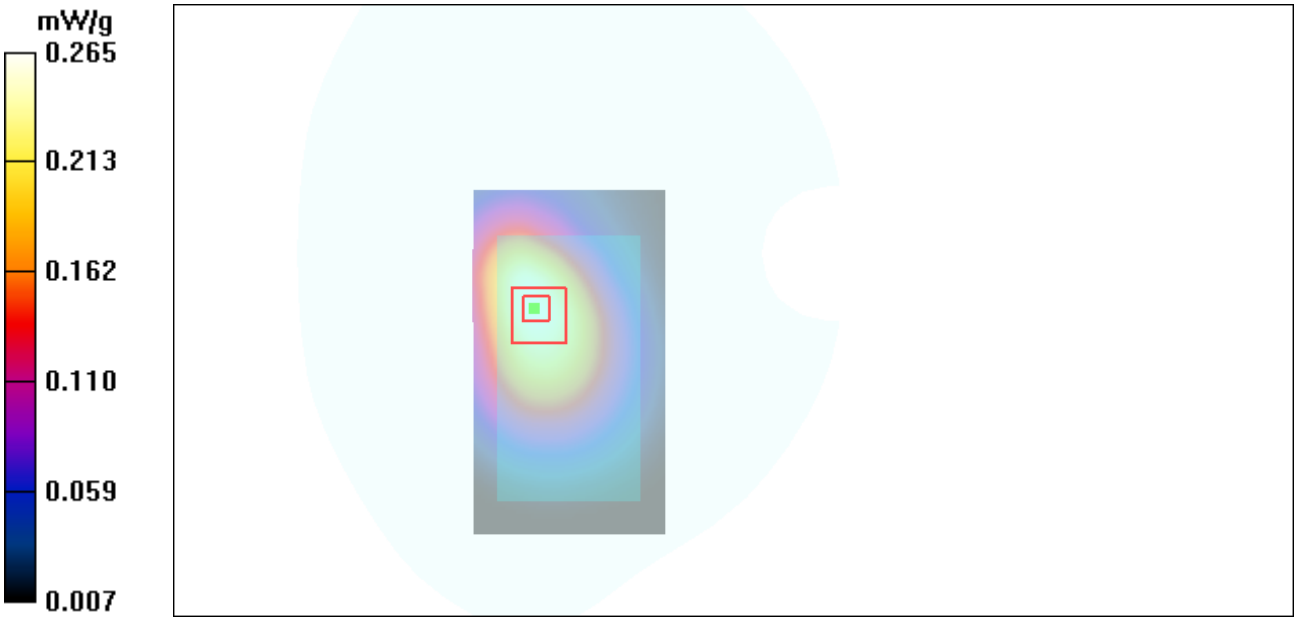


Figure 34 Body, Towards Phantom, GSM 850 GPRS (1Up) Channel 190

GSM 850 GPRS (2Up) Towards Ground Middle

Date/Time: 7/23/2010 4:05:23 PM
Communication System: GSM850 + GPRS(2Up); Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.666 mW/g

Towards Ground Middle /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = -0.043 dB
Peak SAR (extrapolated) = 0.812 W/kg
SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.424 mW/g
Maximum value of SAR (measured) = 0.635 mW/g

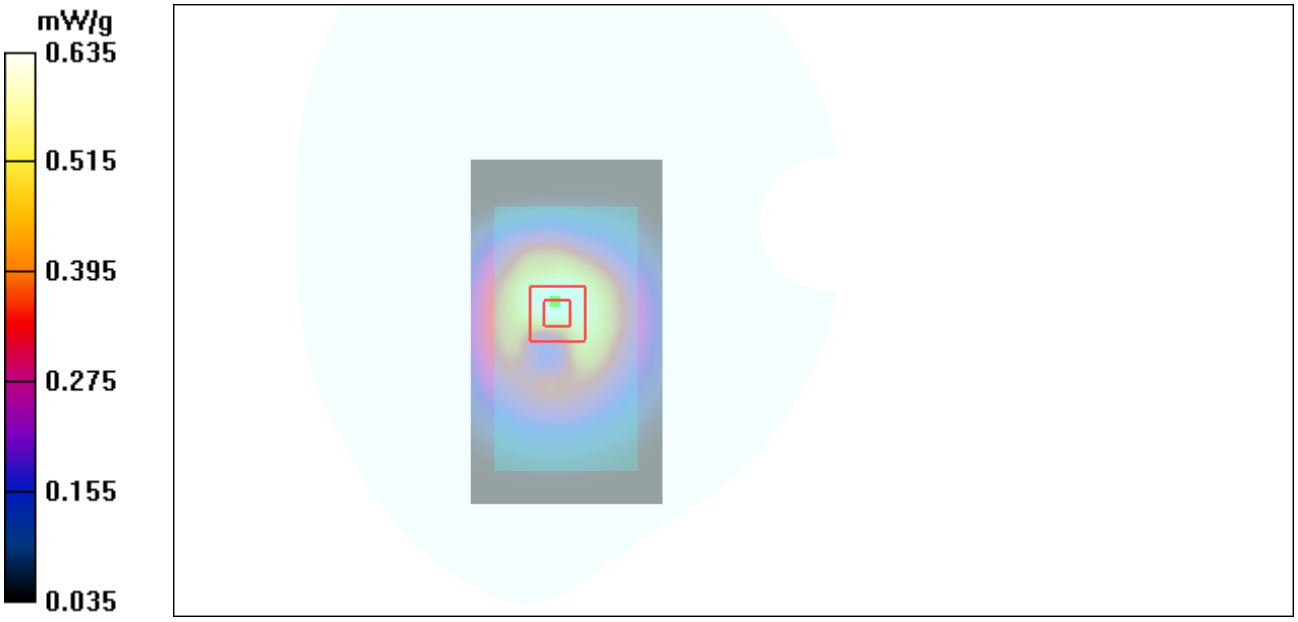


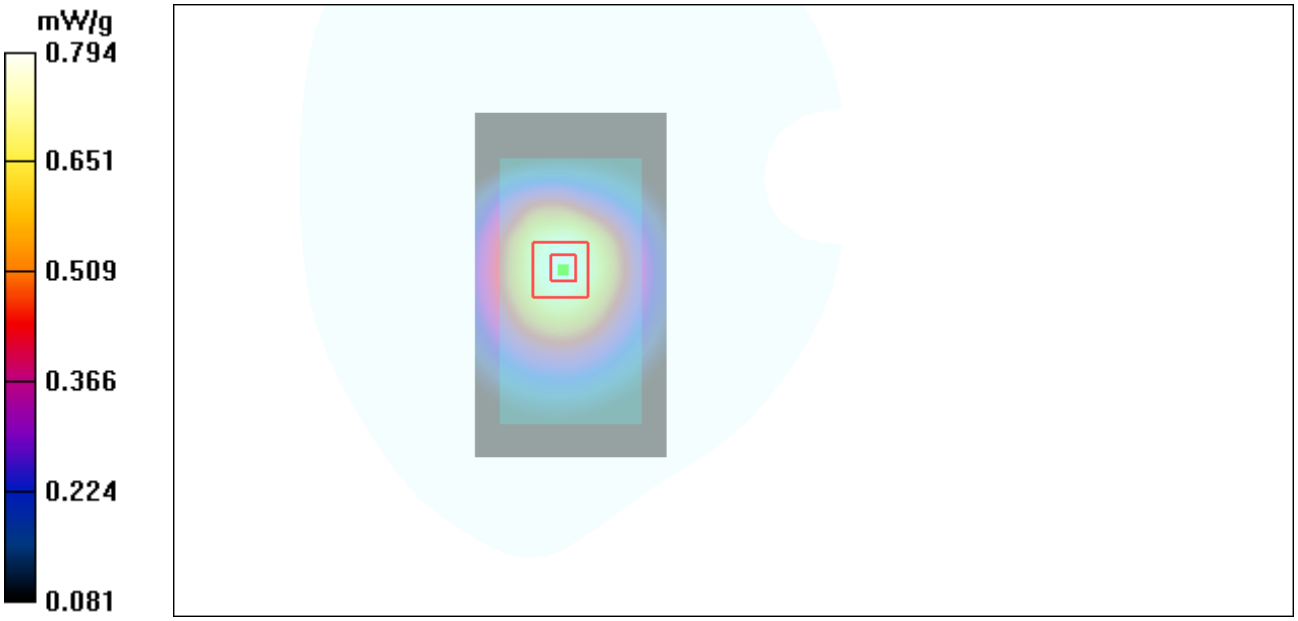
Figure 35 Body, Towards Ground, GSM 850 GPRS (2Up) Channel 190

GSM 850 EGPRS(1Up) Towards Ground Middle

Date/Time: 7/23/2010 4:46:21 PM
Communication System: GSM850+EGPRS(1Up); Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.798 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.7 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.746 mW/g; SAR(10 g) = 0.525 mW/g
Maximum value of SAR (measured) = 0.794 mW/g



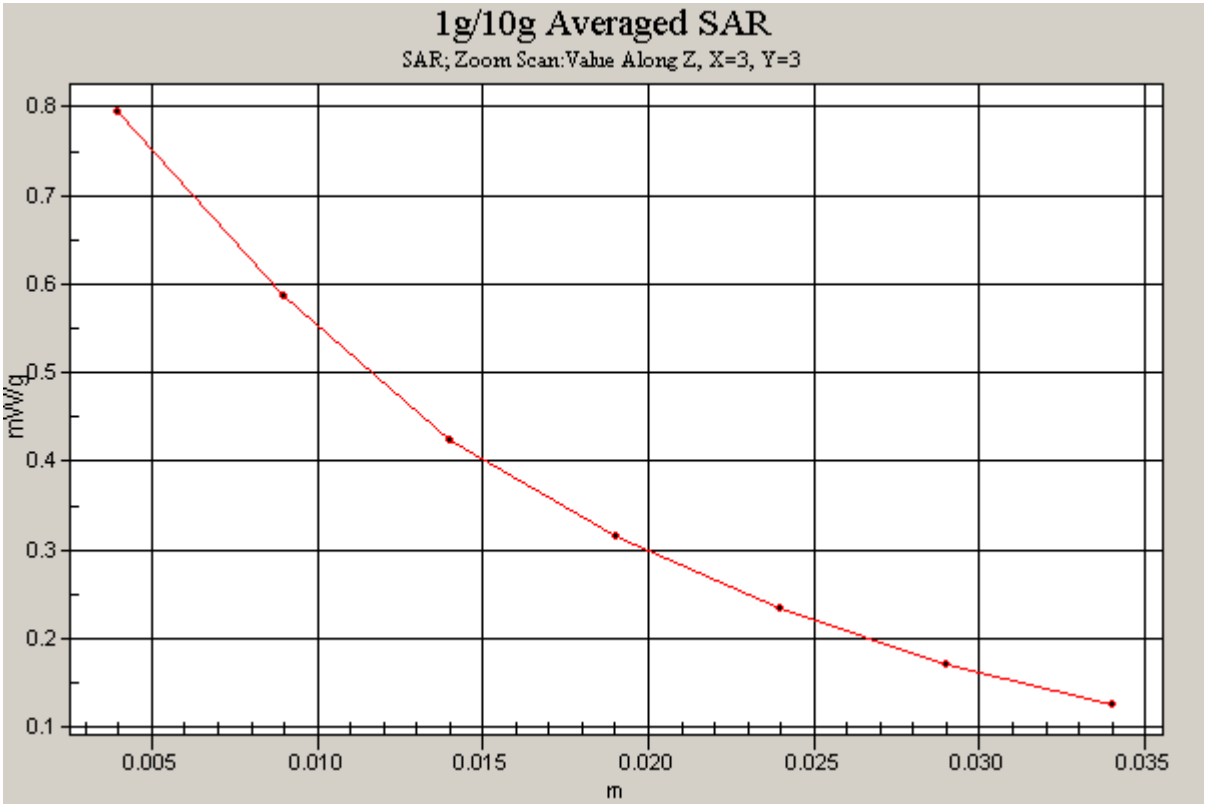


Figure 36 Body, Towards Ground, GSM 850 EGPRS(1Up) Channel 190

GSM 1900 Left Cheek Middle

Date/Time: 7/23/2010 12:29:12 PM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.100 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.70 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 0.132 W/kg
SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.051 mW/g
Maximum value of SAR (measured) = 0.089 mW/g

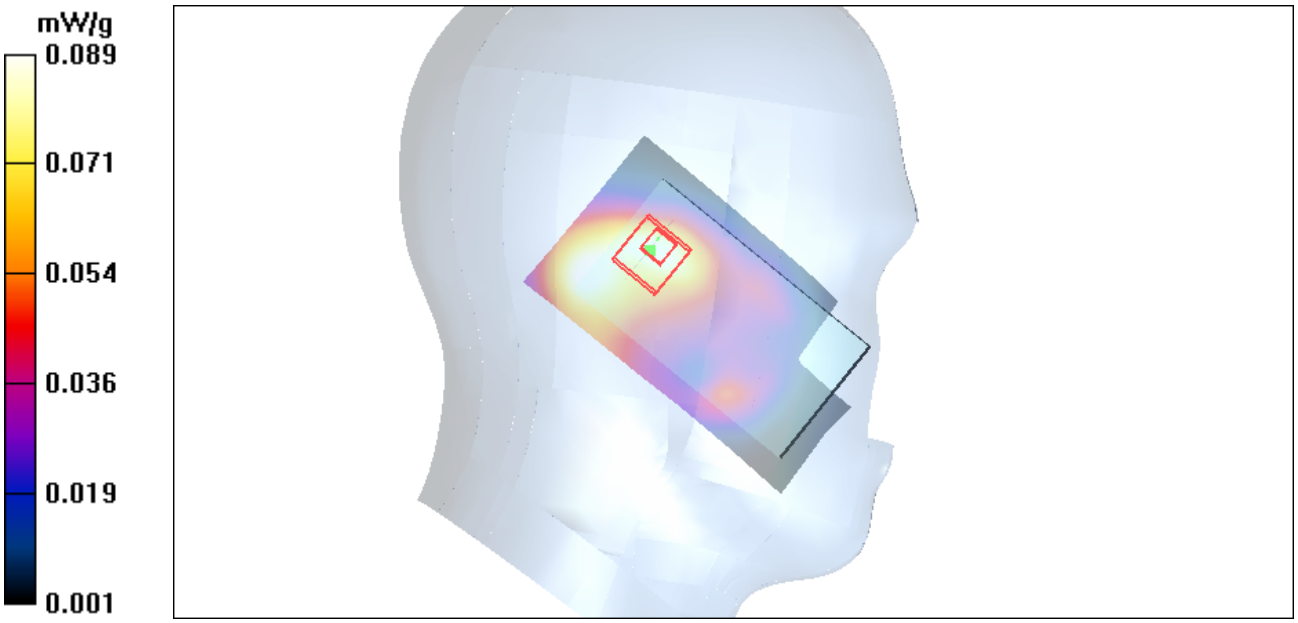


Figure 37 Left Hand Touch Cheek GSM 1900 Channel 661

GSM 1900 Left Tilt Middle

Date/Time: 7/23/2010 1:05:42 PM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.127 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.93 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.068 mW/g
Maximum value of SAR (measured) = 0.126 mW/g

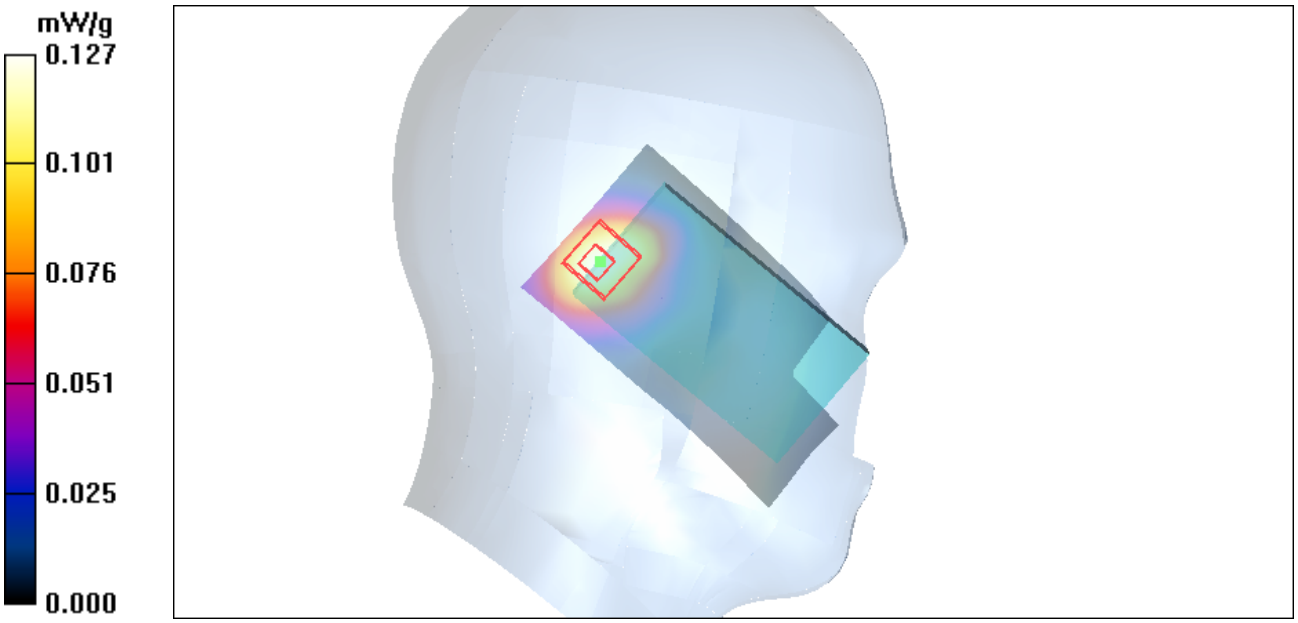


Figure 38 Left Hand Tilt 15° GSM 1900 Channel 661

GSM 1900 Right Cheek High

Date/Time: 7/23/2010 1:54:41 PM
Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1910 MHz; σ = 1.42 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.121 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.93 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 0.234 W/kg
SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.069 mW/g
Maximum value of SAR (measured) = 0.140 mW/g

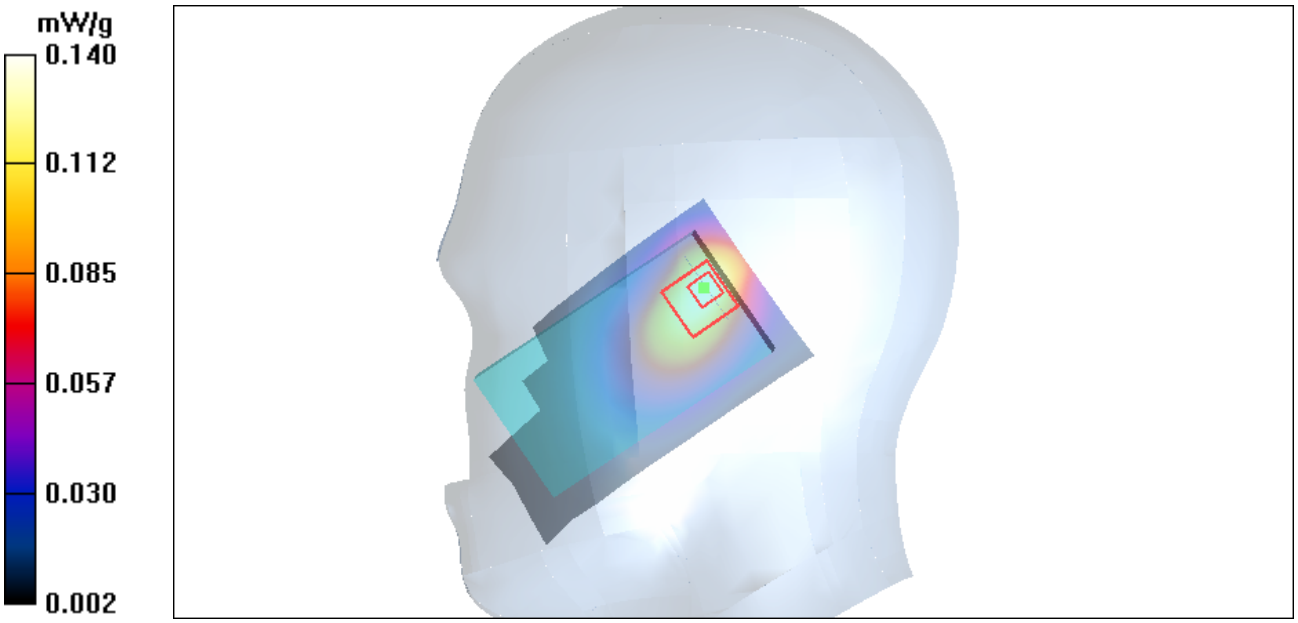


Figure 39 Right Hand Touch Cheek GSM 1900 Channel 810

GSM 1900 Right Cheek Middle

Date/Time: 7/23/2010 7:26:01 AM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.167 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.31 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.296 W/kg
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.170 mW/g

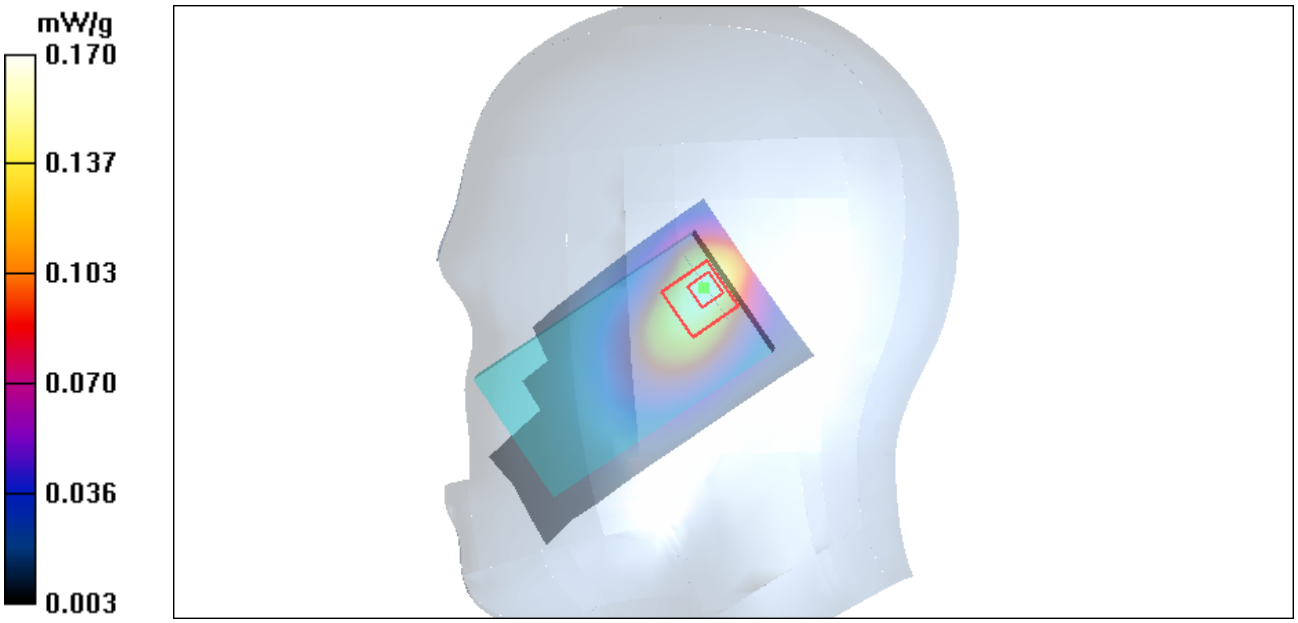


Figure 40 Right Hand Touch Cheek GSM 1900 Channel 661

GSM 1900 Right Cheek Low

Date/Time: 7/23/2010 1:36:11 PM
Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.37 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.175 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.43 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 0.295 W/kg
SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.164 mW/g

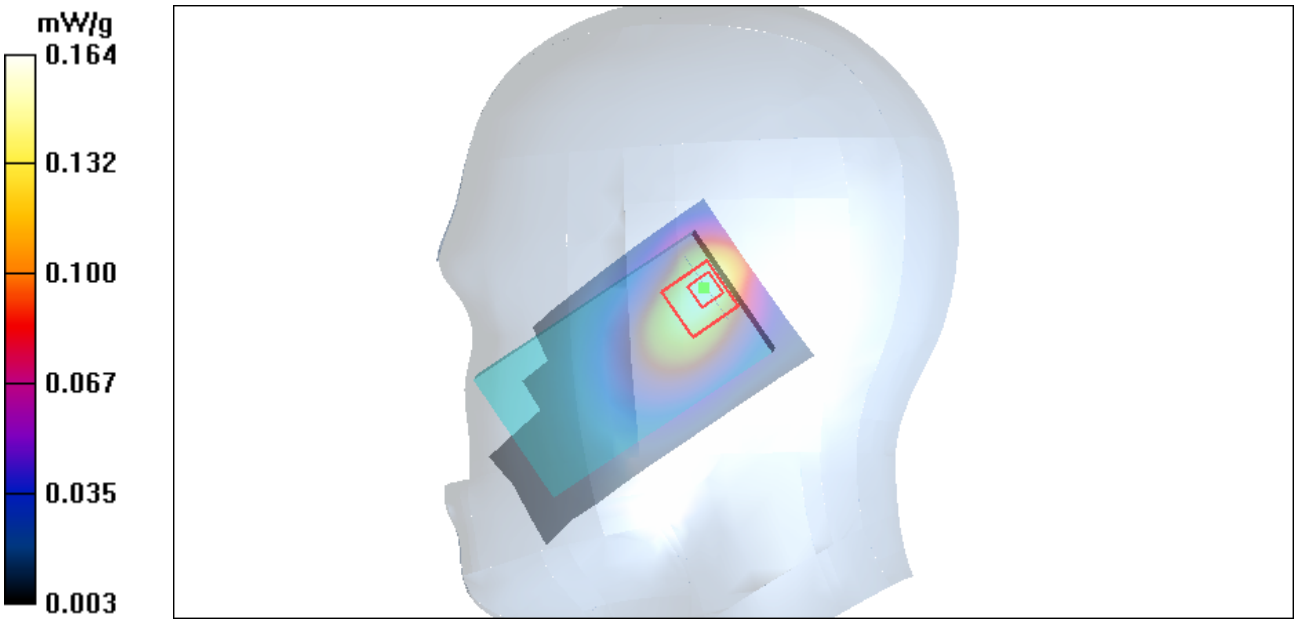


Figure 41 Right Hand Touch Cheek GSM 1900 Channel 512

GSM 1900 Right Tilt Middle

Date/Time: 7/23/2010 12:00:10 PM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.159 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.77 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.276 W/kg
SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.168 mW/g

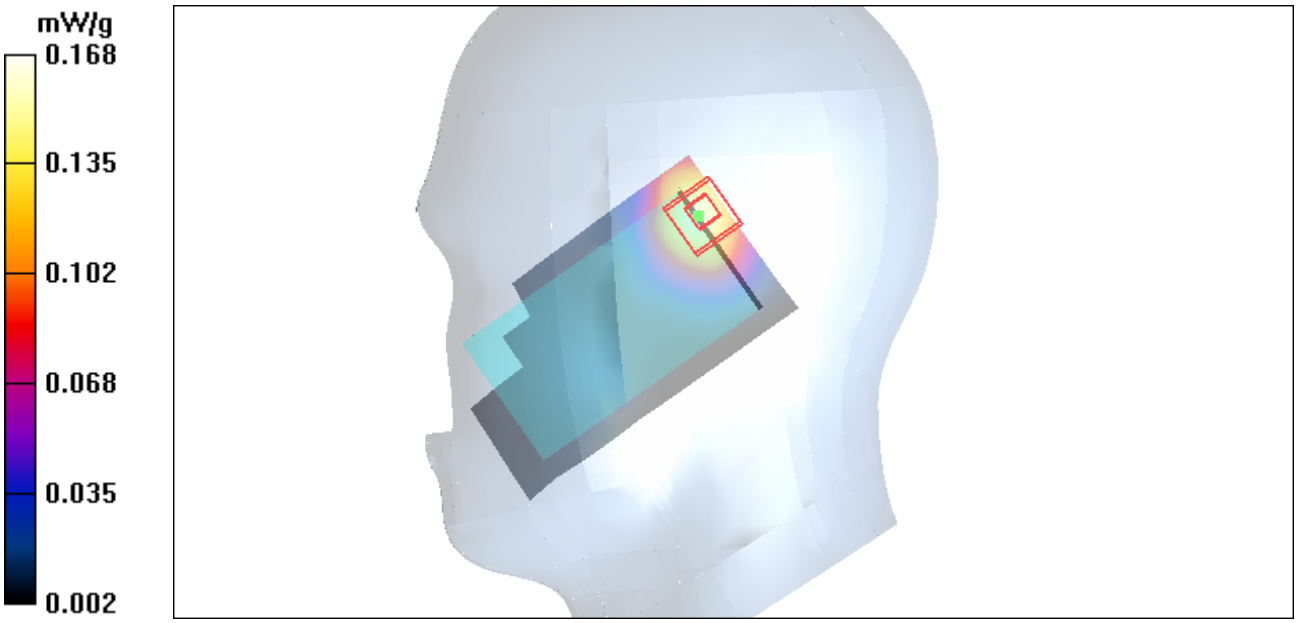


Figure 42 Right Hand Tilt 15° GSM 1900 Channel 661

GSM 1900 GPRS (2Up) Left Cheek Middle

Date/Time: 7/23/2010 6:12:34 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.125 mW/g
Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.70 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.180 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.066 mW/g
Maximum value of SAR (measured) = 0.125 mW/g
Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.70 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.204 W/kg
SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.063 mW/g
Maximum value of SAR (measured) = 0.114 mW/g

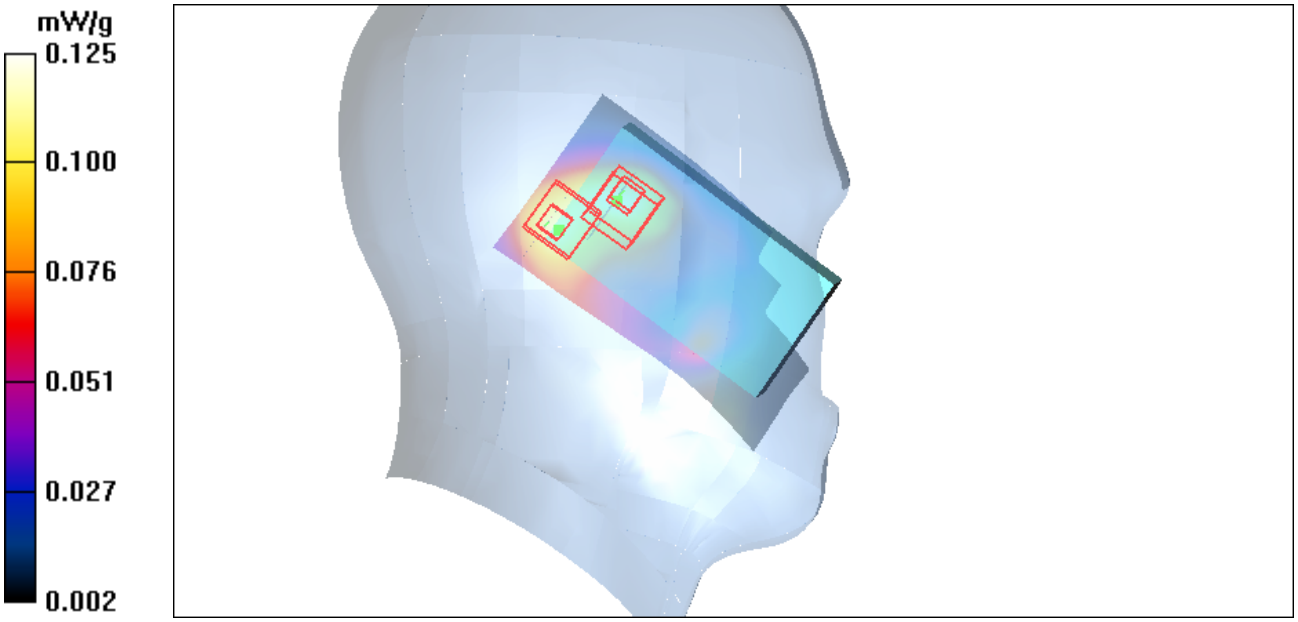


Figure 43 Left Hand Touch Cheek GSM 1900 GPRS (2Up) Channel 661

GSM 1900 GPRS (2Up) Left Tilt Middle

Date/Time: 7/23/2010 6:42:33 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.150 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.90 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.150 mW/g

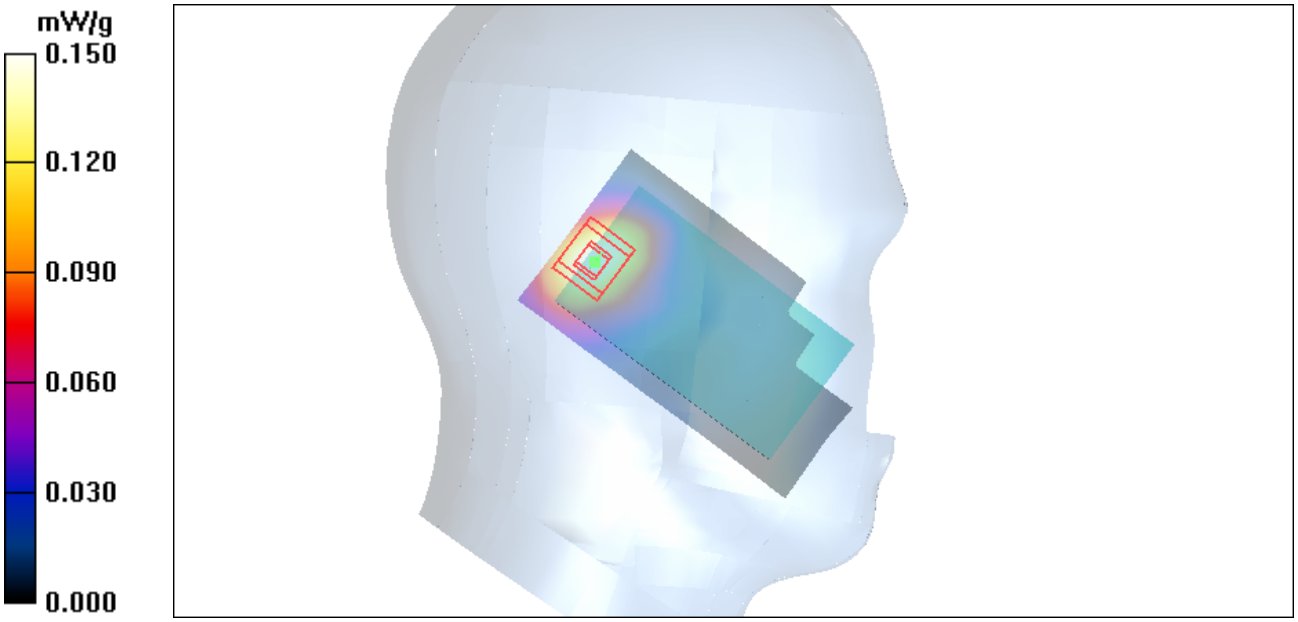


Figure 44 Left Hand Tilt 15° GSM 1900 GPRS (2Up) Channel 661

GSM 1900 GPRS (2Up) Right Cheek Middle

Date/Time: 7/23/2010 5:31:58 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.176 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.89 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.657 W/kg
SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.098 mW/g
Maximum value of SAR (measured) = 0.186 mW/g

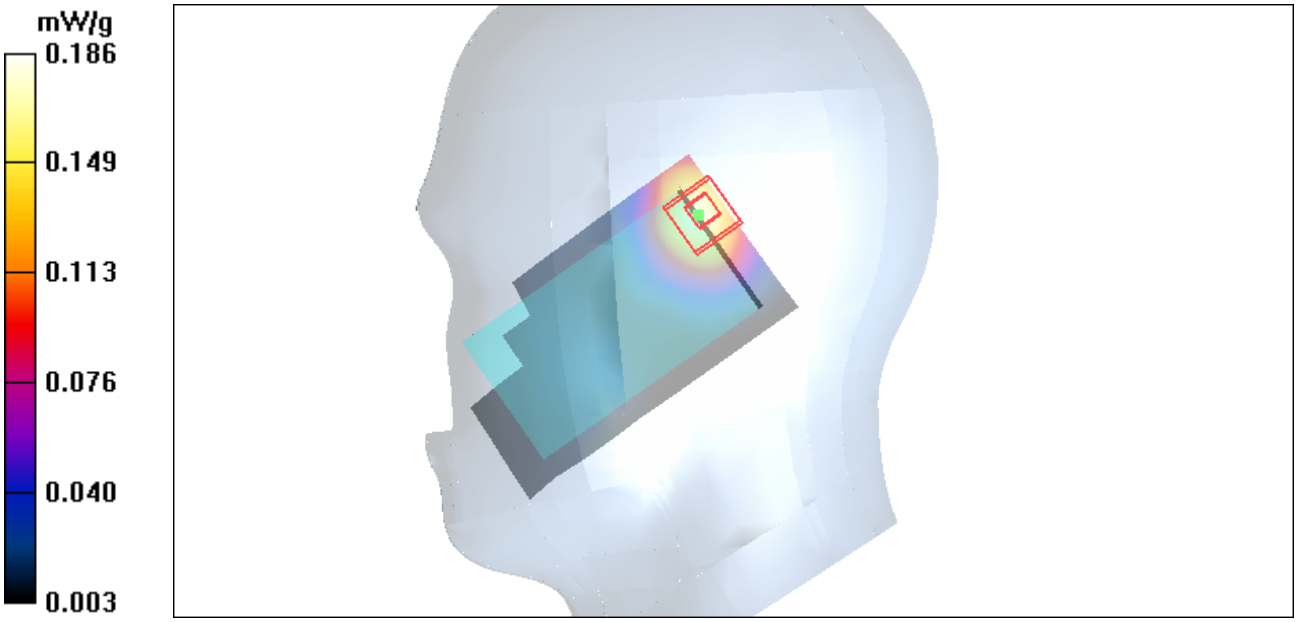


Figure 45 Right Hand Touch Cheek GSM 1900 GPRS (2Up) Channel 661

GSM 1900 GPRS (2Up) Right Tilt High

Date/Time: 7/23/2010 7:21:43 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1909.8 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1910 MHz; σ = 1.42 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.163 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.64 V/m; Power Drift = 0.090 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.179 mW/g

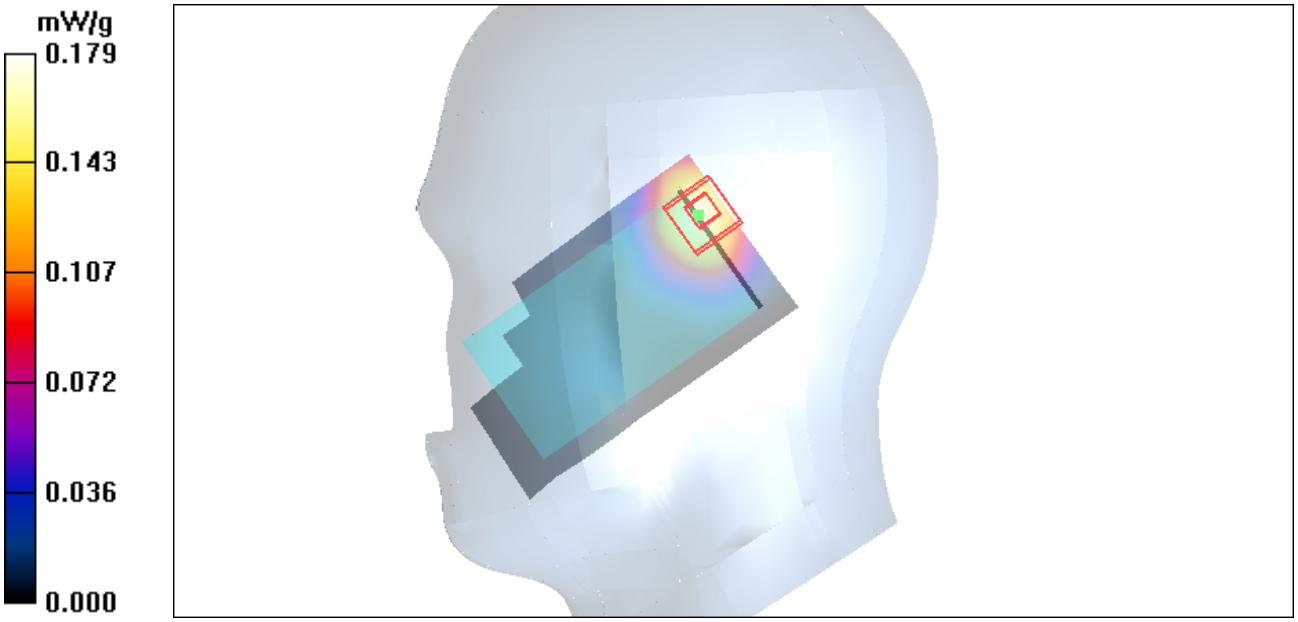


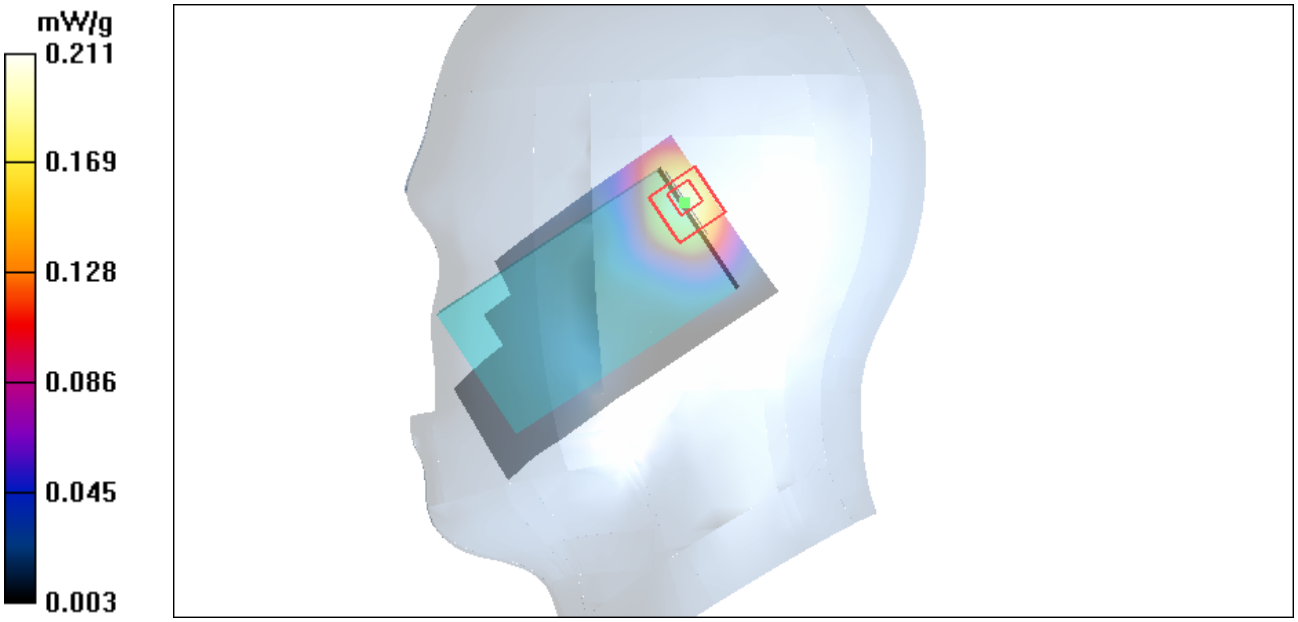
Figure 46 Right Hand Tilt 15° GSM 1900 GPRS(2Up) Channel 810

GSM 1900 GPRS (2Up) Right Tilt Middle

Date/Time: 7/23/2010 5:53:27 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.198 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.348 W/kg
SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.109 mW/g
Maximum value of SAR (measured) = 0.211 mW/g



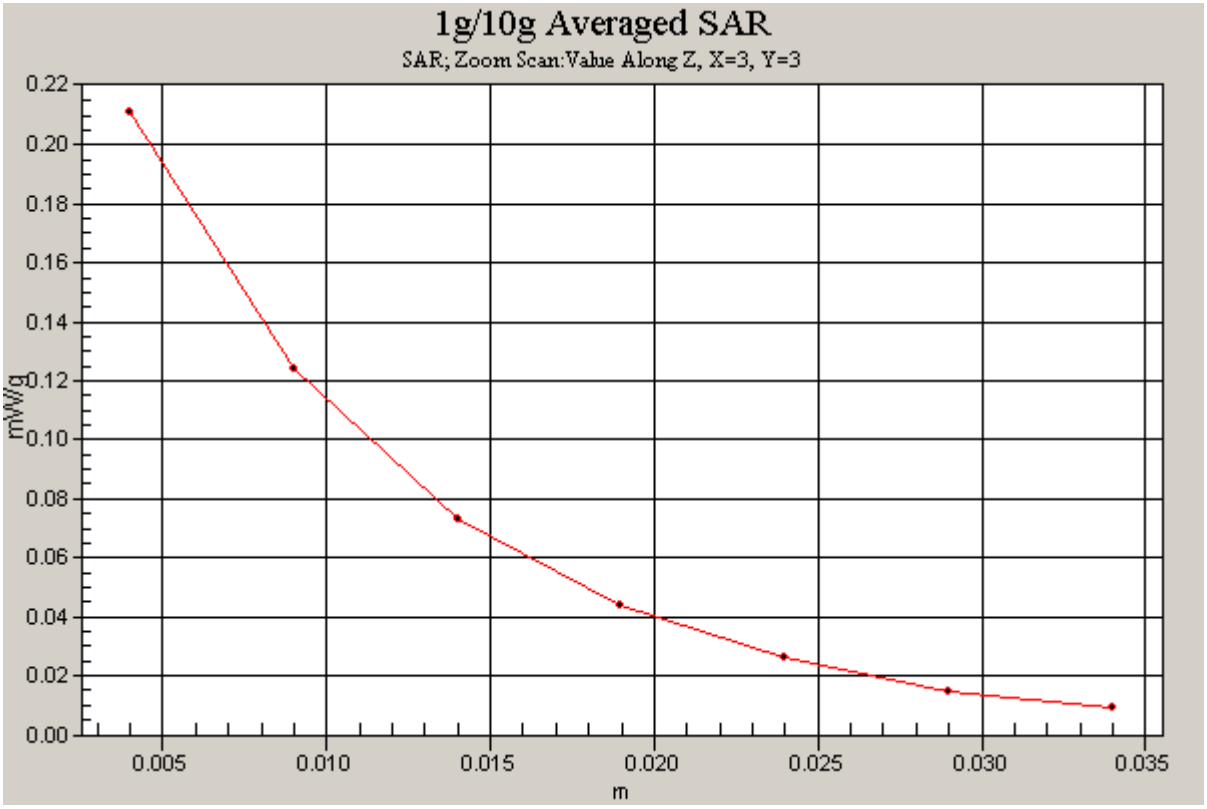


Figure 47 Right Hand Tilt 15° GSM 1900 GPRS (2Up) Channel 661

GSM 1900 GPRS (2Up) Right Tilt Low

Date/Time: 7/23/2010 7:03:40 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.37 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.209 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.70 V/m; Power Drift = 0.195 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.103 mW/g
Maximum value of SAR (measured) = 0.195 mW/g

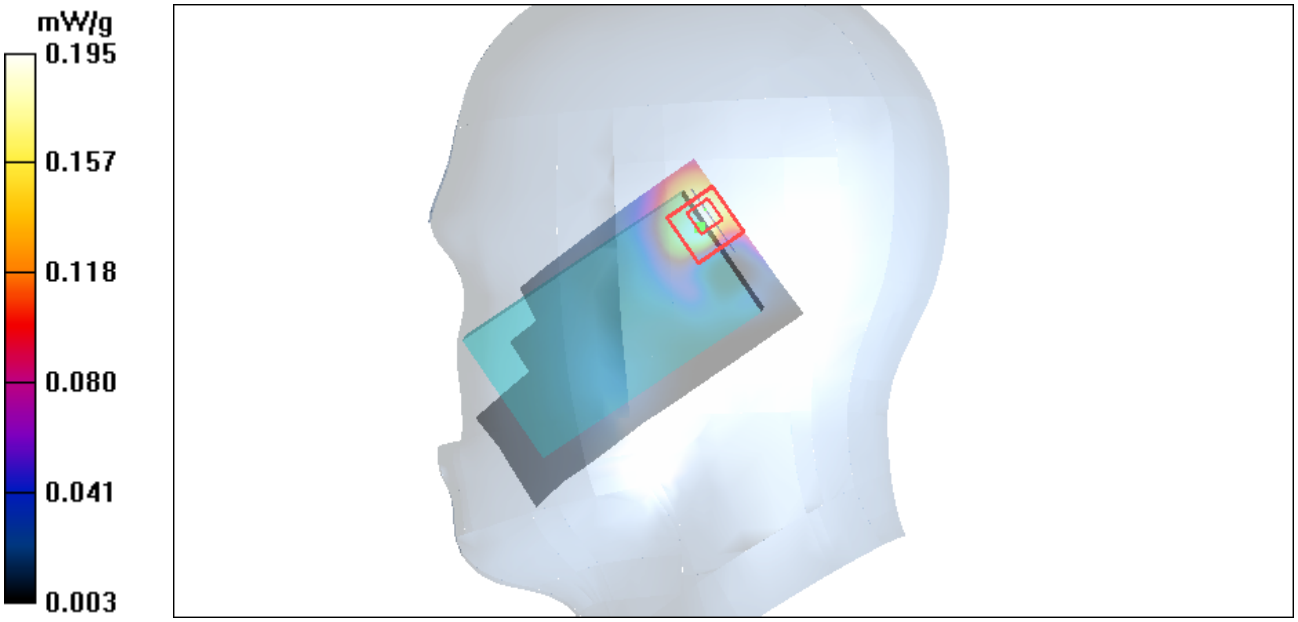


Figure 48 Right Hand Tilt 15° GSM 1900 GPRS(2Up) Channel 512

GSM 1900 Towards Ground High

Date/Time: 7/22/2010 7:13:11 PM
Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.606 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.1 V/m; Power Drift = 0.006 dB
Peak SAR (extrapolated) = 0.859 W/kg
SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.290 mW/g
Maximum value of SAR (measured) = 0.561 mW/g

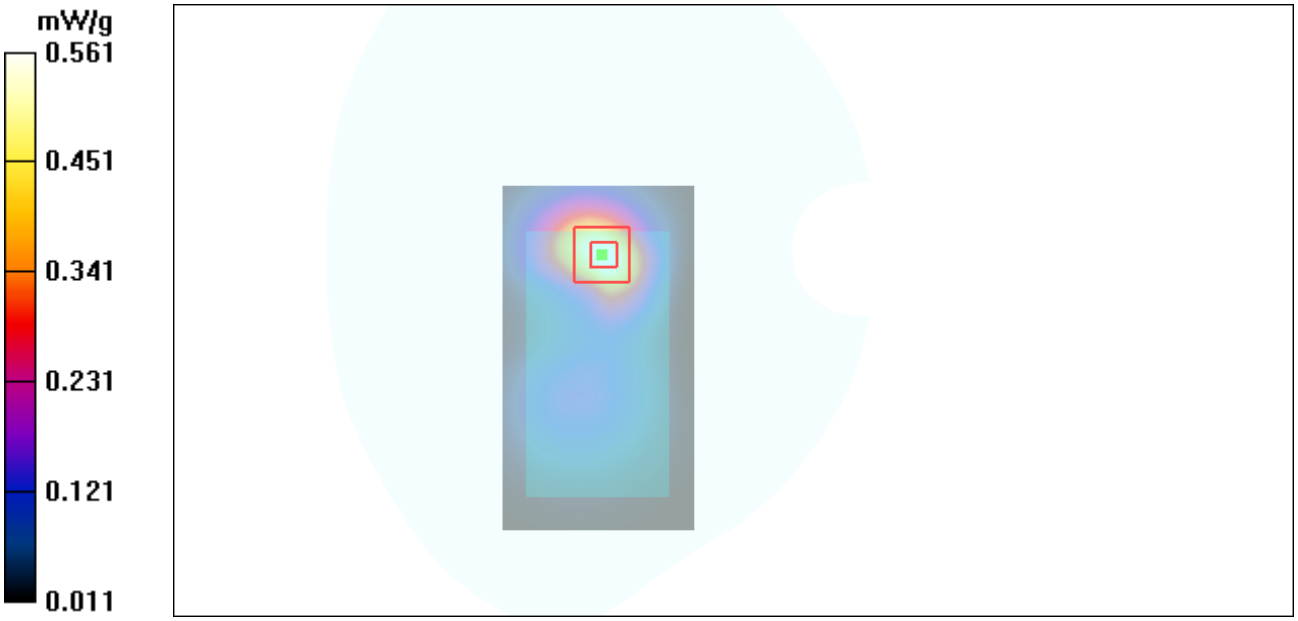


Figure 49 Body, Towards Ground, GSM 1900 Channel 810

GSM 1900 Towards Ground Middle

Date/Time: 7/22/2010 6:37:22 PM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.586 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 0.824 W/kg
SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.287 mW/g
Maximum value of SAR (measured) = 0.549 mW/g

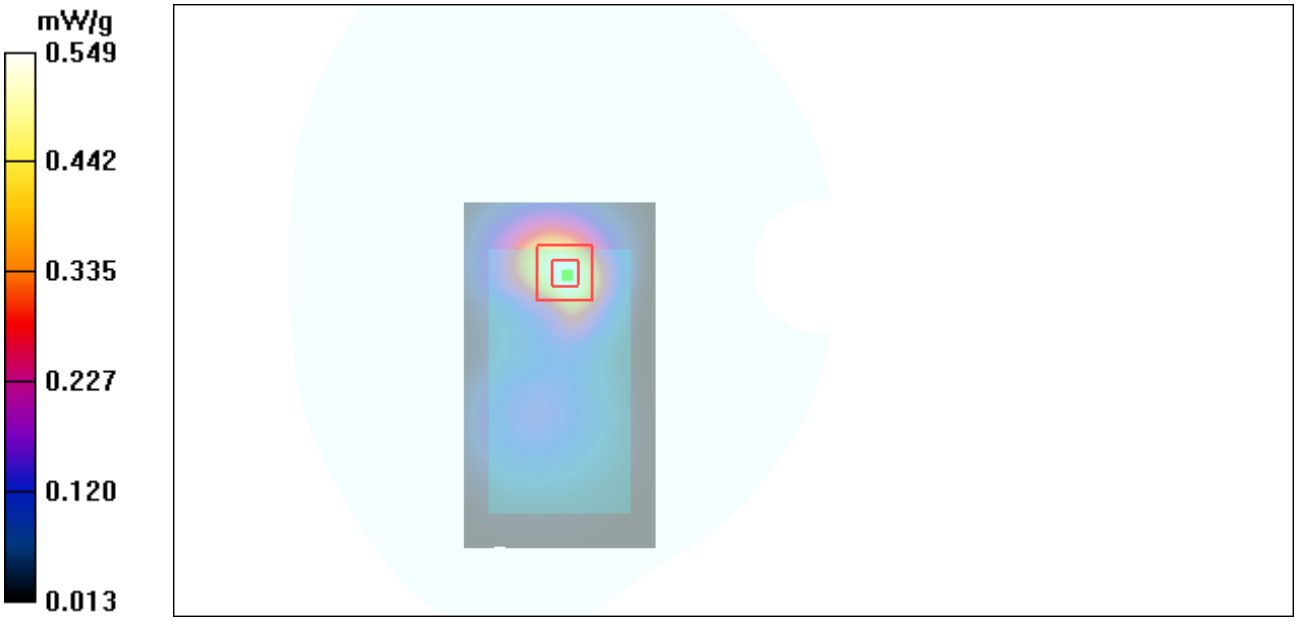


Figure 50 Body, Towards Ground, GSM 1900 Channel 661

GSM 1900 Towards Ground Low

Date/Time: 7/22/2010 6:55:20 PM
Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.51 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.487 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.2 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.661 W/kg
SAR(1 g) = 0.407 mW/g; SAR(10 g) = 0.237 mW/g
Maximum value of SAR (measured) = 0.448 mW/g

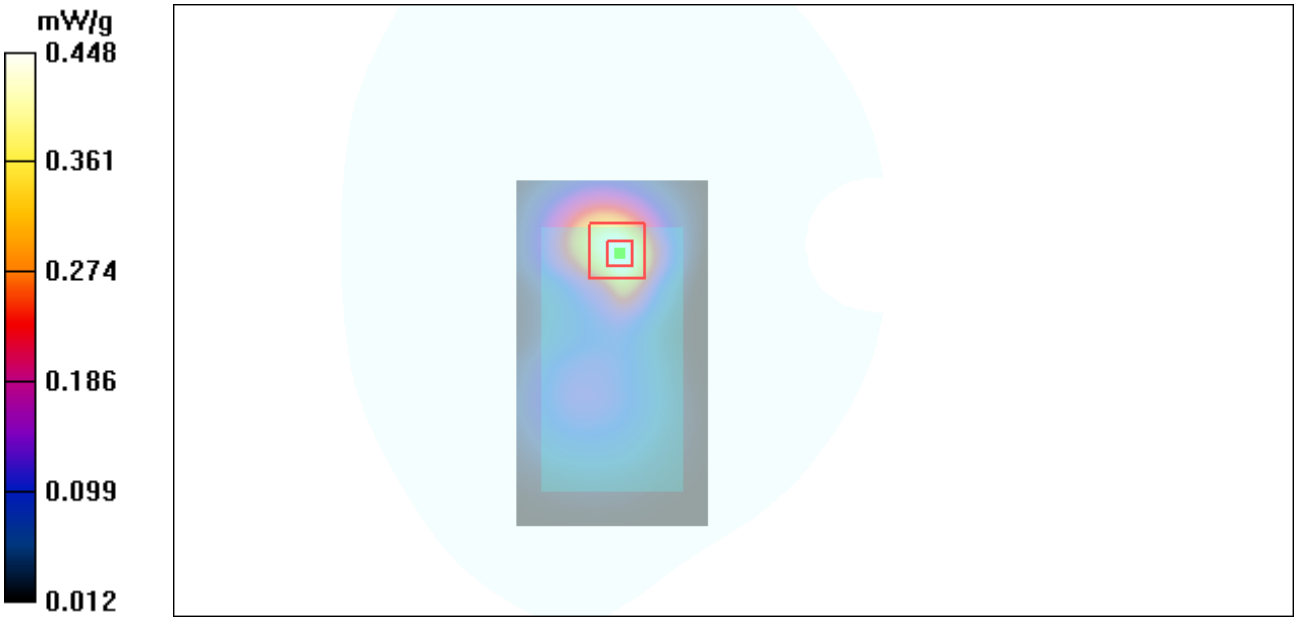


Figure 51 Body, Towards Ground, GSM 1900 Channel 512

GSM 1900 Towards Phantom Middle

Date/Time: 7/22/2010 8:58:37 PM
Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.041 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.87 V/m; Power Drift = 0.143 dB
Peak SAR (extrapolated) = 0.060 W/kg
SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.040 mW/g

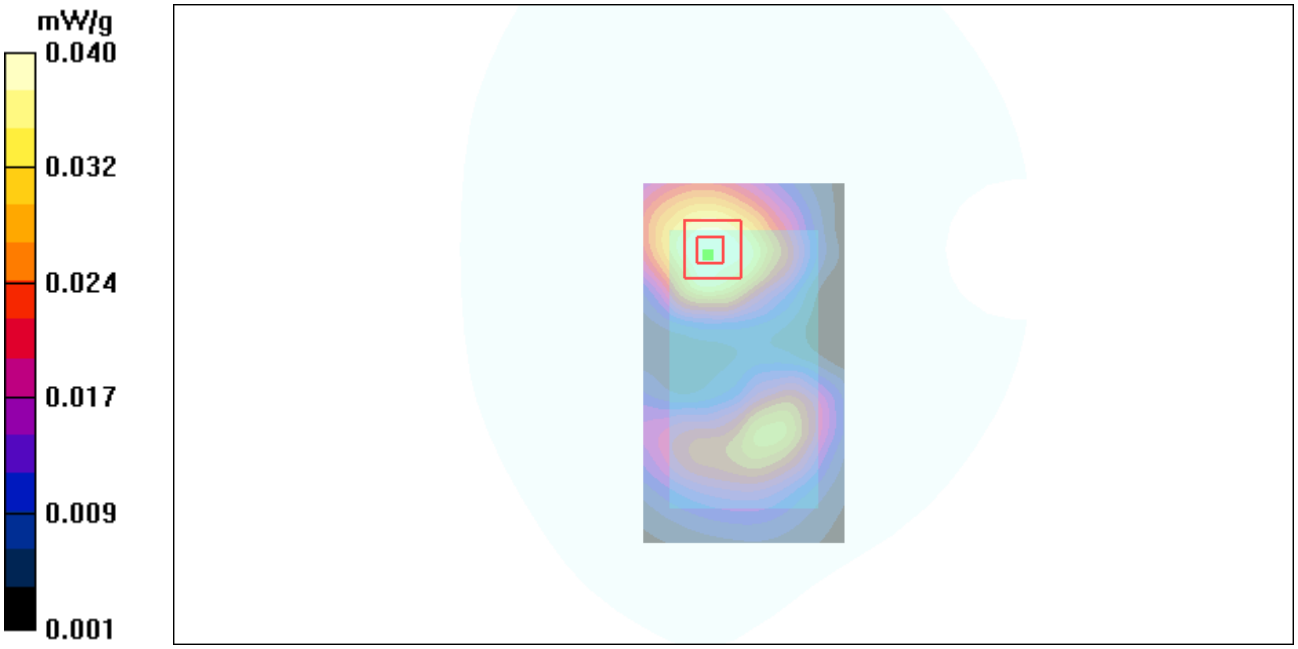


Figure 52 Body, Towards Phantom, GSM 1900 Channel 661

GSM 1900 with Earphone Towards Ground High

Date/Time: 7/22/2010 9:49:06 PM
Communication System: PCS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.695 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.0 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.984 W/kg
SAR(1 g) = 0.573 mW/g; SAR(10 g) = 0.321 mW/g
Maximum value of SAR (measured) = 0.631 mW/g

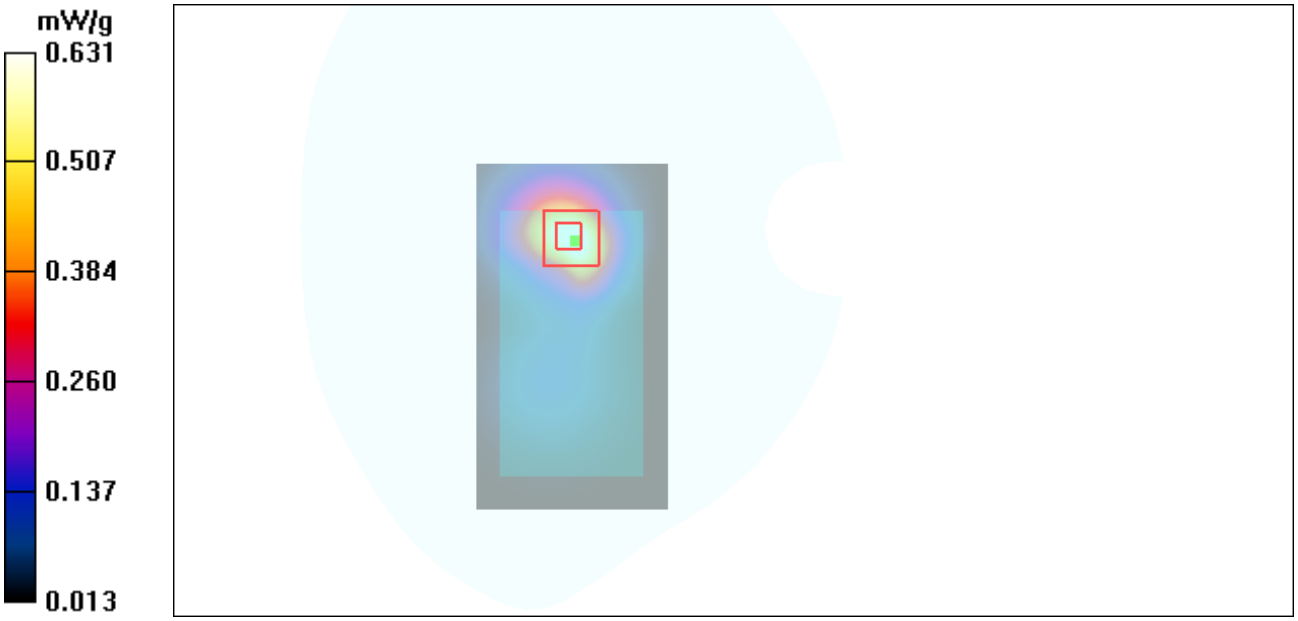


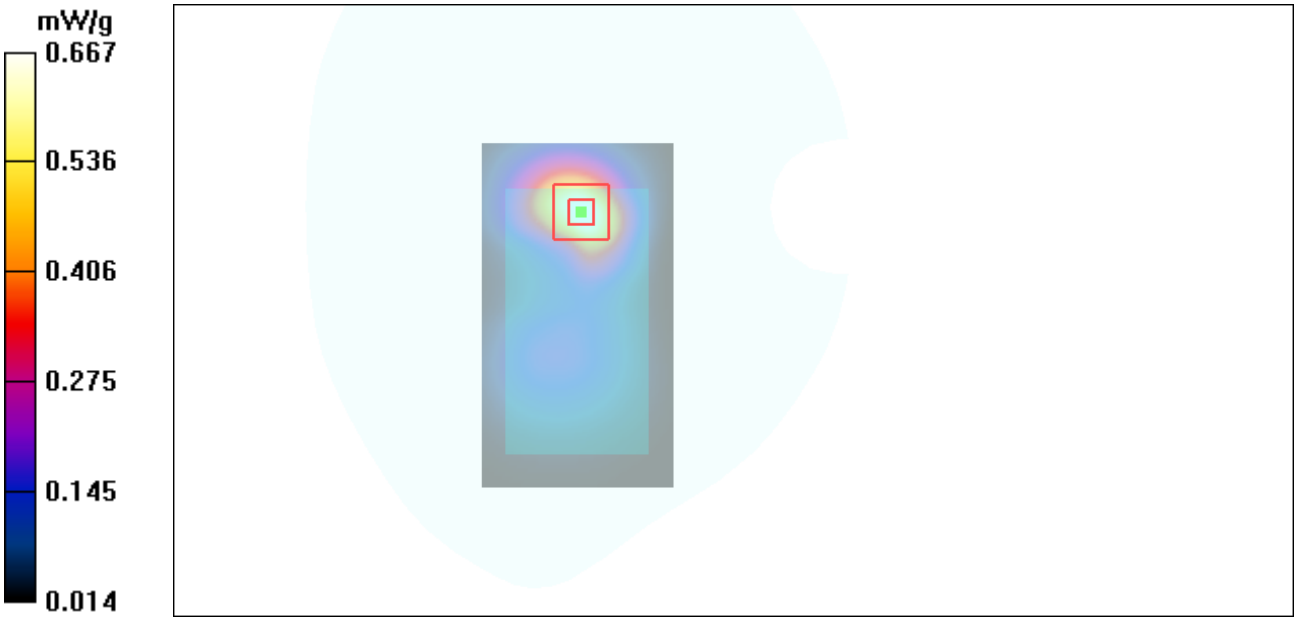
Figure 53 Body, Towards Ground, GSM 1900 Channel 810

GSM 1900 GPRS (2Up) Towards Ground High

Date/Time: 7/22/2010 7:51:35 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1909.8 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.727 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.0 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.346 mW/g
Maximum value of SAR (measured) = 0.667 mW/g



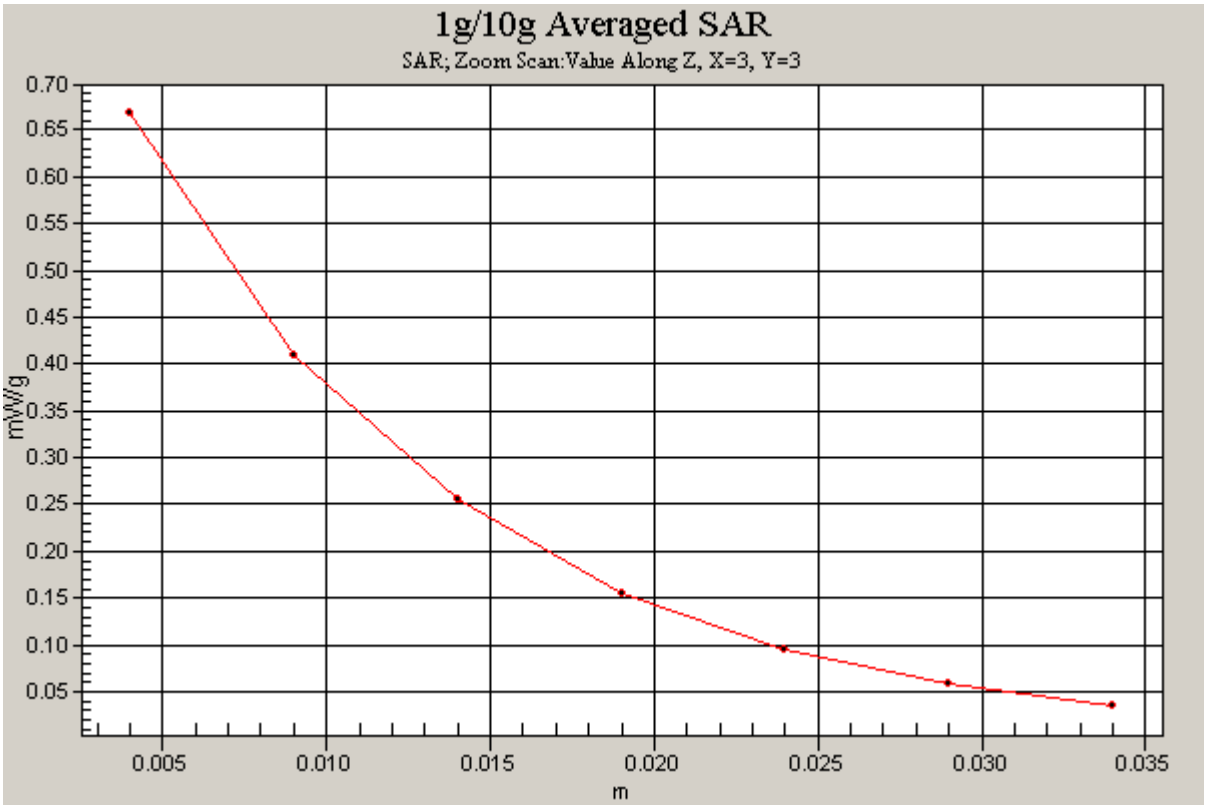


Figure 54 Body, Towards Ground, GSM 1900 GPRS (2Up) Channel 810

GSM 1900 GPRS (2Up) Towards Ground Middle

Date/Time: 7/22/2010 7:33:35 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.730 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.996 W/kg
SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.351 mW/g
Maximum value of SAR (measured) = 0.666 mW/g

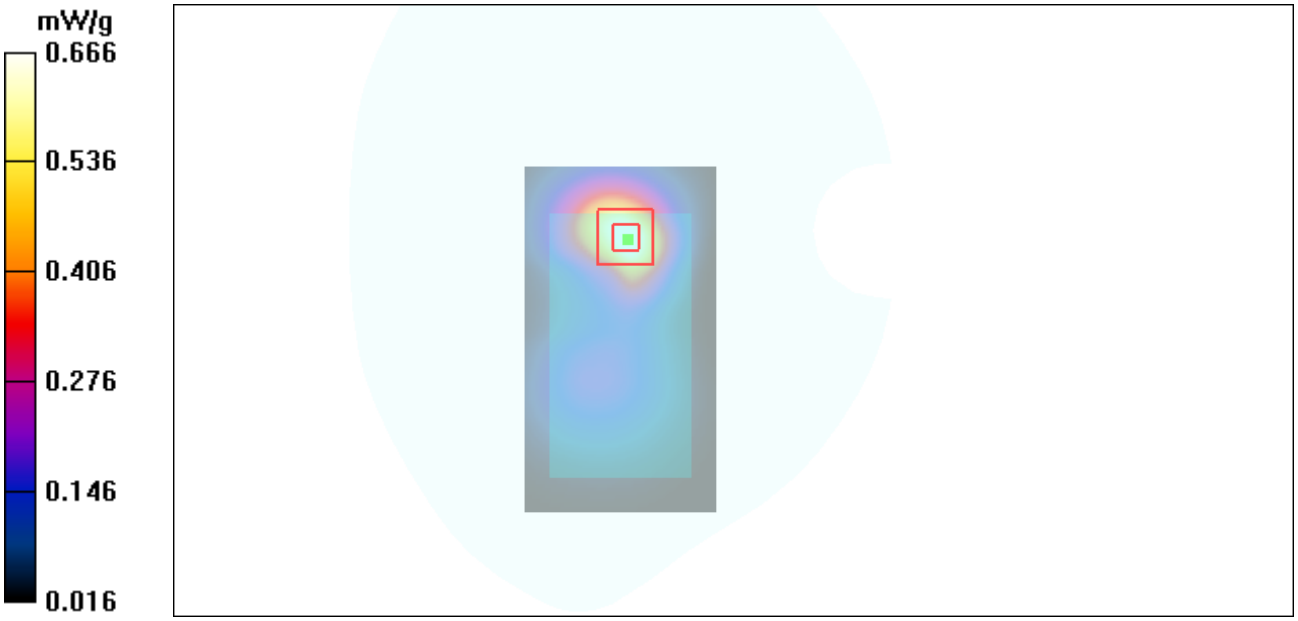


Figure 55 Body, Towards Ground, GSM 1900 GPRS (2Up) Channel 661

GSM 1900 GPRS (2Up) Towards Ground Low

Date/Time: 7/22/2010 8:09:28 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1850.2 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.51 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.588 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.285 mW/g
Maximum value of SAR (measured) = 0.533 mW/g

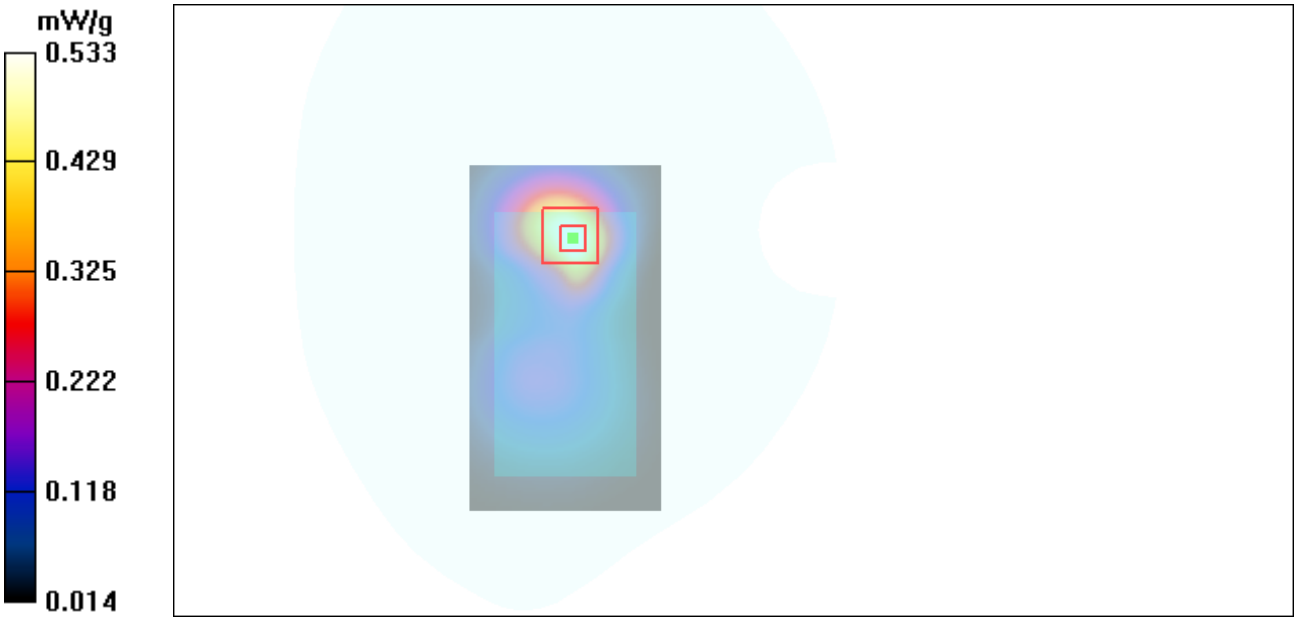


Figure 56 Body, Towards Ground, GSM 1900 GPRS (2Up) Channel 512

GSM 1900 GPRS (2Up) Towards Phantom Middle

Date/Time: 7/22/2010 9:17:52 PM
Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.050 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.43 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.086 W/kg
SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.029 mW/g
Maximum value of SAR (measured) = 0.050 mW/g

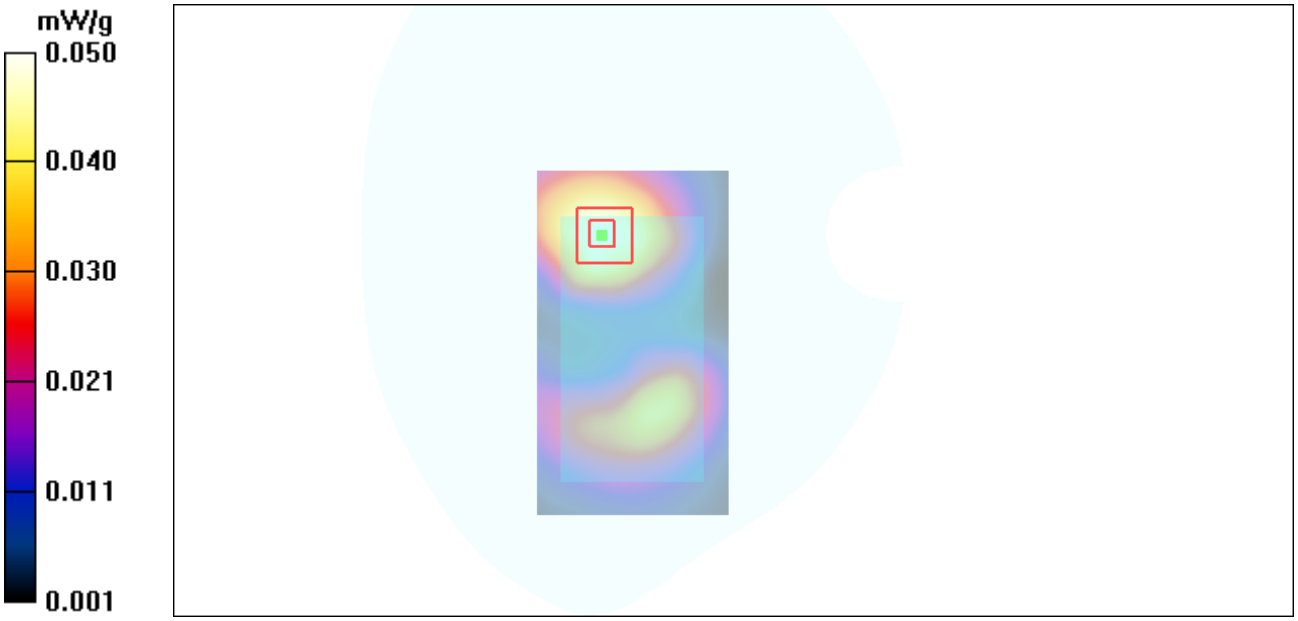


Figure 57 Body, Towards Phantom, GSM 1900 GPRS (2Up) Channel 661

GSM 1900 EGPRS Towards Ground High

Date/Time: 7/22/2010 10:28:50 PM
Communication System: PCS 1900+EGPRS(2Up); Frequency: 1909.8 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.728 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = -0.066 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.344 mW/g
Maximum value of SAR (measured) = 0.674 mW/g

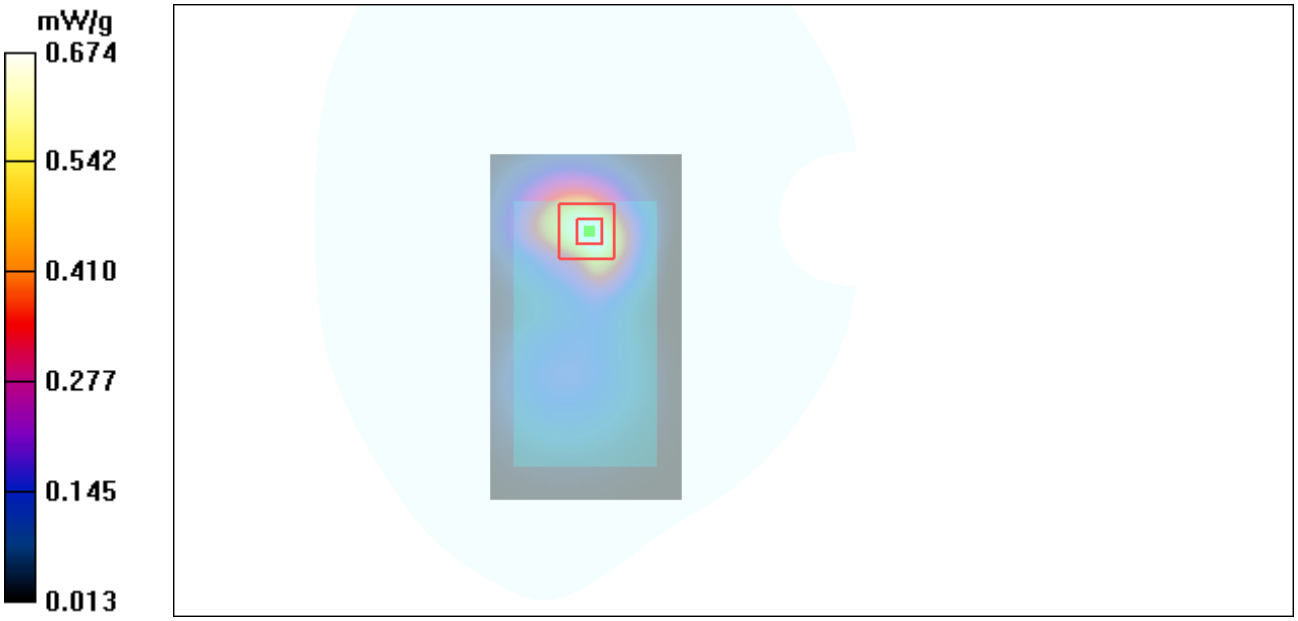


Figure 58 Body, Towards Ground, GSM 1900 EGPRS Channel 810

WCDMA Band II Left Cheek Middle

Date/Time: 7/20/2010 1:05:19 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.197 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 0.256 W/kg
SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.100 mW/g
Maximum value of SAR (measured) = 0.185 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.056 dB
Peak SAR (extrapolated) = 0.242 W/kg
SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.162 mW/g

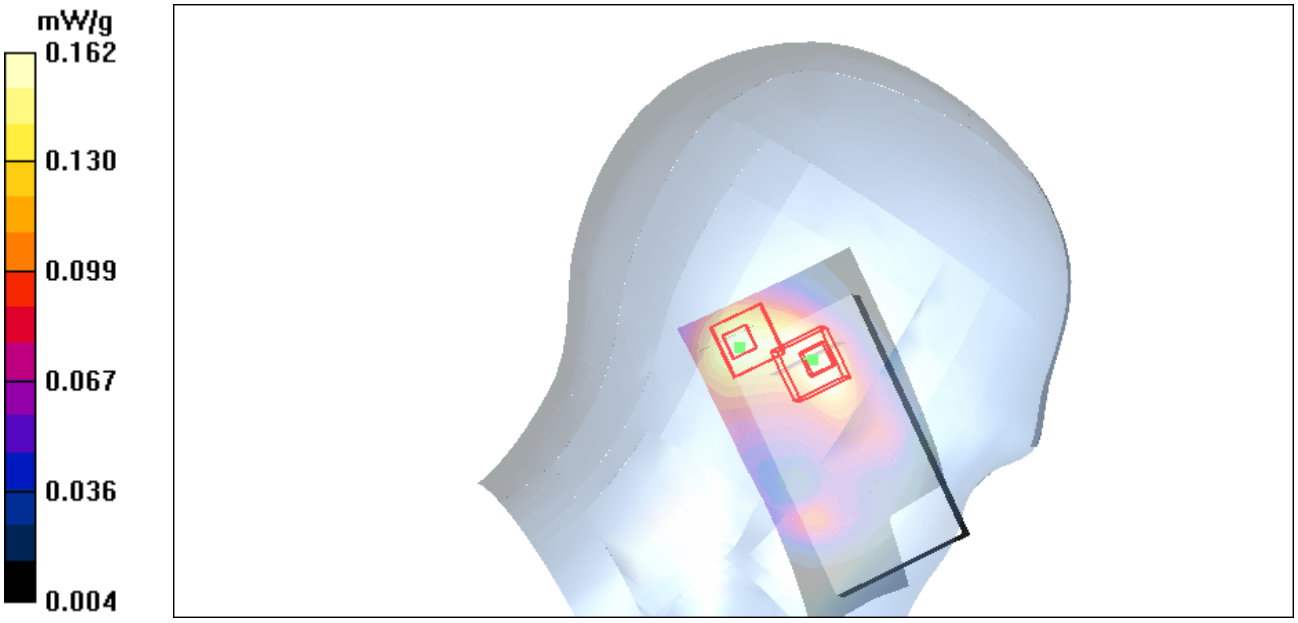


Figure 59 Left Hand Touch Cheek WCDMA Band II Channel 9400

WCDMA Band II Left Tilt Middle

Date/Time: 7/20/2010 1:35:43 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.225 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = 0.097 dB
Peak SAR (extrapolated) = 0.327 W/kg
SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.124 mW/g
Maximum value of SAR (measured) = 0.224 mW/g

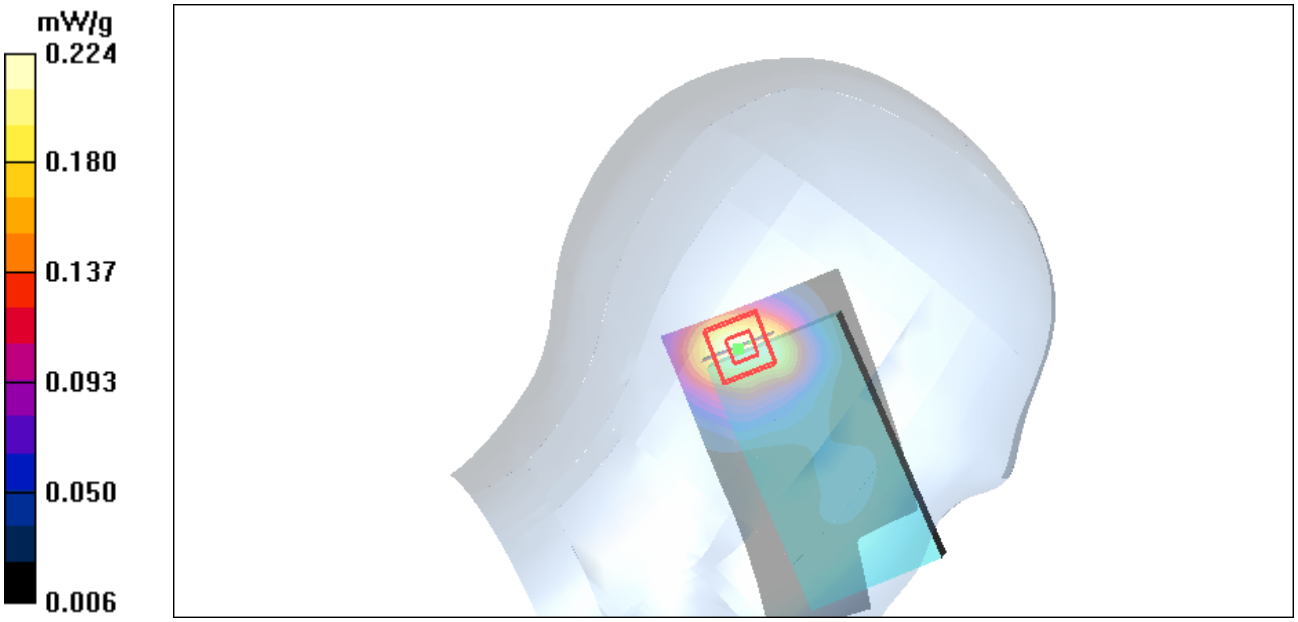


Figure 60 Left Hand Tilt 15° WCDMA Band II Channel 9400

WCDMA Band II Right Cheek Middle

Date/Time: 7/20/2010 1:58:43 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.279 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 0.485 W/kg
SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.148 mW/g
Maximum value of SAR (measured) = 0.283 mW/g

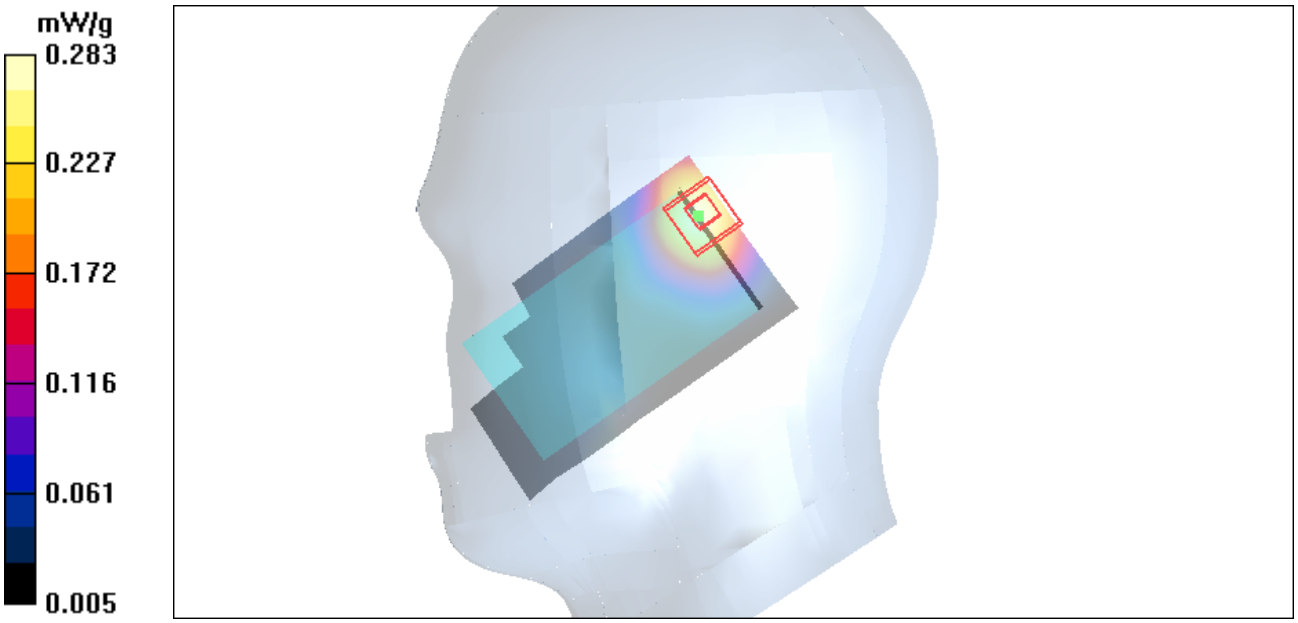


Figure 61 Right Hand Touch Cheek WCDMA Band II Channel 9400

WCDMA Band II Right Tilt High

Date/Time: 7/20/2010 4:04:24 AM
Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.43 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.287 mW/g

Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.8 V/m; Power Drift = 0.043 dB
Peak SAR (extrapolated) = 0.475 W/kg
SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.152 mW/g
Maximum value of SAR (measured) = 0.294 mW/g

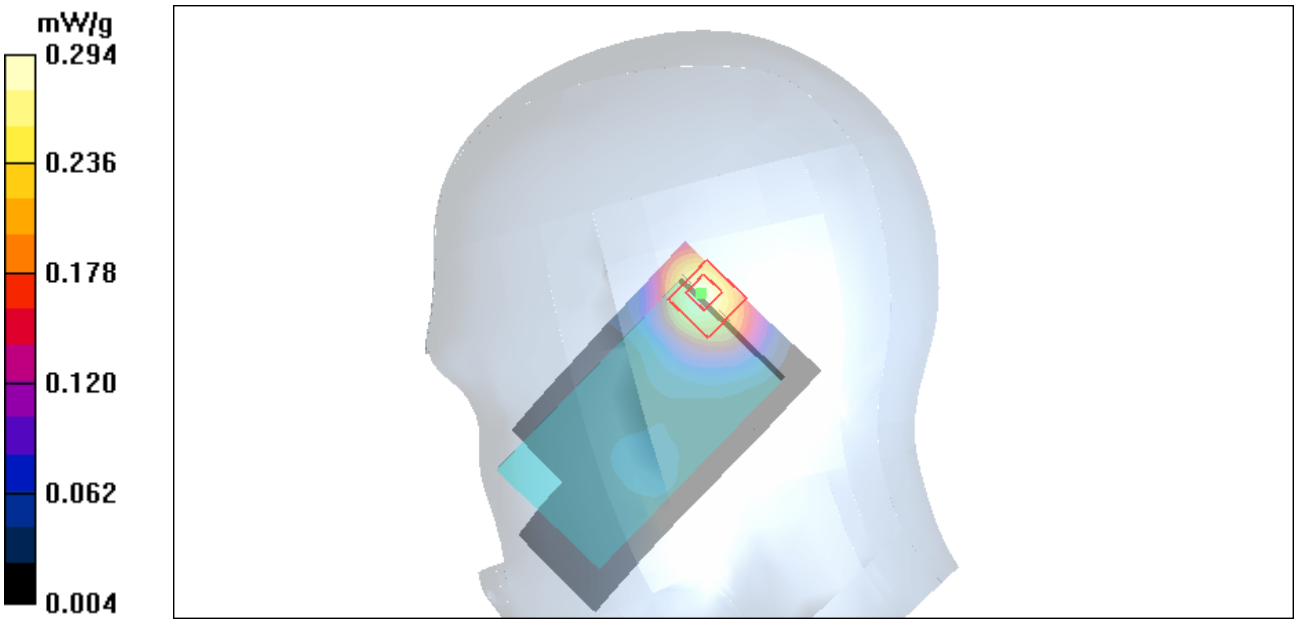


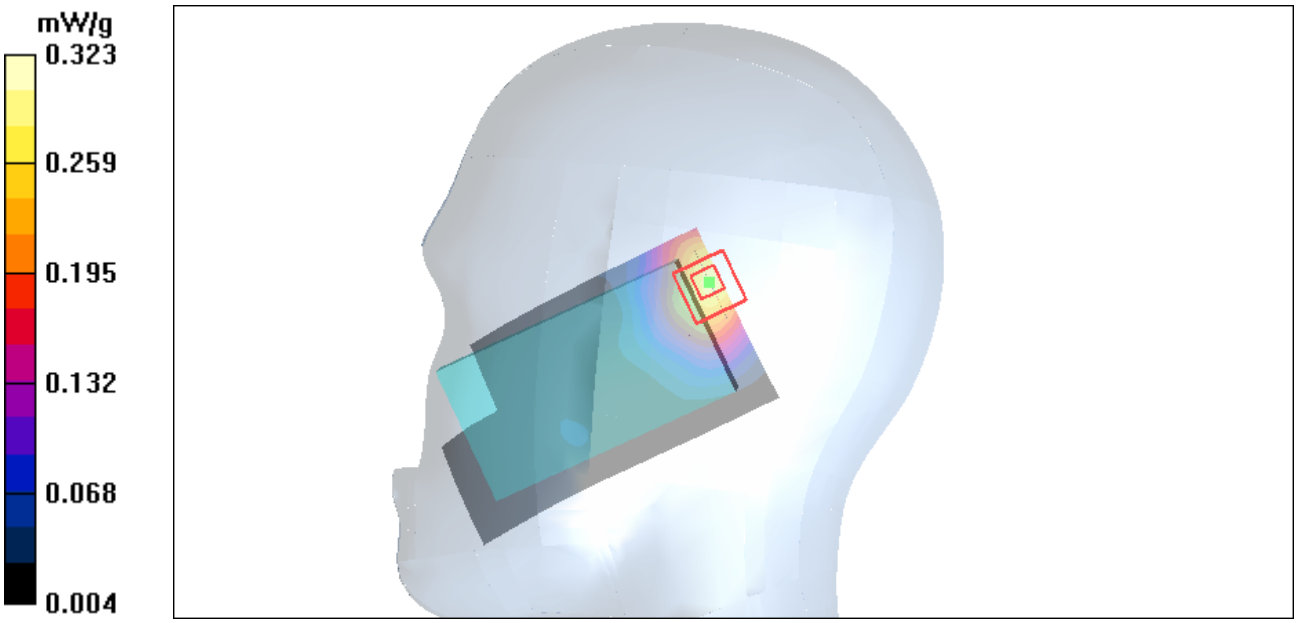
Figure 62 Right Hand Tilt 15° WCDMA Band II Channel 9538

WCDMA Band II Right Tilt Middle

Date/Time: 7/20/2010 2:59:06 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.41 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.289 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 0.522 W/kg
SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.163 mW/g
Maximum value of SAR (measured) = 0.323 mW/g



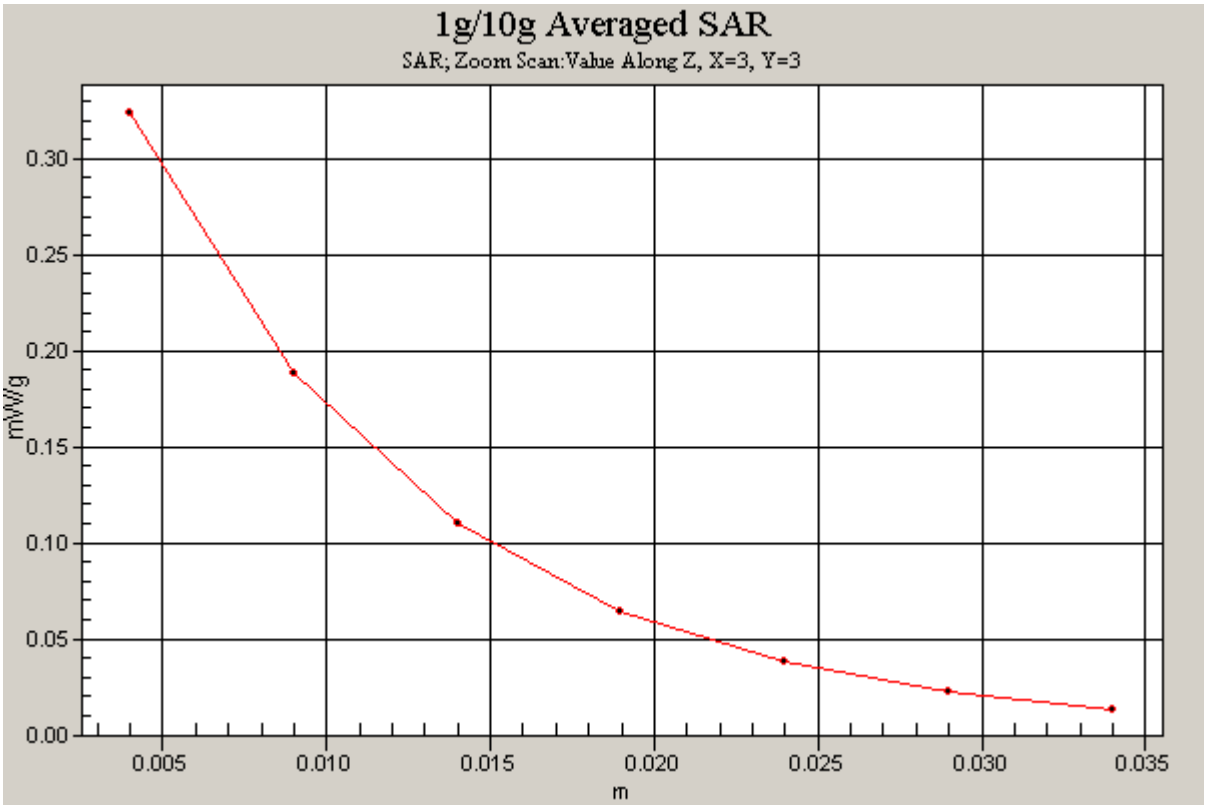


Figure 63 Right Hand Tilt 15° WCDMA Band II Channel 9400

WCDMA Band II Right Tilt Low

Date/Time: 7/20/2010 3:45:22 AM
Communication System: WCDMA Band II; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.39 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.77, 7.77, 7.77); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.266 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = 0.074 dB
Peak SAR (extrapolated) = 0.453 W/kg
SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.145 mW/g
Maximum value of SAR (measured) = 0.282 mW/g

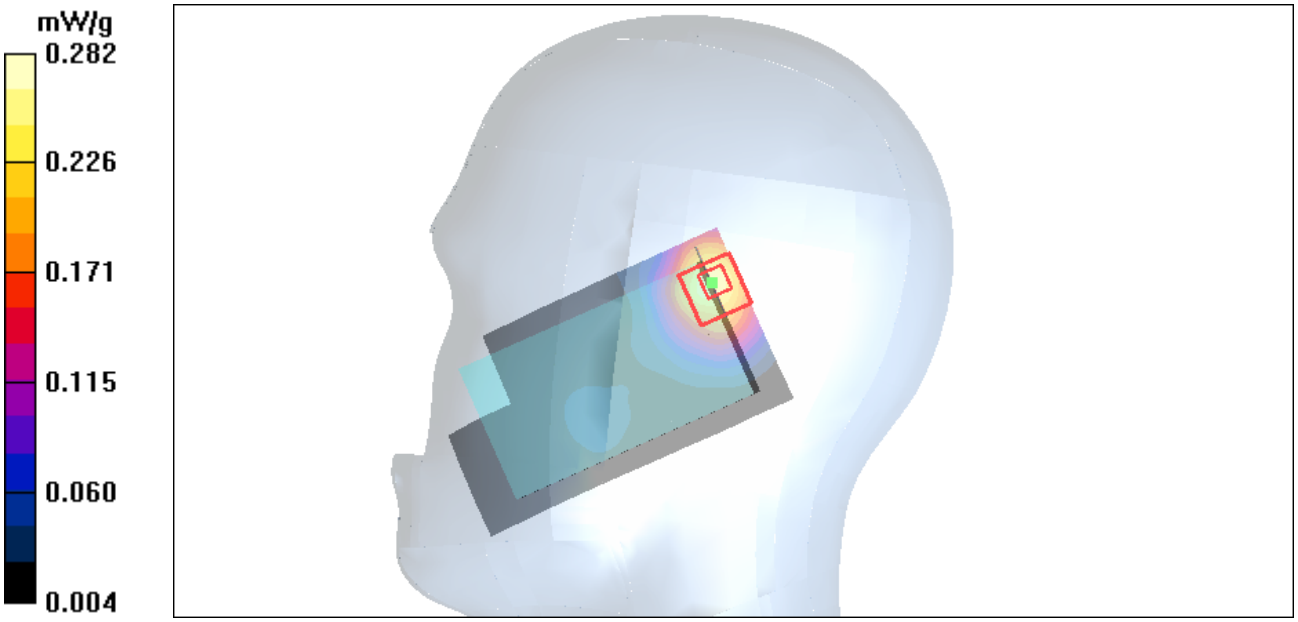


Figure 64 Right Hand Tilt 15° WCDMA Band II Channel 9262

WCDMA Band II Towards Ground High

Date/Time: 7/17/2010 12:44:59 AM
Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.57 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 1.31 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.2 V/m; Power Drift = 0.076 dB
Peak SAR (extrapolated) = 1.85 W/kg
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.633 mW/g
Maximum value of SAR (measured) = 1.22 mW/g

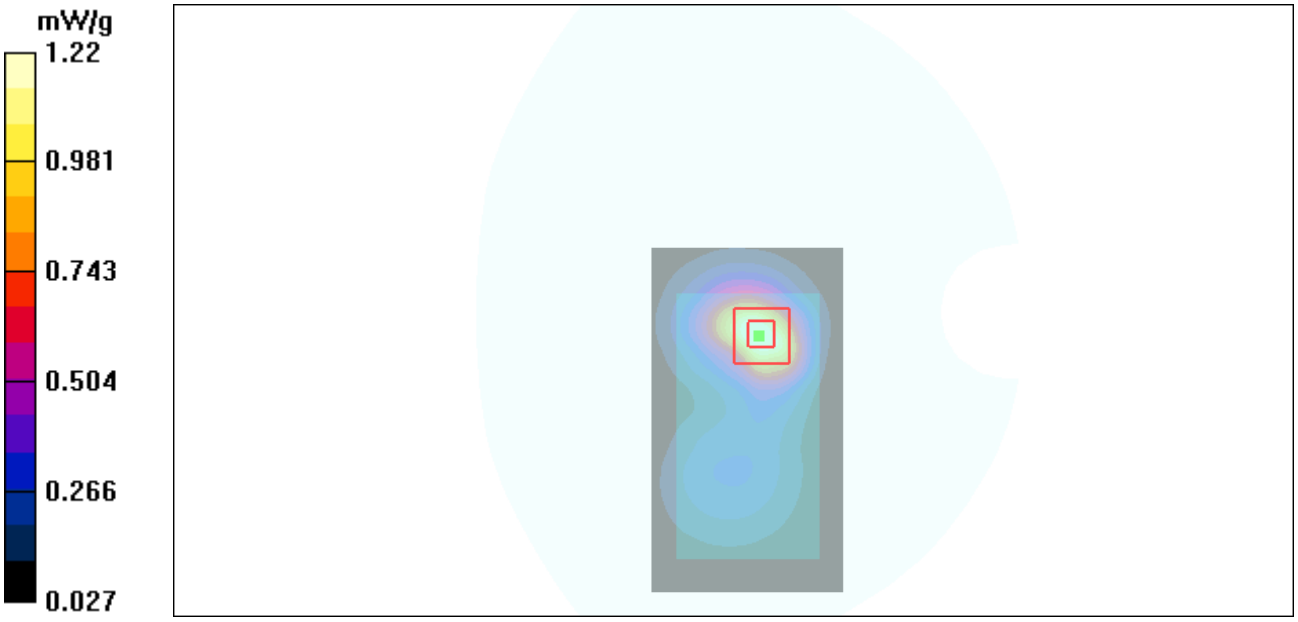


Figure 65 Body, Towards Ground, WCDMA Band II Channel 9538

WCDMA Band II Towards Ground Middle

Date/Time: 7/17/2010 12:25:05 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 1.27 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.9 V/m; Power Drift = 0.151 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.617 mW/g
Maximum value of SAR (measured) = 1.20 mW/g

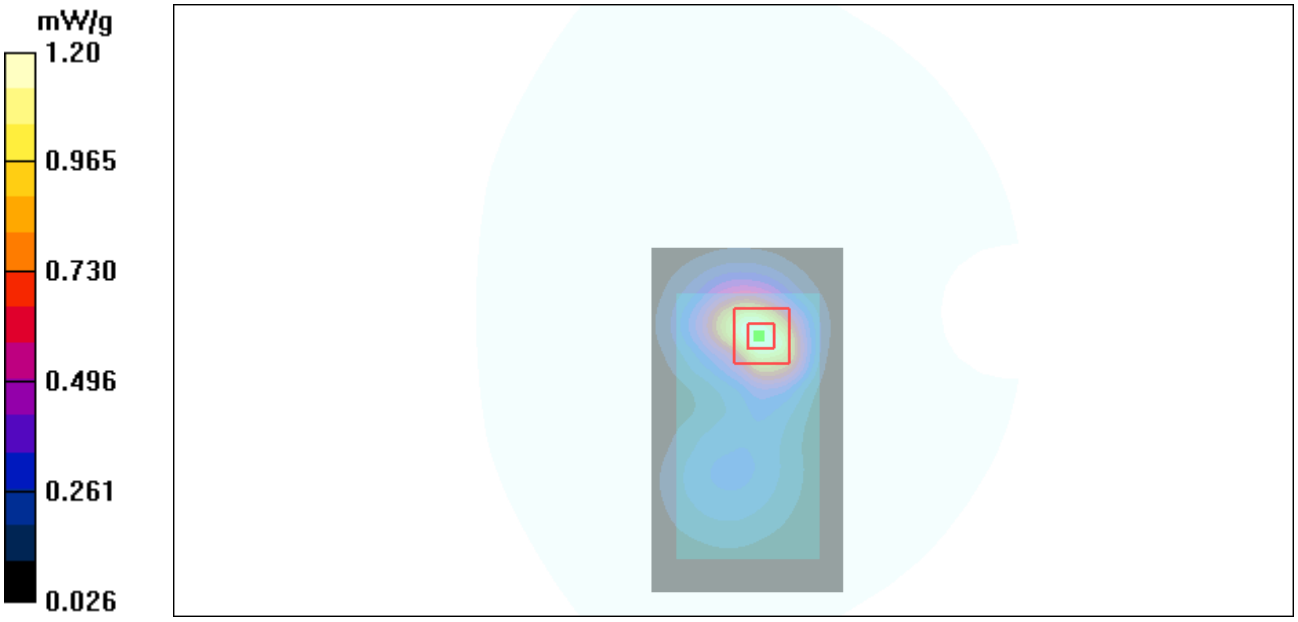


Figure 66 Body, Towards Ground, WCDMA Band II Channel 9400

WCDMA Band II Towards Ground Low

Date/Time: 7/17/2010 1:03:27 AM

Communication System: WCDMA Band II; Frequency: 1852.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.51 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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) = 0.937 mW/g

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

Reference Value = 21.8 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.779 mW/g; SAR(10 g) = 0.458 mW/g

Maximum value of SAR (measured) = 0.841 mW/g

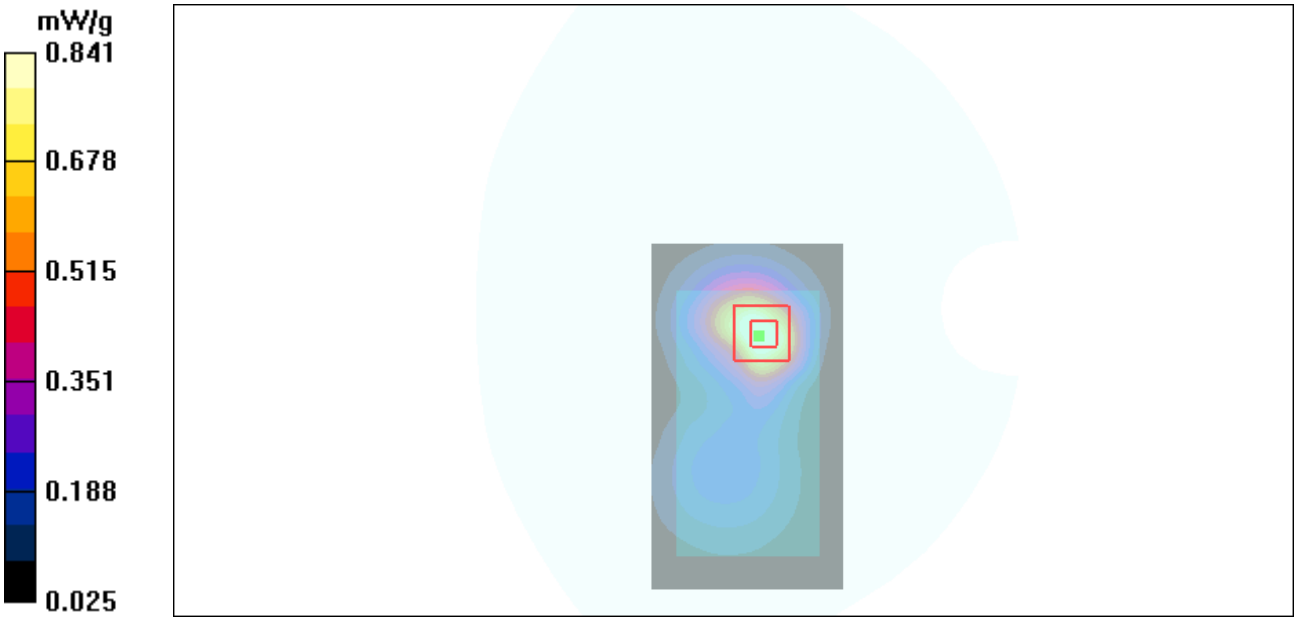


Figure 67 Body, Towards Ground, WCDMA Band II Channel 9262

WCDMA Band II Towards Phantom Middle

Date/Time: 7/17/2010 1:24:18 AM
Communication System: WCDMA Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.080 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.91 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.113 W/kg
SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.047 mW/g
Maximum value of SAR (measured) = 0.078 mW/g

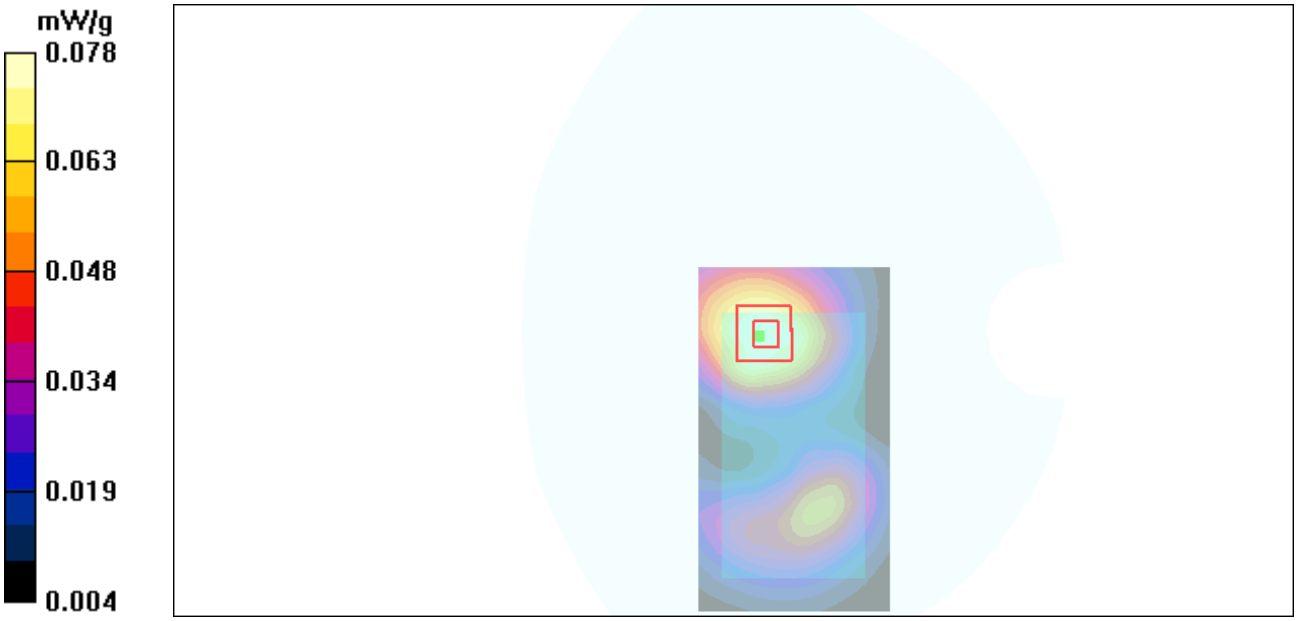


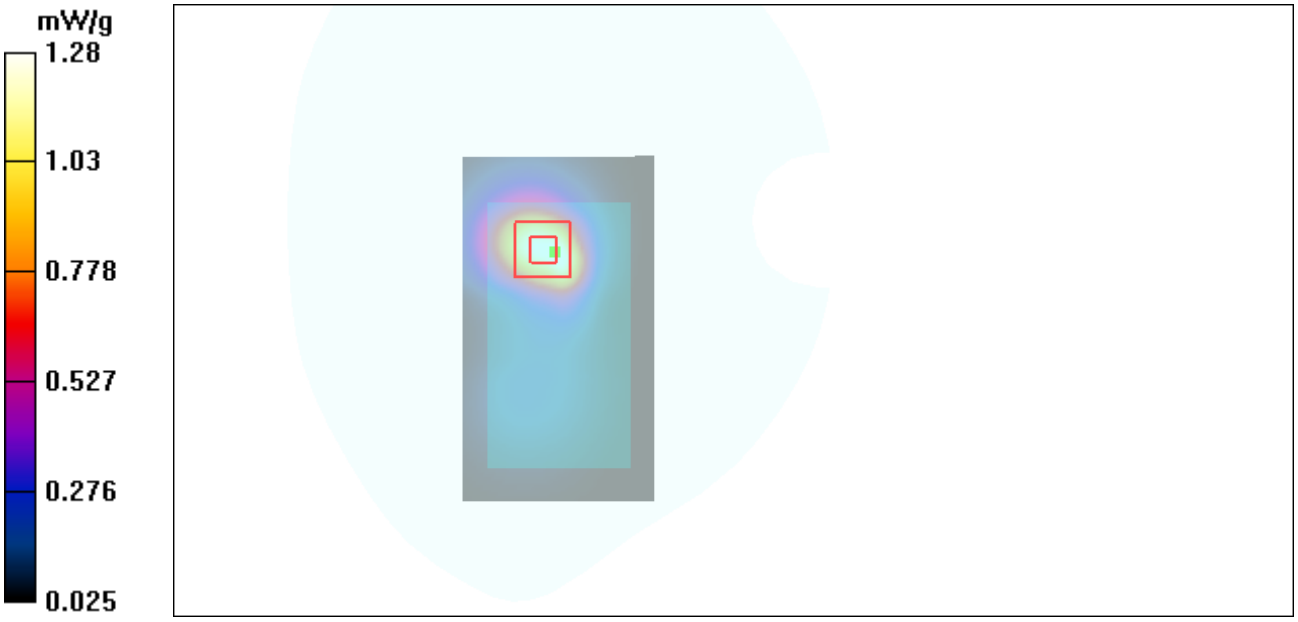
Figure 68 Body, Towards Phantom, WCDMA Band II Channel 9400

WCDMA Band II with Earphone Towards Ground High

Date/Time: 7/17/2010 10:12:16 PM
Communication System: WCDMA Band II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.57 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 1.37 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.667 mW/g
Maximum value of SAR (measured) = 1.28 mW/g



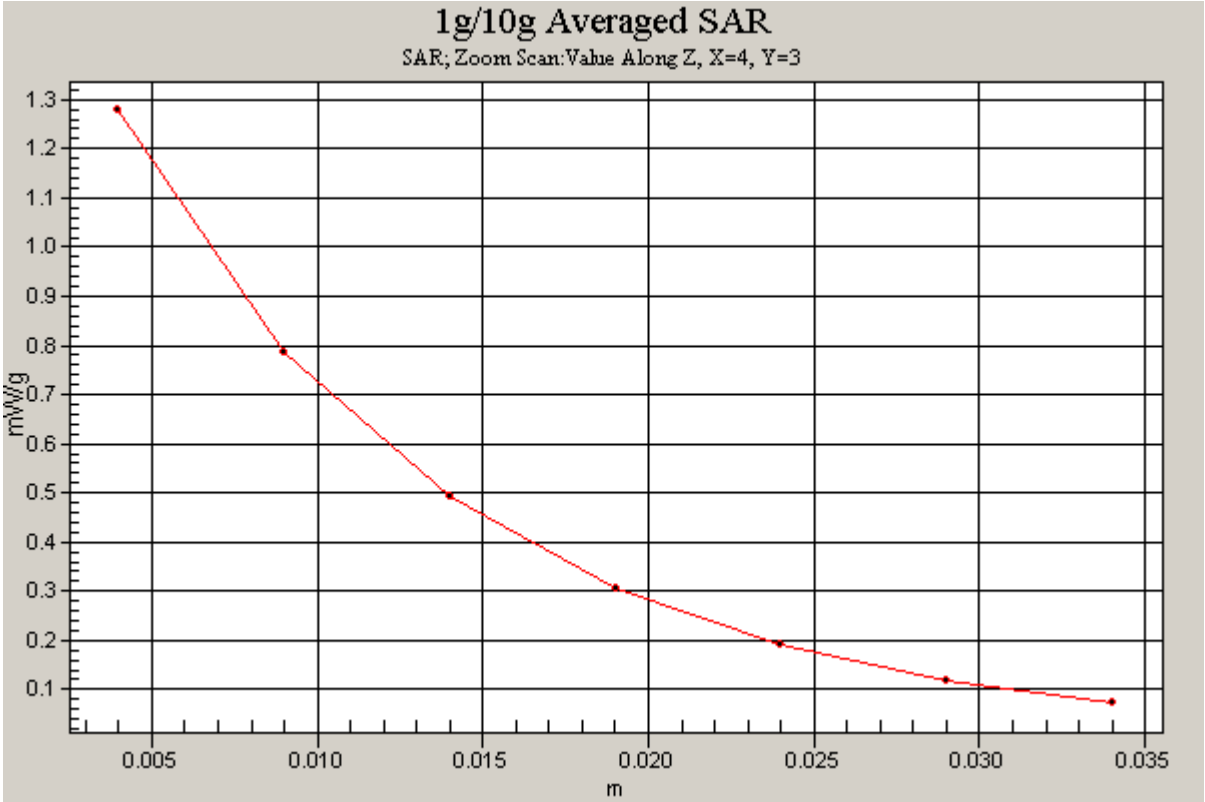


Figure 69 Body with Earphone, Towards Ground, WCDMA Band II Channel 9538

WCDMA Band II +HSDPA Towards Ground High

Date/Time: 7/17/2010 10:35:58 PM
Communication System: WCDMA Band II+HSDPA; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.57 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.60, 7.60, 7.60); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.805 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.9 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.400 mW/g
Maximum value of SAR (measured) = 0.753 mW/g

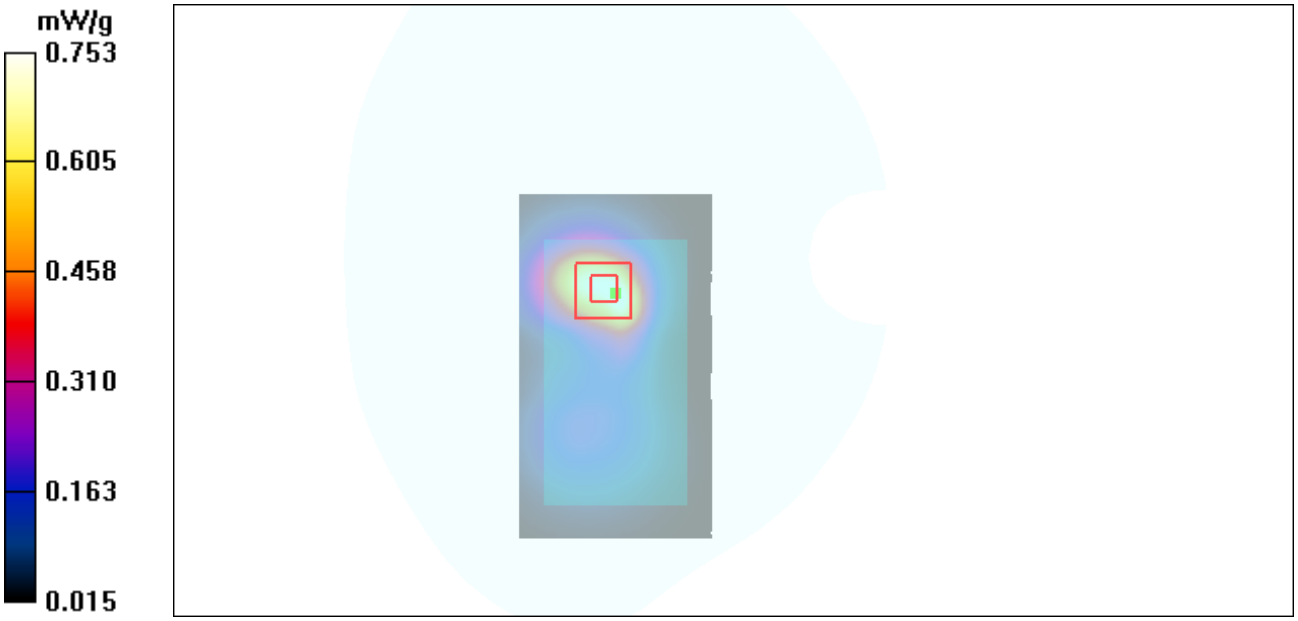


Figure 70 Body, Towards Ground, WCDMA Band II HSDPA Channel 9538

WCDMA Band V Left Cheek Middle

Date/Time: 7/19/2010 11:39:12 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.602 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.9 V/m; Power Drift = -0.062 dB
Peak SAR (extrapolated) = 0.743 W/kg
SAR(1 g) = 0.566 mW/g; SAR(10 g) = 0.409 mW/g
Maximum value of SAR (measured) = 0.598 mW/g

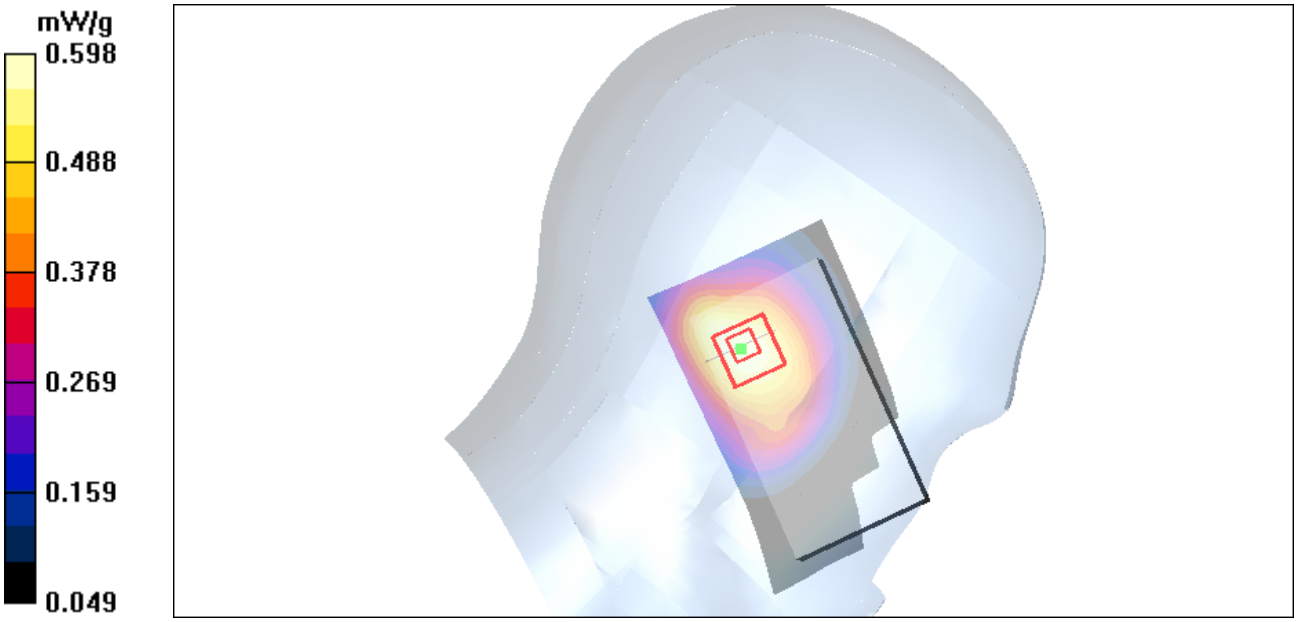


Figure 71 Left Hand Touch Cheek WCDMA Band V Channel 4183

WCDMA Band V Left Tilt Middle

Date/Time: 7/19/2010 11:58:48 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.534 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.0 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 0.686 W/kg
SAR(1 g) = 0.483 mW/g; SAR(10 g) = 0.324 mW/g
Maximum value of SAR (measured) = 0.522 mW/g

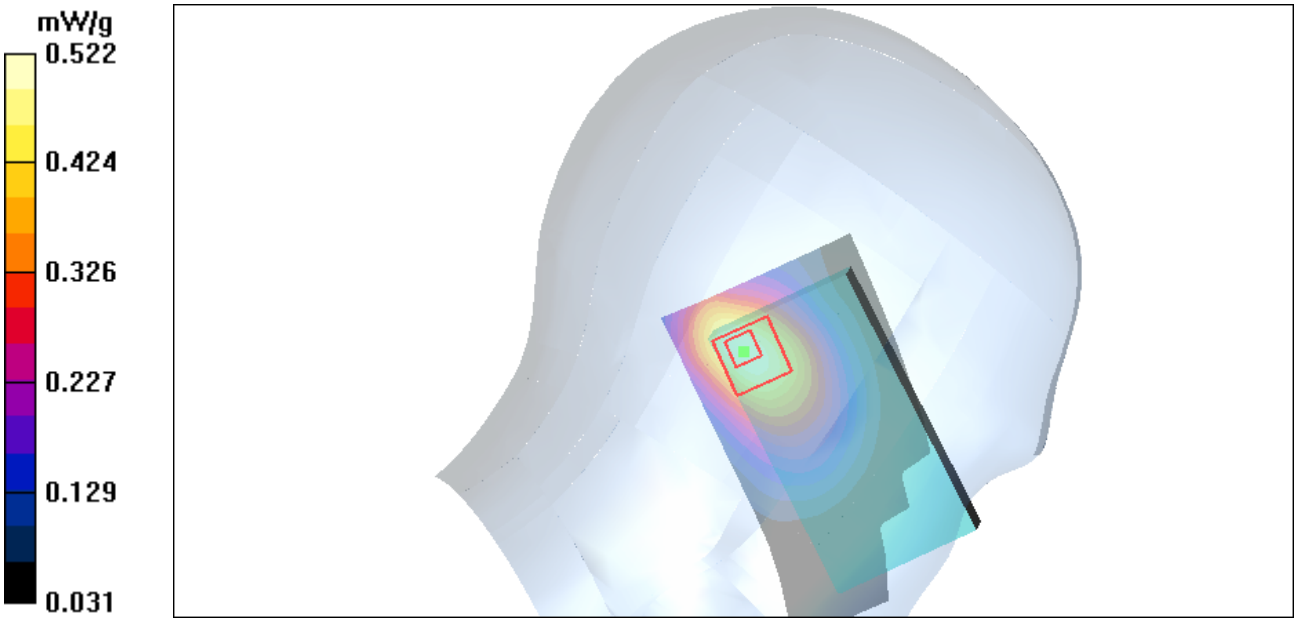


Figure 72 Left Hand Tilt 15° WCDMA Band V Channel 4183

WCDMA Band V Right Cheek High

Date/Time: 7/20/2010 12:39:32 AM
Communication System: WCDMA Band V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 847 MHz; σ = 0.918 mho/m; ε_r = 42.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.636 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.9 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.953 W/kg
SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.385 mW/g
Maximum value of SAR (measured) = 0.647 mW/g

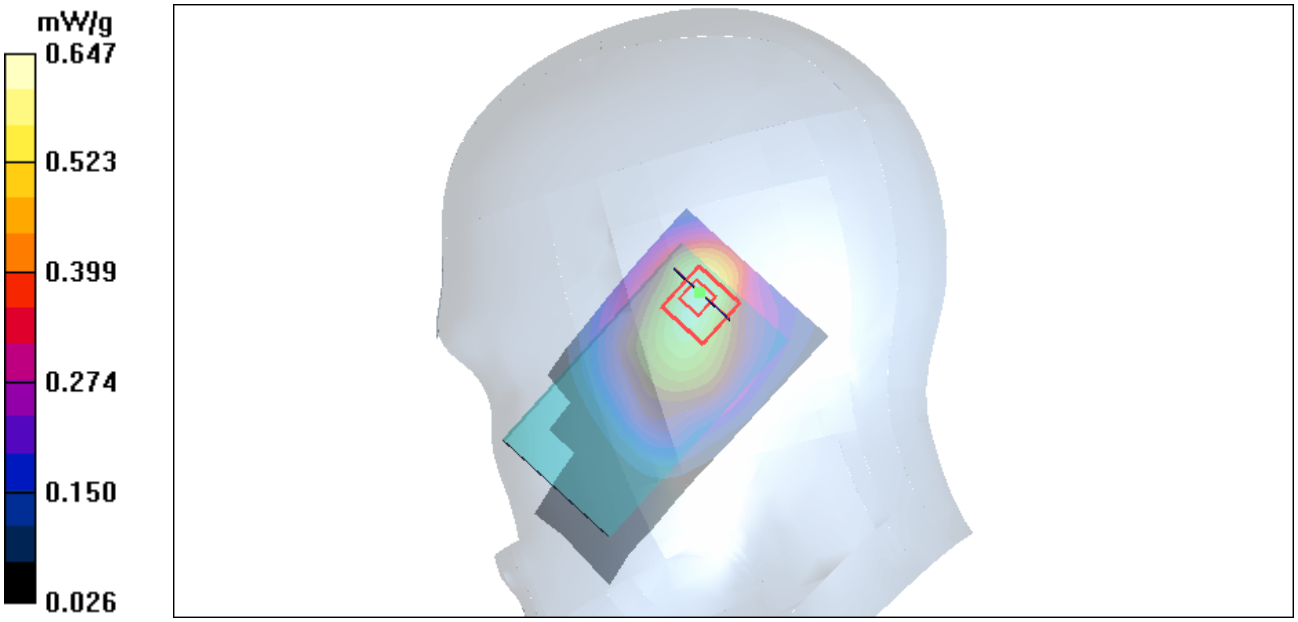


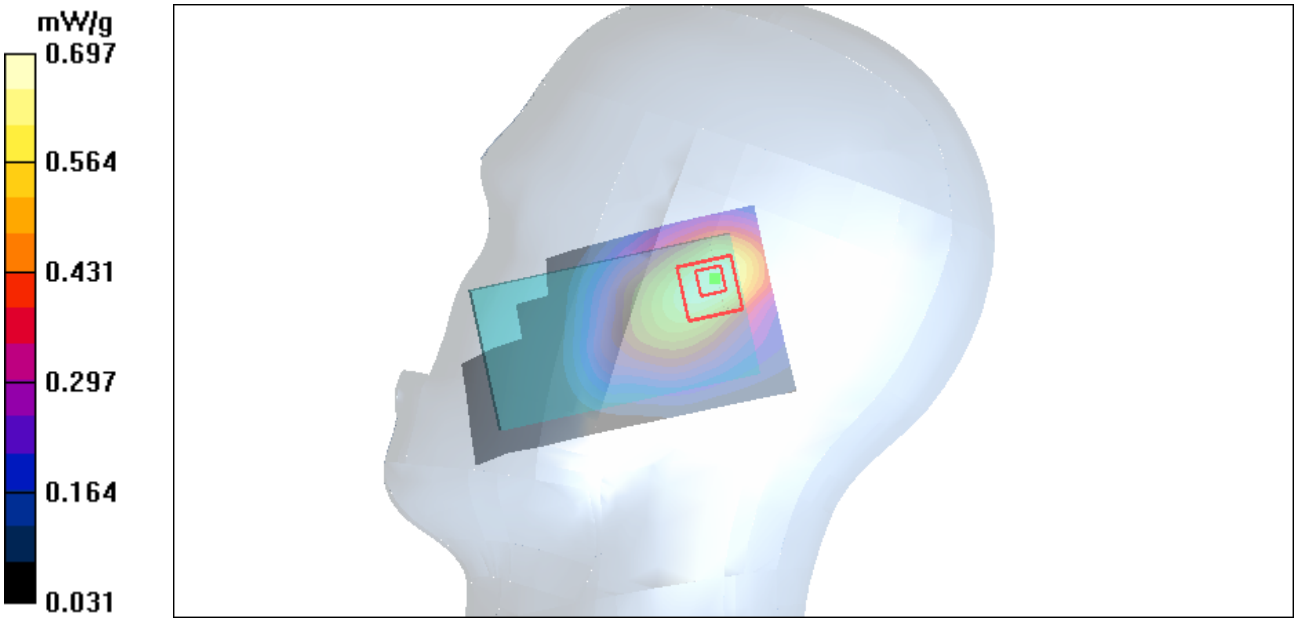
Figure 73 Right Hand Touch Cheek WCDMA Band V Channel 4233

WCDMA Band V Right Cheek Middle

Date/Time: 7/19/2010 11:00:18 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.700 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.1 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.420 mW/g
Maximum value of SAR (measured) = 0.697 mW/g



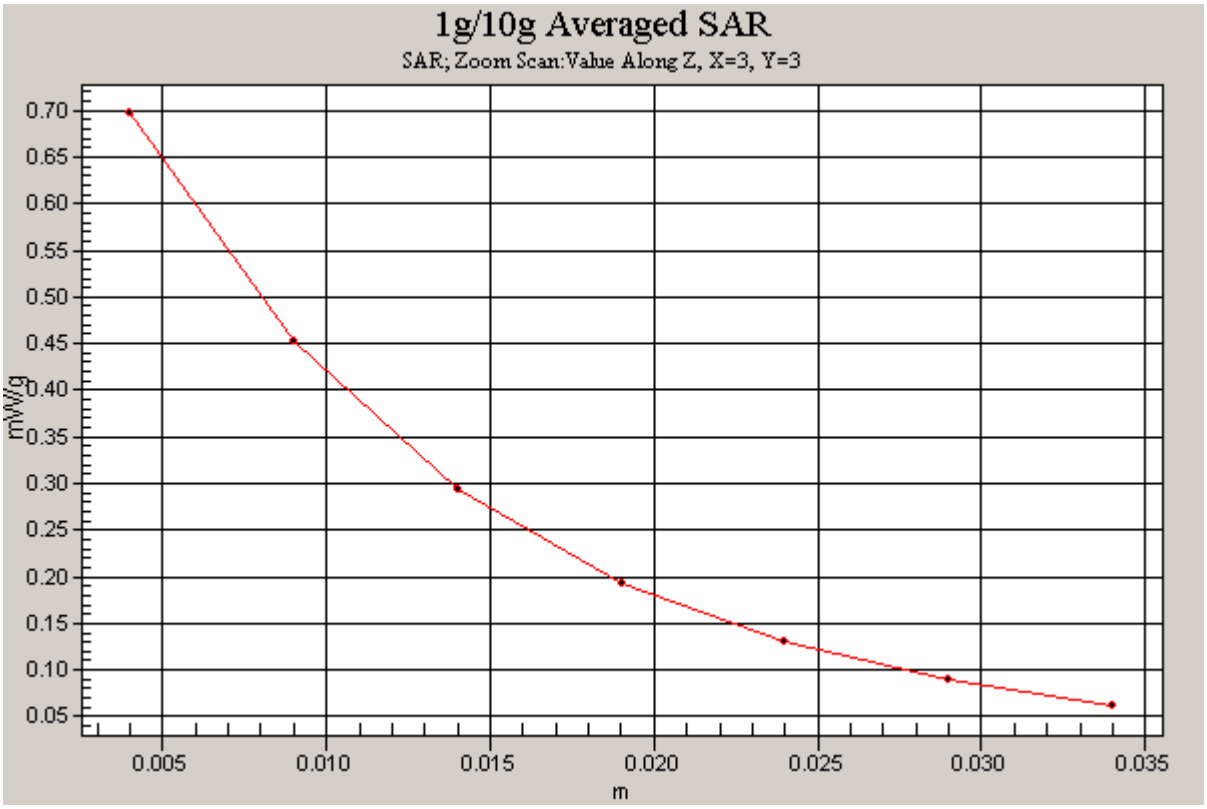


Figure 74 Right Hand Touch Cheek WCDMA Band V Channel 4183

WCDMA Band V Right Cheek Low

Date/Time: 7/20/2010 12:20:51 AM
Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.899 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.632 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.7 V/m; Power Drift = 0.113 dB
Peak SAR (extrapolated) = 0.931 W/kg
SAR(1 g) = 0.593 mW/g; SAR(10 g) = 0.386 mW/g
Maximum value of SAR (measured) = 0.637 mW/g

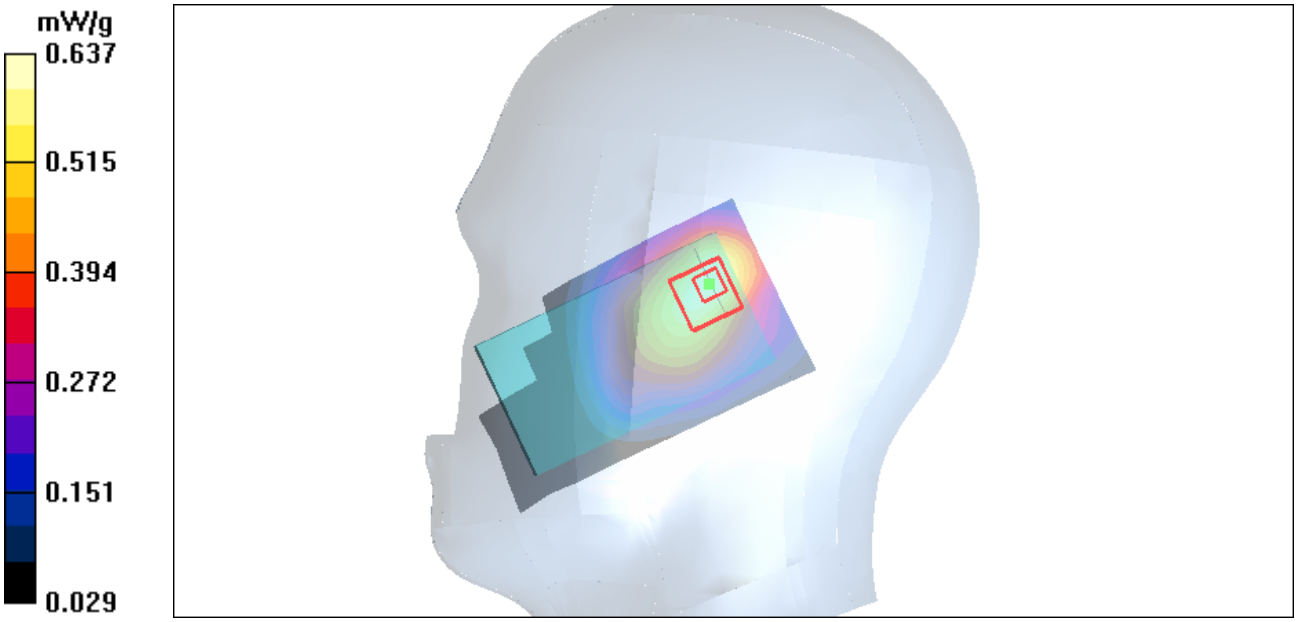


Figure 75 Right Hand Touch Cheek WCDMA Band V Channel 4132

WCDMA Band V Right Tilt Middle

Date/Time: 7/19/2010 11:18:41 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.91 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.34, 9.34, 9.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.670 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.0 V/m; Power Drift = -0.186 dB
Peak SAR (extrapolated) = 0.953 W/kg
SAR(1 g) = 0.591 mW/g; SAR(10 g) = 0.371 mW/g
Maximum value of SAR (measured) = 0.643 mW/g

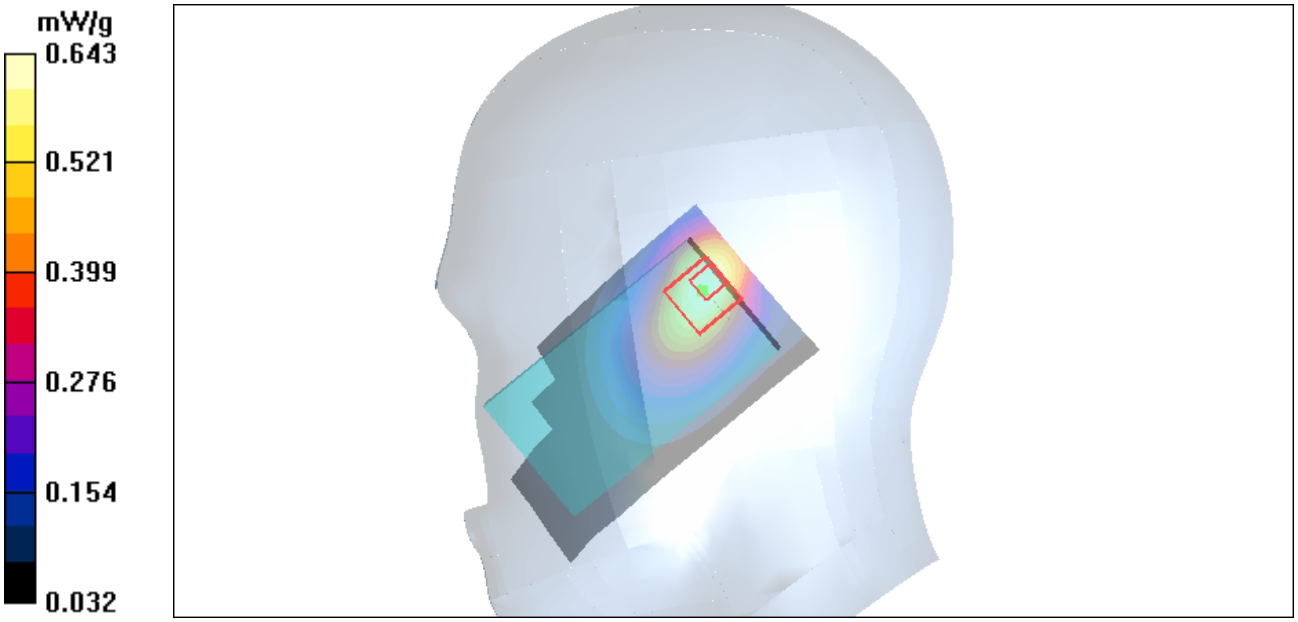


Figure 76 Right Hand Tilt 15° WCDMA Band V Channel 4183

WCDMA Band V Towards Ground High

Date/Time: 7/19/2010 9:09:04 PM
Communication System: WCDMA Band V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 847 MHz; σ = 1.01 mho/m; ε_r = 55.3; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.871 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.809 mW/g; SAR(10 g) = 0.568 mW/g
Maximum value of SAR (measured) = 0.864 mW/g

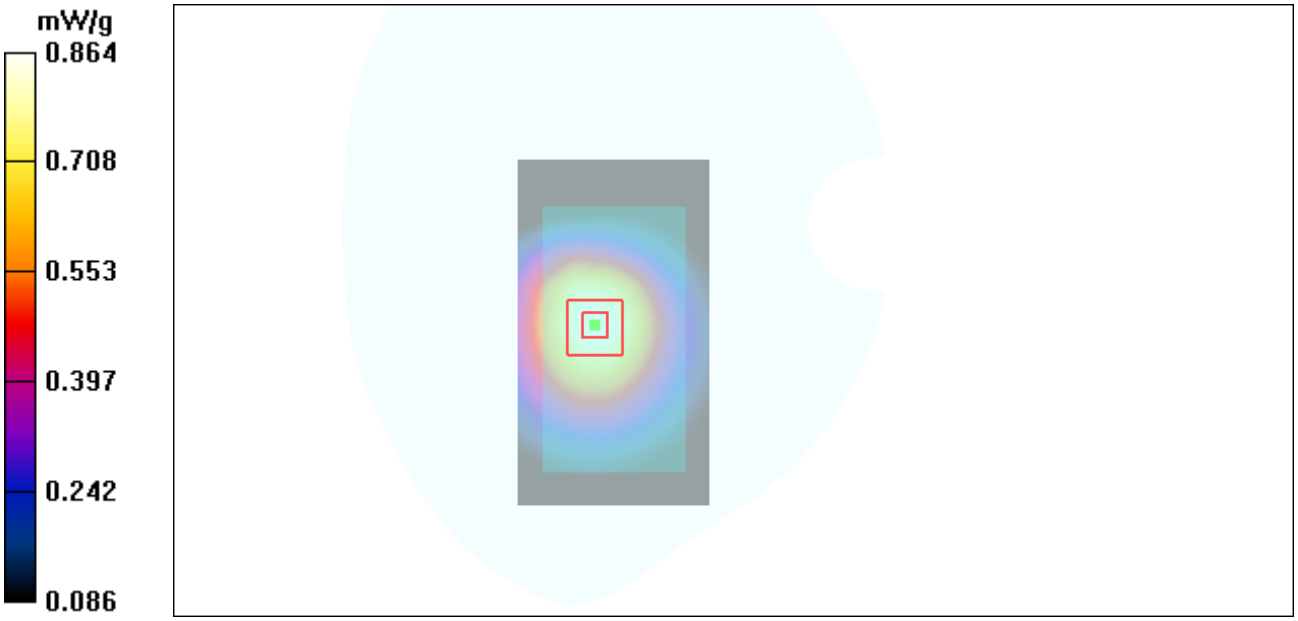


Figure 77 Body, Towards Ground, WCDMA Band V Channel 4233

WCDMA Band V Towards Ground Middle

Date/Time: 7/19/2010 8:33:23 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 55.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.888 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.823 mW/g; SAR(10 g) = 0.582 mW/g
Maximum value of SAR (measured) = 0.869 mW/g

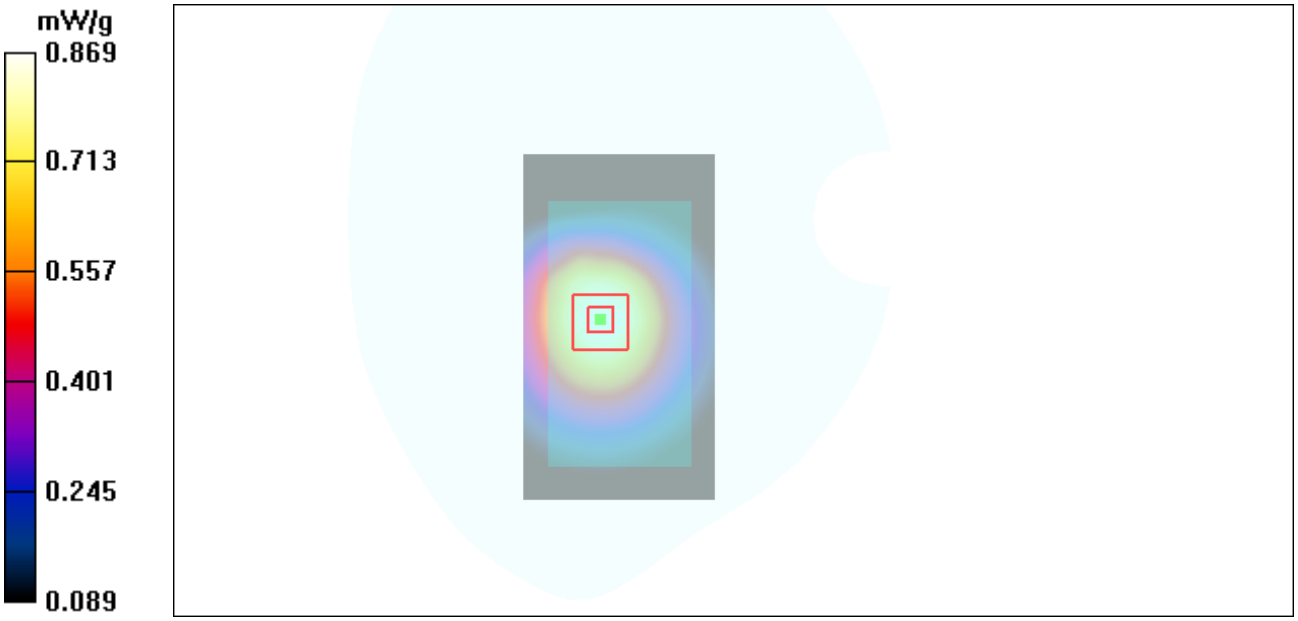


Figure 78 Body, Towards Ground, WCDMA Band V Channel 4183

WCDMA Band V Towards Ground Low

Date/Time: 7/19/2010 8:51:10 PM

Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.992 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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) = 0.943 mW/g

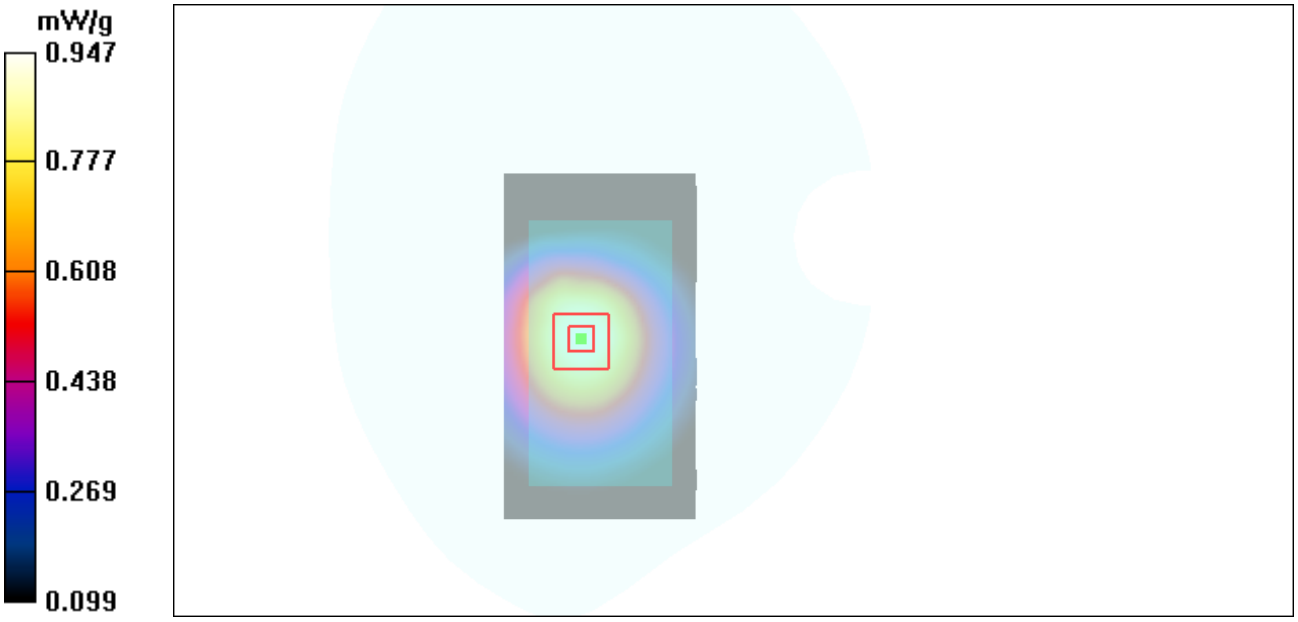
Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.893 mW/g; SAR(10 g) = 0.632 mW/g

Maximum value of SAR (measured) = 0.947 mW/g



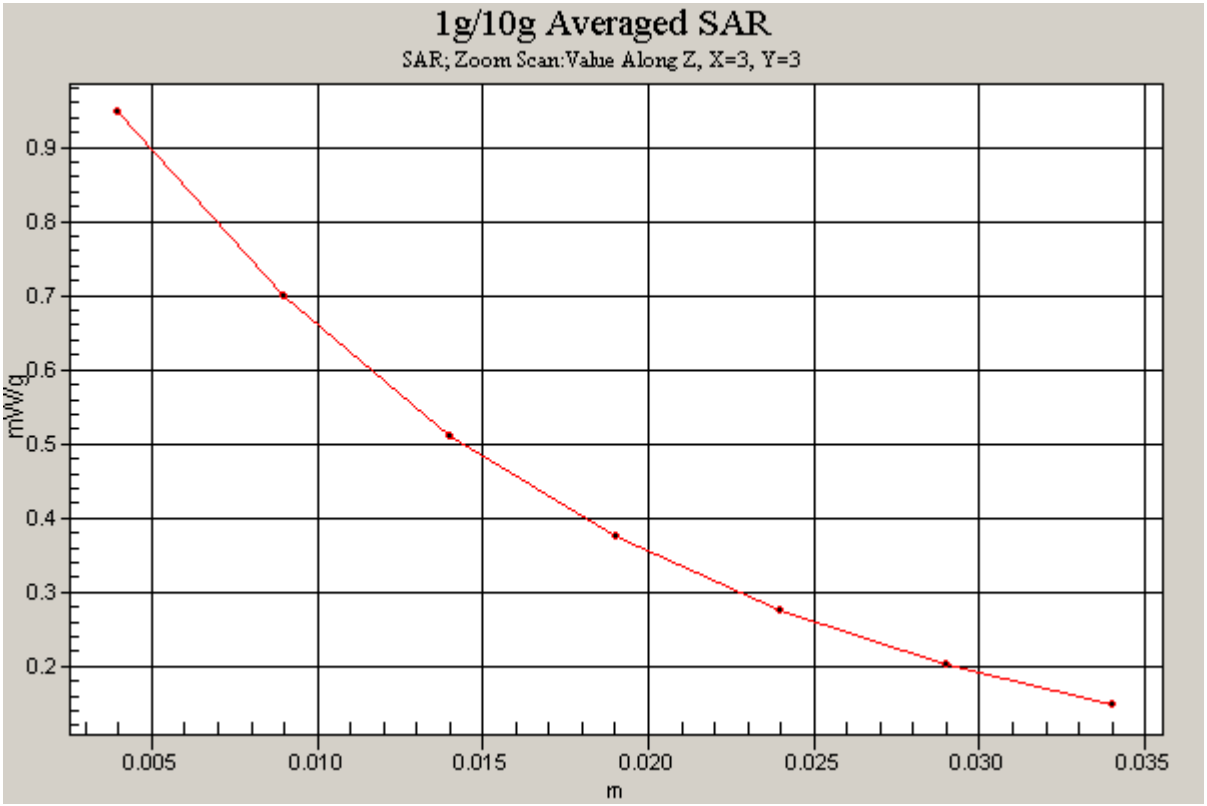


Figure 79 Body, Towards Ground, WCDMA Band V Channel 4132

WCDMA Band V Towards Phantom Middle

Date/Time: 7/19/2010 8:14:52 PM
Communication System: WCDMA Band V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1 mho/m; ε_r = 55.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.394 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.105 dB
Peak SAR (extrapolated) = 0.471 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.260 mW/g
Maximum value of SAR (measured) = 0.382 mW/g

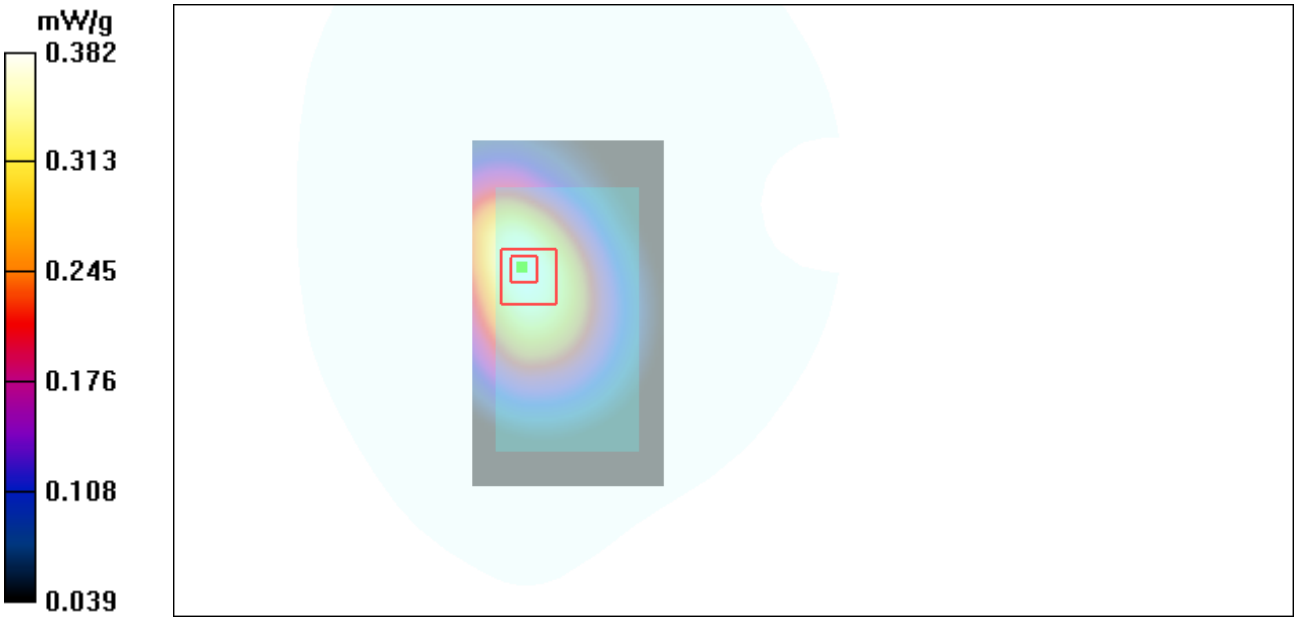


Figure 80 Body, Towards Phantom, WCDMA Band V Channel 4183

WCDMA Band V with Earphone Towards Ground Low

Date/Time: 7/19/2010 9:27:47 PM
Communication System: WCDMA Band V; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.992 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.756 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.947 W/kg
SAR(1 g) = 0.707 mW/g; SAR(10 g) = 0.498 mW/g
Maximum value of SAR (measured) = 0.753 mW/g

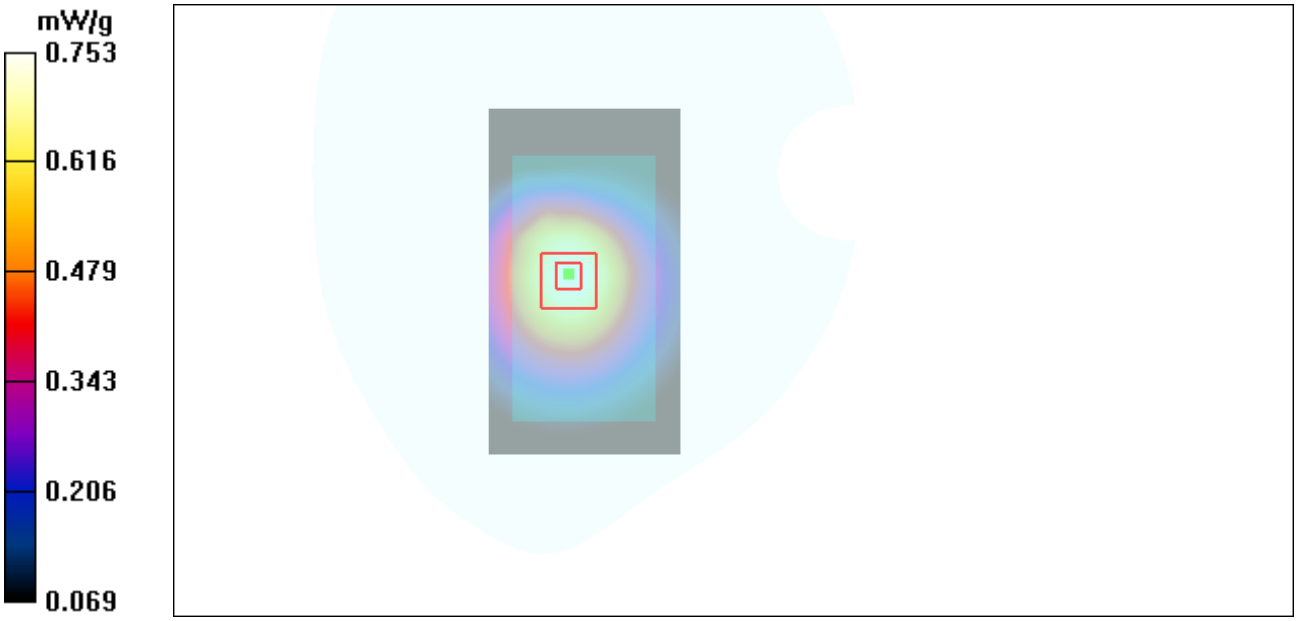


Figure 81 Body with earphone, Towards Ground, WCDMA Band V Channel 4183

WCDMA Band V +HSDPA Towards Ground Low

Date/Time: 7/19/2010 9:49:22 PM

Communication System: WCDMA Band V+HSDPA; Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.992 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.24, 9.24, 9.24); Calibrated: 12/30/2009

Electronics: DAE4 Sn871; Calibrated: 11/11/2009

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) = 0.642 mW/g

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

Reference Value = 11.2 V/m; Power Drift = -0.082 dB

Peak SAR (extrapolated) = 0.792 W/kg

SAR(1 g) = 0.598 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 0.631 mW/g

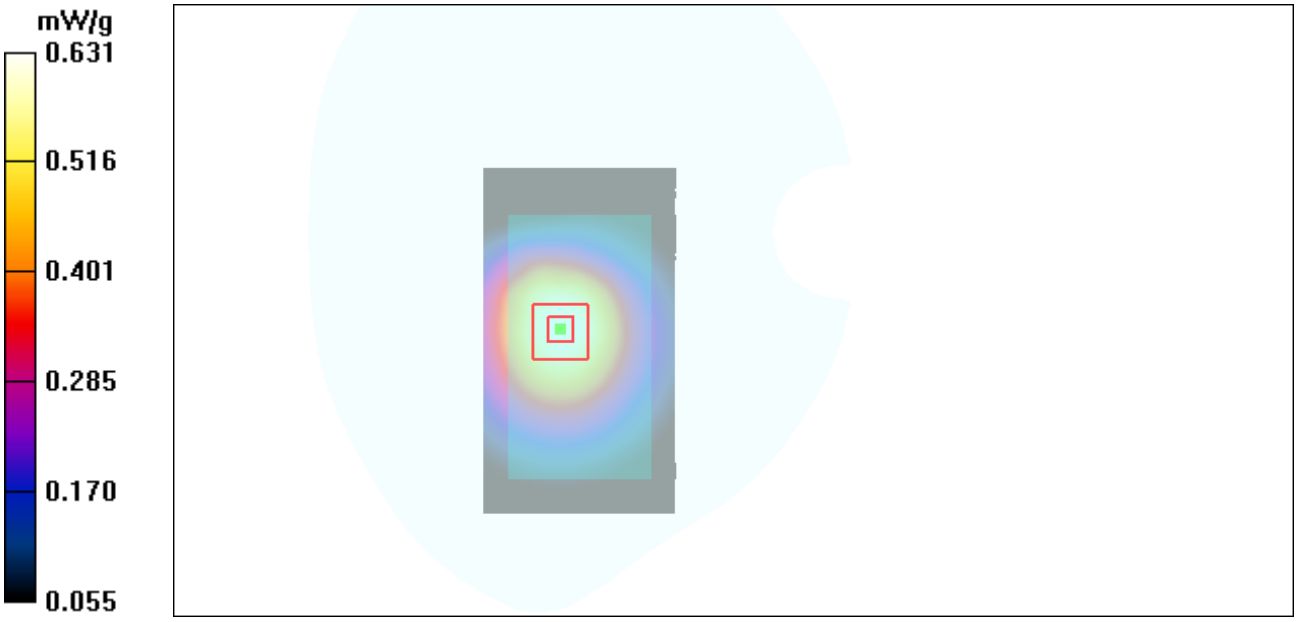


Figure 82 Body with earphone, Towards Ground, WCDMA Band V HSDPA Channel 4132

802.11b Left Cheek High

Date/Time: 7/25/2010 2:12:26 AM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; σ = 1.8 mho/m; ε_r = 38.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.024 mW/g

Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.22 V/m; Power Drift = -0.090 dB
Peak SAR (extrapolated) = 0.037 W/kg
SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.008 mW/g
Maximum value of SAR (measured) = 0.021 mW/g

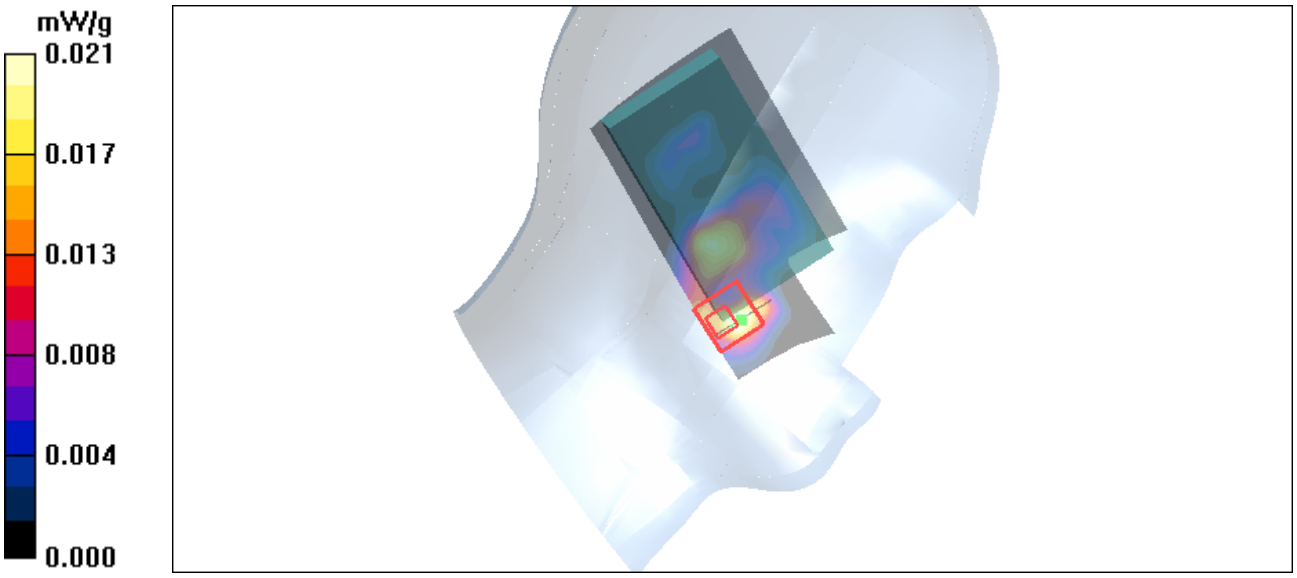


Figure 83 Left Hand Touch Cheek 802.11b Channel 11

802.11b Left Cheek Middle

Date/Time: 7/25/2010 12:59:58 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.77 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.034 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.633 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 0.068 W/kg
SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.012 mW/g
Maximum value of SAR (measured) = 0.036 mW/g

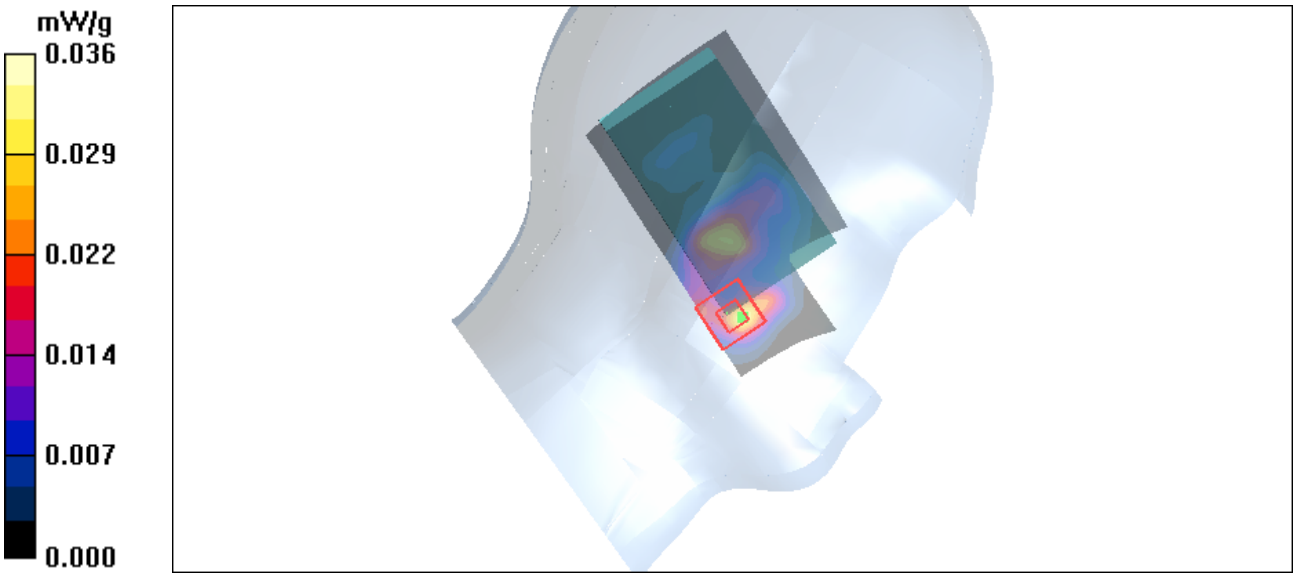


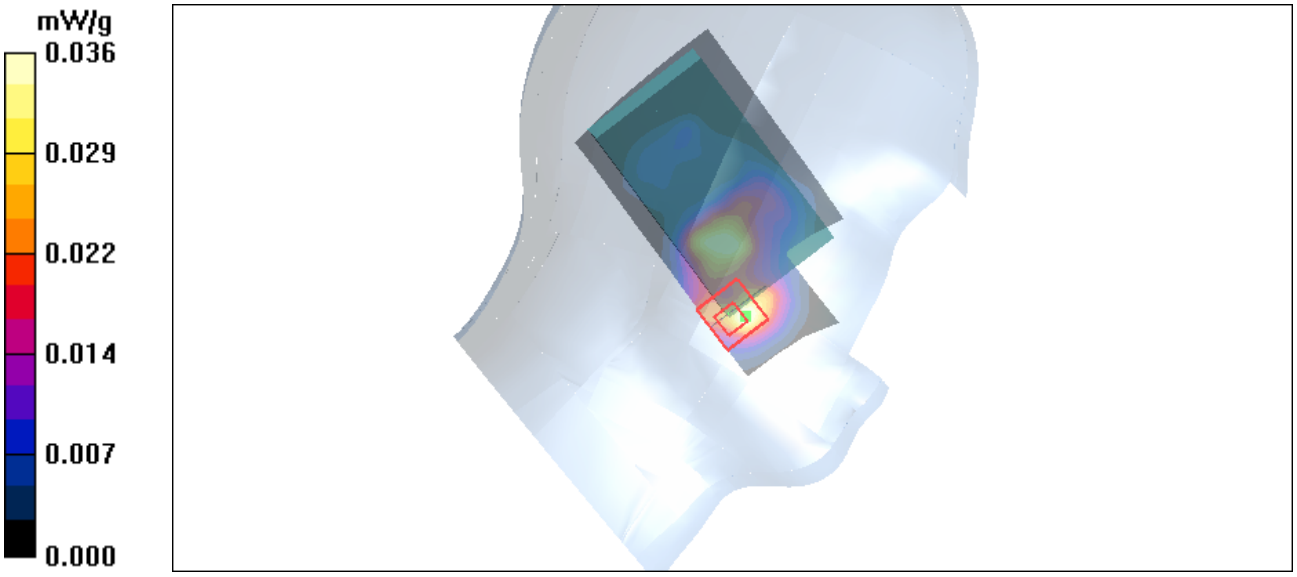
Figure 84 Left Hand Touch Cheek 802.11b Channel 6

802.11b Left Cheek Low

Date/Time: 7/25/2010 1:45:48 AM
Communication System: 802.11b; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2412 MHz; σ = 1.74 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.039 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.40 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.014 mW/g
Maximum value of SAR (measured) = 0.036 mW/g



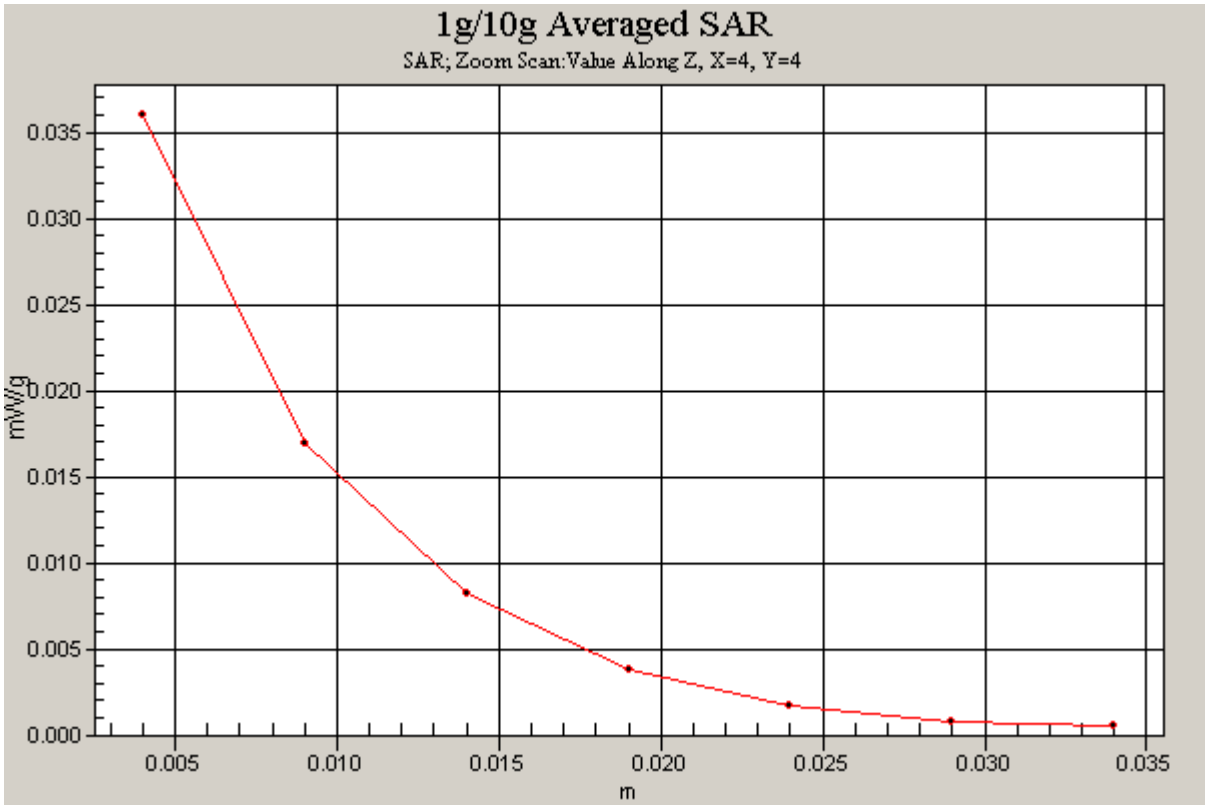


Figure 85 Left Hand Touch Cheek 802.11b Channel 1

802.11b Left Tilt Middle

Date/Time: 7/25/2010 1:21:40 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.77 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.010 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.49 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 0.012 W/kg
SAR(1 g) = 0.005 mW/g; SAR(10 g) = 0.002 mW/g
Maximum value of SAR (measured) = 0.005 mW/g

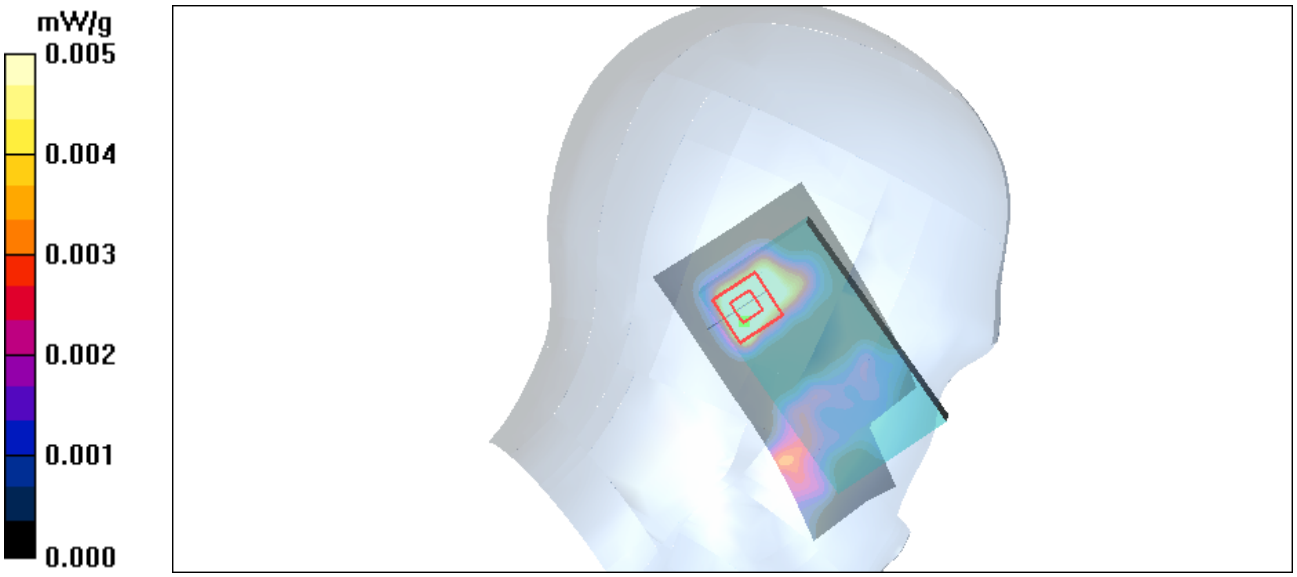


Figure 86 Left Hand Tilt 15° 802.11b Channel 6

802.11b Right Cheek Middle

Date/Time: 7/25/2010 12:01:00 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.77 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.027 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.37 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.031 W/kg
SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.007 mW/g.
Maximum value of SAR (measured) = 0.016 mW/g

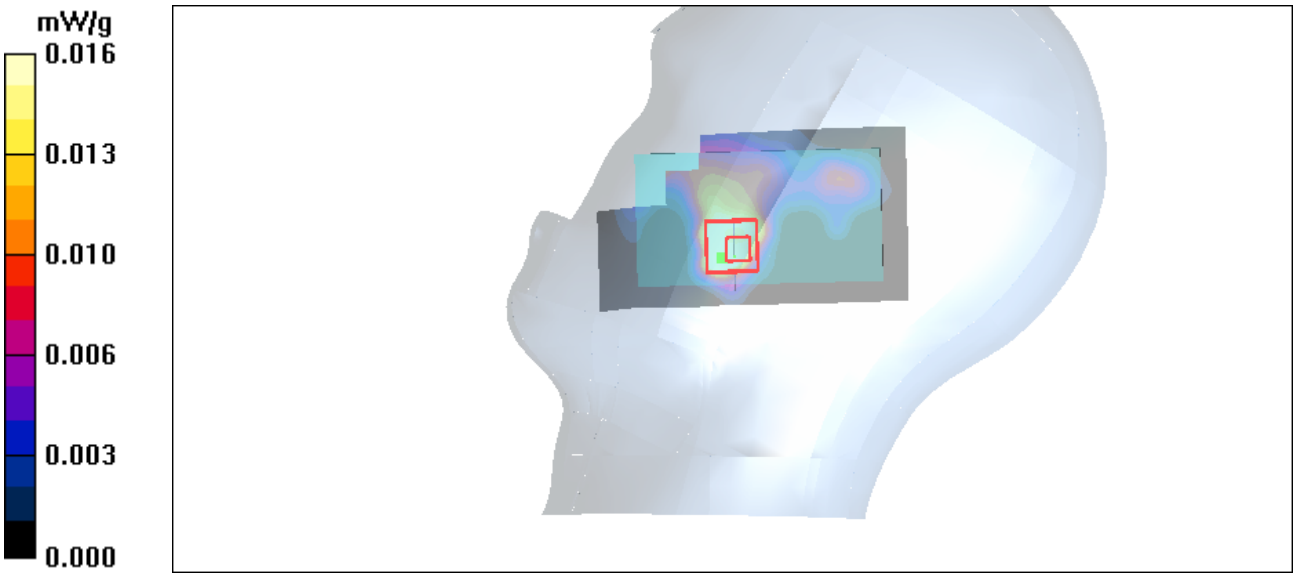


Figure 87 Right Hand Touch Cheek 802.11b Channel 6

802.11b Right Tilt Middle

Date/Time: 7/25/2010 12:38:27 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.77 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Right Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.22, 7.22, 7.22); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.013 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.70 V/m; Power Drift = 0. 020 dB
Peak SAR (extrapolated) = 0.015 W/kg
SAR(1 g) = 0.008 mW/g; SAR(10 g) = 0.004 mW/g
Maximum value of SAR (measured) = 0.009 mW/g

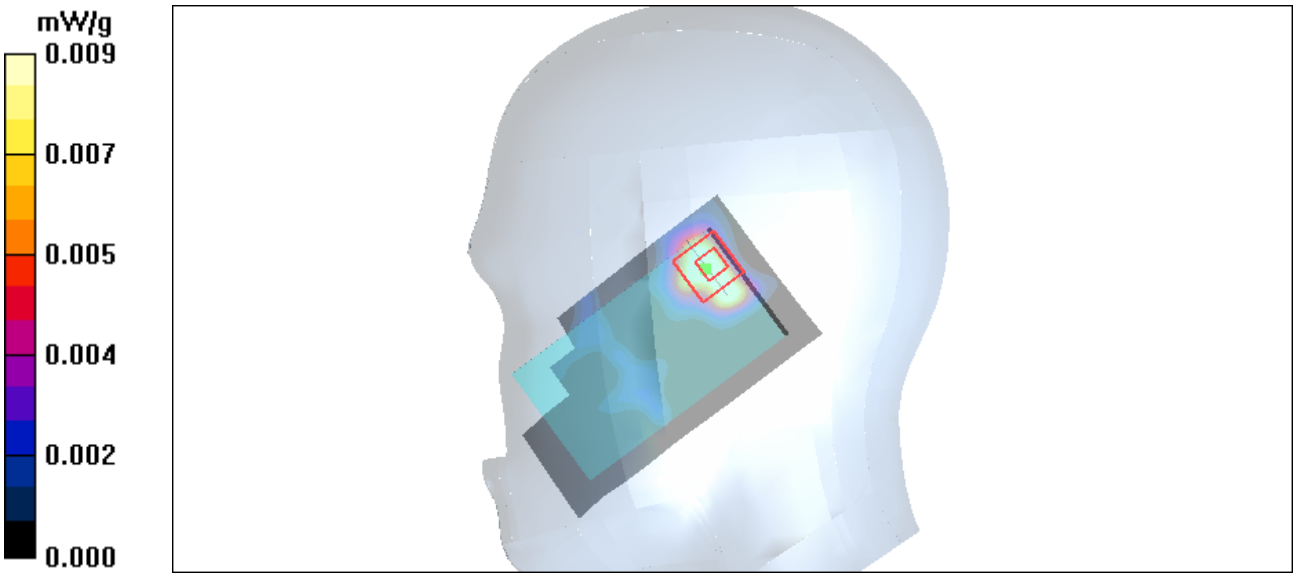


Figure 88 Right Hand Tilt 15° 802.11b Channel 6

802.11b Towards Ground Middle

Date/Time: 7/25/2010 4:10:23 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.91 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.007 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.35 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 0.017 W/kg
SAR(1 g) = 0.005 mW/g; SAR(10 g) = 0.002 mW/g
Maximum value of SAR (measured) = 0.006 mW/g

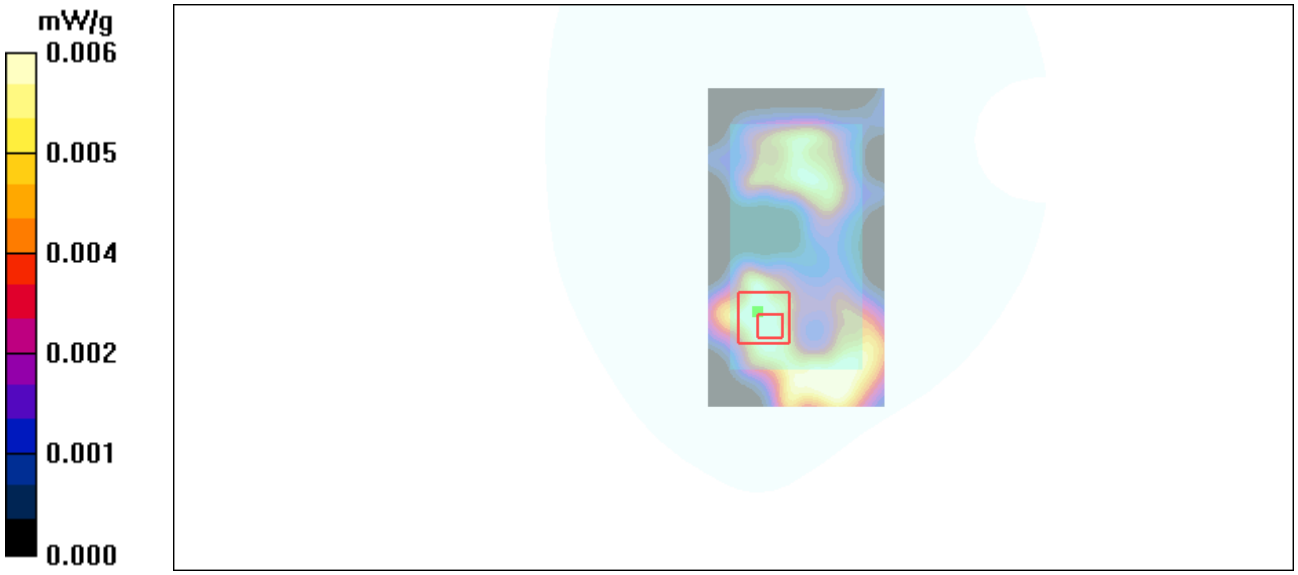


Figure 89 Body, Towards Ground, 802.11b Channel 6

802.11b Towards Phantom High

Date/Time: 7/25/2010 5:04:29 AM
Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; σ = 1.94 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.006 mW/g

Towards Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.11 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.018 W/kg
SAR(1 g) = 0.006 mW/g; SAR(10 g) = 0.003 mW/g
Maximum value of SAR (measured) = 0.007 mW/g

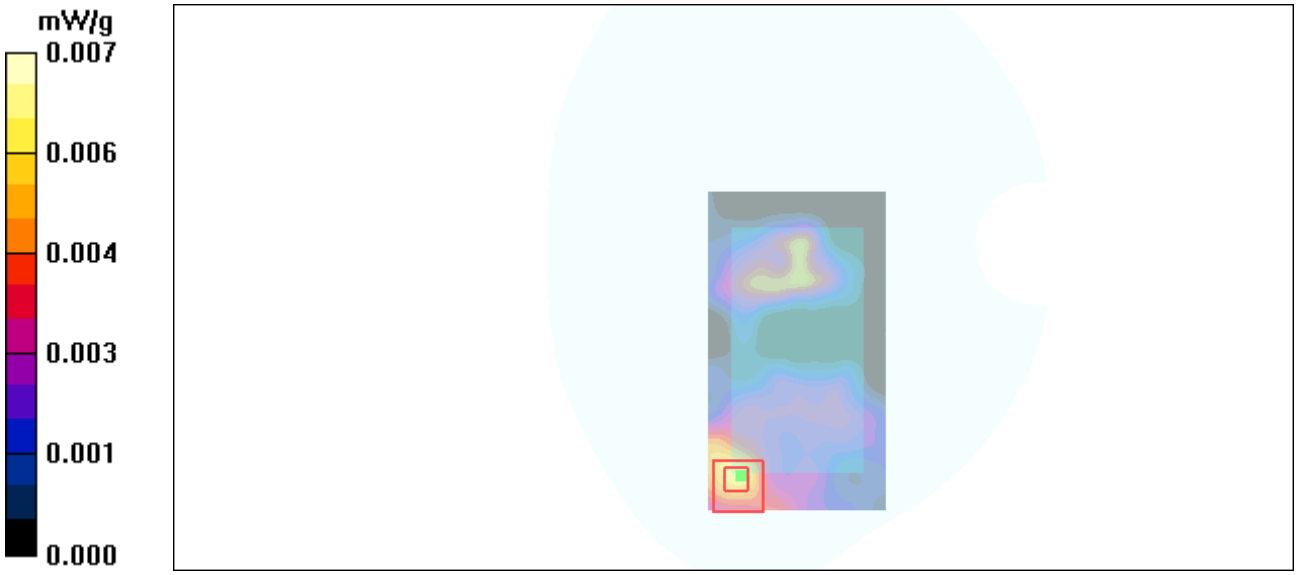


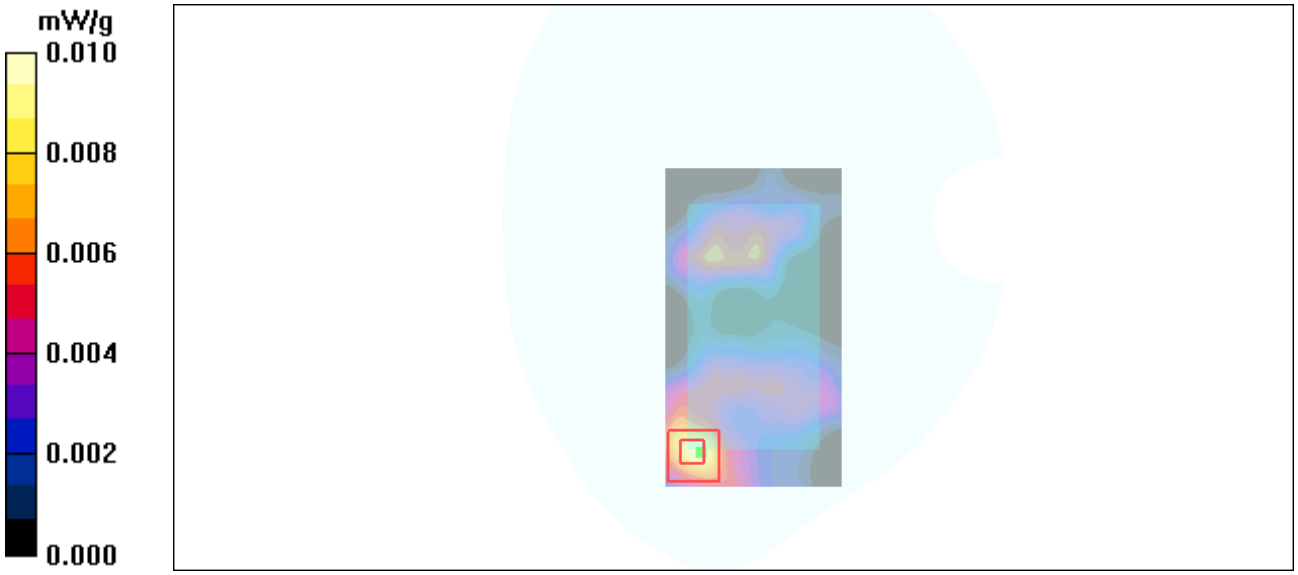
Figure 90 Body, Towards Phantom, 802.11b Channel 11

802.11b Towards Phantom Middle

Date/Time: 7/25/2010 3:51:06 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.91 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.010 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.30 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.016 W/kg
SAR(1 g) = 0.008 mW/g; SAR(10 g) = 0.004 mW/g
Maximum value of SAR (measured) = 0.010 mW/g



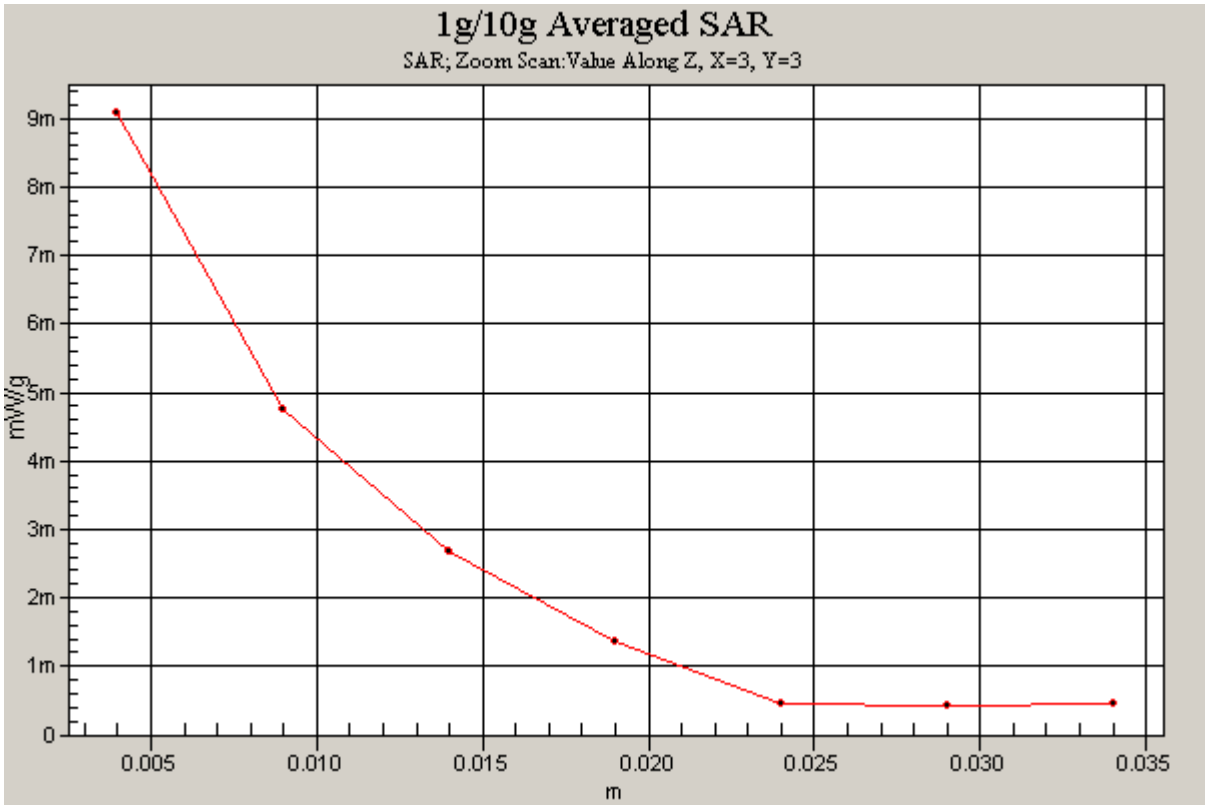


Figure 91 Body, Towards Phantom, 802.11b Channel 6

802.11b Towards Phantom Low

Date/Time: 7/25/2010 4:29:43 AM
Communication System: 802.11b; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2412 MHz; σ = 1.88 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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 Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.007 mW/g

Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.11 V/m; Power Drift = -0. 060 dB
Peak SAR (extrapolated) = 0.016 W/kg
SAR(1 g) = 0.007 mW/g; SAR(10 g) = 0.003 mW/g
Maximum value of SAR (measured) = 0.008 mW/g

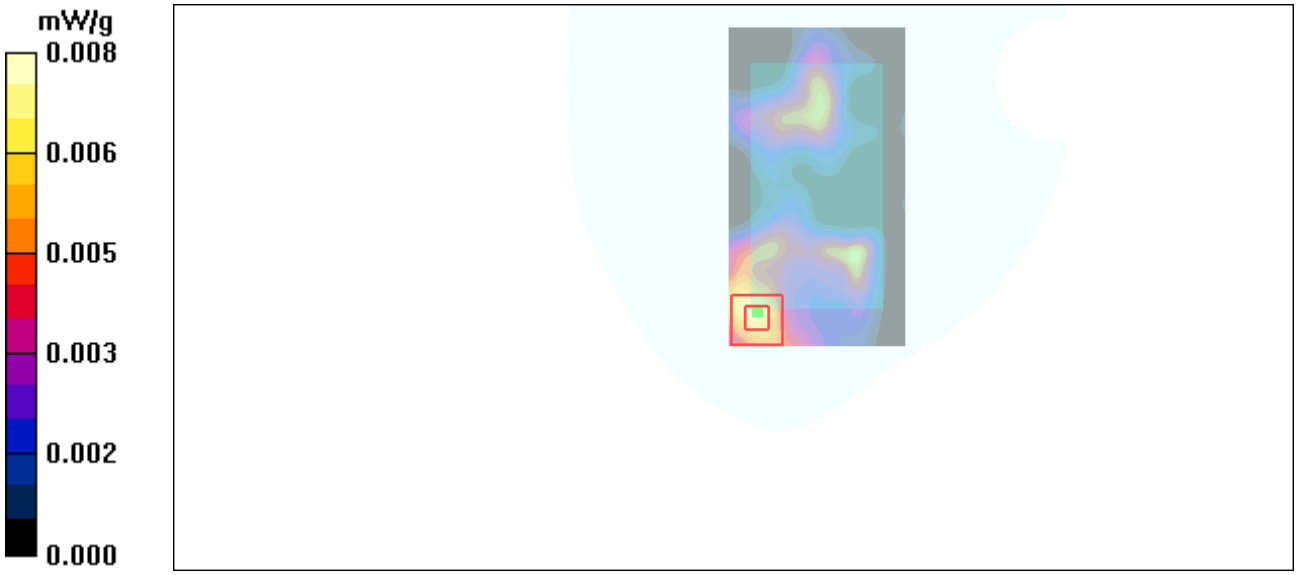


Figure 92 Body, Towards Phantom, 802.11b Channel 1

802.11b with Earphone Towards Phantom Middle

Date/Time: 7/25/2010 5:25:24 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.91 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liqiud Temperature: 21.5℃
Phantom section: Flat Section
DASY4 Configuration:
Probe: EX3DV4 - SN3661; ConvF(7.34, 7.34, 7.34); Calibrated: 12/30/2009
Electronics: DAE4 Sn871; Calibrated: 11/11/2009
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) = 0.009 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.29 V/m; Power Drift = -0.069 dB
Peak SAR (extrapolated) = 0.038 W/kg
SAR(1 g) = 0.008 mW/g; SAR(10 g) = 0.004 mW/g
Maximum value of SAR (measured) = 0.009 mW/g

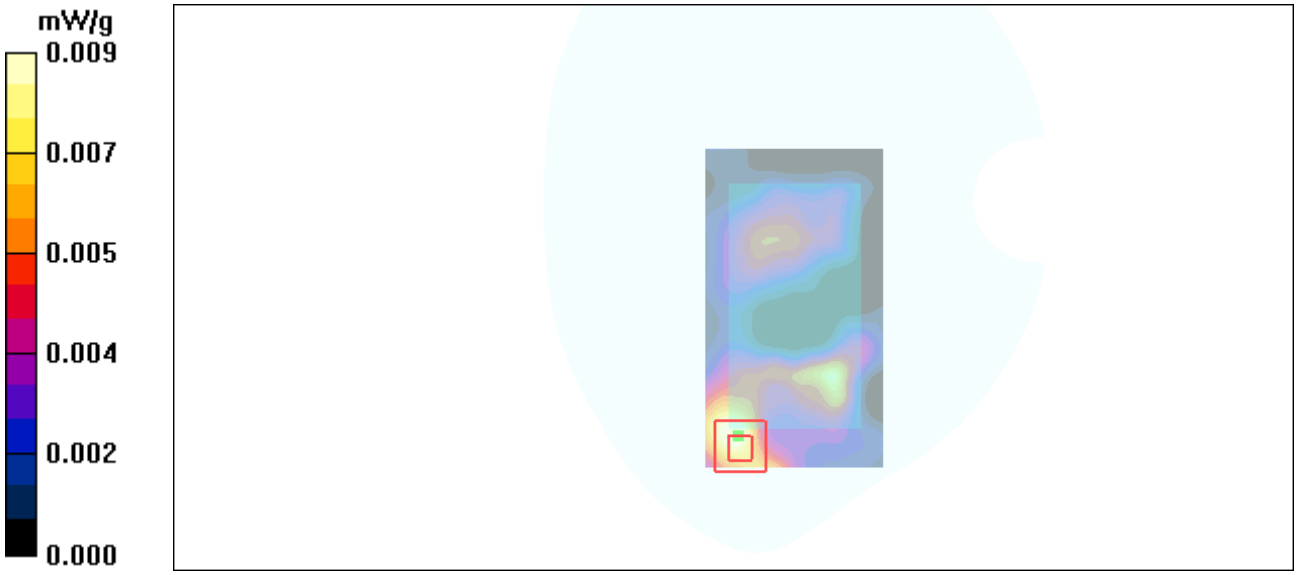


Figure 93 Body with earphone, Towards Phantom, 802.11b Channel 6

ANNEX D: Probe Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Auden**

Certificate No: **EX3-3661_Dec09**

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3661

Calibration procedure(s): QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: December 30, 2009

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: December 30, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe EX3DV4

SN:3661

Manufactured: October 20, 2008
Calibrated: December 30, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

EX3DV4 SN:3661 December 30, 2009

DASY - Parameters of Probe: EX3DV4 SN:3661

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.46	0.52	0.48	± 10.1%
DCP (mV)[B]	89.4	91.4	90.5	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	± 1.5%
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying rectangular distribution and is expressed for the square of the field value.