



OET 65

TEST REPORT

Product Name	UMTS Dualband / GSM Quadband mobile phone
Model	Gemini
Marketing Name	Alcatel OT871A
FCC ID	RAD264
Client	TCT Mobile Limited


TA Technology (Shanghai) Co., Ltd.

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

Report No.: RXA1208-0616SAR

Page 2 of 198

GENERAL SUMMARY

Product Name	UMTS Dualband / GSM Quadband mobile phone	Model	Gemini
Report No.	RXA1208-0616SAR	FCC ID	RAD264
Client	TCT Mobile Limited		
Manufacturer	TCT Mobile Limited		
Reference Standard(s)	<p>IEEE Std C95.1, 1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radiofrequency Electromagnetic Fields, 3 kHz to 300 GHz.</p> <p>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.</p> <p>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 Radiofrequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions.</p> <p>KDB 447498 D01 Mobile Portable RF Exposure v04: Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies</p> <p>KDB941225 D01 SAR test for 3G devices v02: SAR Measurement Procedures CDMA 20001x RTT, 1x Ev-Do, WCDMA, HSDPA/HSPA</p> <p>KDB 941225 D03: SAR test Reduction GSM GPRS EDGE vo1, Published on Nov 13 2009</p> <p>KDB 648474 D01 SAR Handsets Multi Xmitter and Ant, v01r05: SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas.</p>		
Conclusion	<p>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.</p> <p>General Judgment: Pass</p> <div style="text-align: right;">  <p>(Stamp) Date of issue: August 31st, 2012</p> </div>		
Comment	The test result only responds to the measured sample.		

Approved by 杨伟中
Director

Revised by 凌敏定
SAR Manager

Performed by 程如蔚
SAR Engineer

TABLE OF CONTENT

1. General Information	5
1.1. Notes of the Test Report.....	5
1.2. Testing Laboratory	5
1.3. Applicant Information	6
1.4. Manufacturer Information.....	6
1.5. Information of EUT.....	7
1.6. The Maximum SAR _{1g} Values	8
1.7. Test Date	8
2. SAR Measurements System Configuration.....	9
2.1. SAR Measurement Set-up	9
2.2. DASY5 E-field Probe System	10
2.2.1. EX3DV4 Probe Specification	10
2.2.2. ES3DV3 Probe Specification	11
2.2.3. E-field Probe Calibration.....	12
2.3. Other Test Equipment	12
2.3.1. Device Holder for Transmitters	12
2.3.2. Phantom	13
2.4. Scanning Procedure	13
2.5. Data Storage and Evaluation	15
2.5.1. Data Storage.....	15
2.5.2. Data Evaluation by SEMCAD	15
3. Laboratory Environment.....	17
4. Tissue-equivalent Liquid	18
4.1. Tissue-equivalent Liquid Ingredients.....	18
4.2. Tissue-equivalent Liquid Properties	19
5. System Check.....	20
5.1. Description of System Check.....	20
5.2. System Check Results.....	21
6. Operational Conditions during Test.....	22
6.1. General Description of Test Procedures	22
6.2. Test Positions.....	22
6.2.1. Against Phantom Head.....	22
6.2.2. Body Worn Configuration.....	22
6.3. Test Configuration	23
6.3.1. GSM Test Configuration.....	23
6.3.2. UMTS Test Configuration	23
6.3.3. HSDPA Test Configuration	24
6.3.4. HSUPA Test Configuration	26
7. Test Results	28
7.1. Conducted Power Results	28

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

Report No.: RXA1208-0616SAR

Page 4 of 198

7.2. SAR Test Results	30
7.2.1. GSM 850 (GPRS/EGPRS).....	30
7.2.2. GSM 1900 (GPRS/EGPRS).....	32
7.2.3. UMTS Band II (WCDMA/HSDPA/HSUPA)	34
7.2.4. UMTS Band V (WCDMA/HSDPA/HSUPA)	36
7.2.5. Bluetooth Function.....	38
8. 700MHz to 3GHz Measurement Uncertainty.....	40
9. Main Test Instruments	42
ANNEX A: Test Layout	43
ANNEX B: System Check Results	46
ANNEX C: Graph Results	52
ANNEX D: Probe EX3DV4 Calibration Certificate.....	145
ANNEX E: Probe ES3DV3 Calibration Certificate	156
ANNEX F: D835V2 Dipole Calibration Certificate	167
ANNEX G: D1900V2 Dipole Calibration Certificate.....	175
ANNEX H: DAE4-871 Calibration Certificate.....	182
ANNEX I: DAE4-1317 Calibration Certificate	187
ANNEX J: The EUT Appearances and Test Configuration	192

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.

If the electrical report is inconsistent with the printed one, it should be subject to the latter.

1.2. Testing Laboratory

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Yang Weizhong
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: yangweizhong@ta-shanghai.com

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 6 of 198

1.3. Applicant Information

Company: TCT Mobile Limited
Address: 5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City: Shanghai
Postal Code: 201203
Country: P.R. China

1.4. Manufacturer Information

Company: TCT Mobile Limited
Address: 5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City: Shanghai
Postal Code: 201203
Country: P.R. China

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 7 of 198

1.5. Information of EUT

General Information

Device Type:	Portable Device		
Exposure Category:	Uncontrolled Environment / General Population		
State of Sample:	Prototype Unit		
Product Name:	UMTS Dualband / GSM Quadband mobile phone		
IMEI:	013160000202397		
Hardware Version:	05		
Software Version:	SW980		
Antenna Type:	Internal Antenna		
Device Operating Configurations :			
Supporting Mode(s):	GSM 850/GSM 1900; (tested) UMTS Band II /UMTS Band V; (tested) GSM 900/GSM 1800; (untested) Bluetooth; (untested)		
Test Modulation:	(GSM)GMSK; (UMTS)QPSK		
Device Class:	B		
HSDPA UE Category:	8		
HSUPA UE Category:	6		
GPRS Multislot Class(10):	Max Number of Timeslots in Uplink	2	
	Max Number of Timeslots in Downlink	4	
	Max Total Timeslot	5	
EGPRS Multislot Class(10):	Max Number of Timeslots in Uplink	2	
	Max Number of Timeslots in Downlink	4	
	Max Total Timeslot	5	
Operating Frequency Range(s):	Mode	Tx (MHz)	Rx (MHz)
	GSM 850	824.2 ~ 848.8	869.2 ~ 893.8
	GSM 1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8
	UMTS Band II	1852.4 ~ 1907.6	1932.4 ~ 1987.6
	UMTS Band V	826.4 ~ 846.6	871.4 ~ 891.6
Power Class:	GSM 850: 4		
	GSM 1900: 1		
	UMTS Band II: 3		
	UMTS Band V: 3		
Power Level:	GSM 850: tested with power level 5		
	GSM 1900: tested with power level 0		
	UMTS Band II: tested with power control all up bits		
	UMTS Band V: tested with power control all up bits		
Test Channel: (Low - Middle - High)	128 - 190 - 251	(GSM 850)	(tested)
	512 - 661 - 810	(GSM 1900)	(tested)
	9262 - 9400 - 9538	(UMTS Band II)	(tested)
	4132 - 4183 - 4233	(UMTS Band V)	(tested)

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 8 of 198

Auxiliary Equipment Details

Name	Model	Manufacturer	S/N
Battery 1	CAB3120000C3	BAK	BAK2011110800329
Battery 2	CAB3120000C1	BYD	B08606451BA
Stereo Headset 1	CCB3160A15C1	Juwei	/
Stereo Headset 2	CCB3160A15C2	Lianyun	/

Equipment Under Test (EUT) is a UMTS Dualband / GSM Quadband mobile phone. The EUT has a GSM/UMTS antenna that is used for Tx/Rx, and the other is BT antenna that can be used for Tx/Rx. The detail about EUT and Lithium Battery is in chapter 1.5 in this report. SAR are tested for GSM 850, GSM 1900, UMTS Band II and UMTS Band V.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. The Maximum SAR_{1g} Values

Head SAR Configuration

Mode	Channel	Position	SAR _{1g} (W/kg)
GSM 850	High/251	Left, Cheek	0.745
GSM 1900	Middle/661	Left, Cheek	0.835
UMTS Band II	Middle/9400	Left, Cheek	1.330
UMTS Band V	High/4233	Right, Cheek	0.971

Body Worn Configuration

Mode	Channel	Position	Separation distance	SAR _{1g} (W/kg)
2Txslots GPRS 850	High/251	Towards Ground	15mm	1.190
2Txslots EGPRS 1900	High/810	Towards Ground	15mm	0.494
UMTS Band II	High/9538	Towards Ground	15mm	0.572
UMTS Band V	High/4233	Towards Ground	15mm	0.917

1.7. Test Date

The first test performed from April 23, 2012 to April 24, 2012.

The second test performed from August 18, 2012 to August 19, 2012.

2. SAR Measurements System Configuration

2.1. SAR Measurement Set-up

The DASY5 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 DASY5 measurement server.
- The DASY5 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
- DASY5 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.

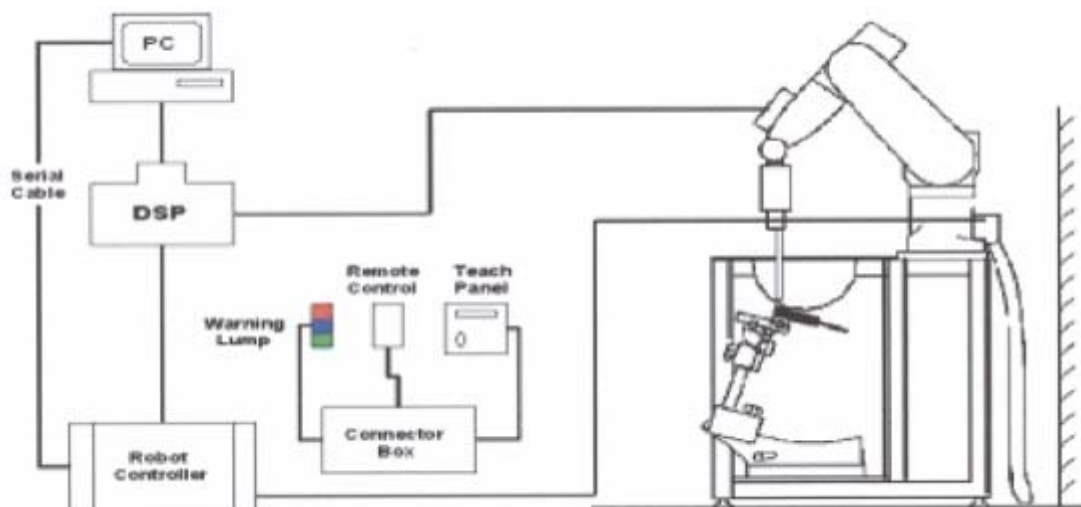


Figure 1 SAR Lab Test Measurement Set-up

2.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4/ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

2.2.1. 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 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.



Figure 2. EX3DV4 E-field Probe



Figure 3. EX3DV4 E-field probe

2.2.2. ES3DV3 Probe Specification

Construction Symmetrical design with triangular core
Interleaved sensors
Built-in shielding against static charges
PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

Calibration ISO/IEC 17025 calibration service available

Frequency 10 MHz to 4 GHz
Linearity: ± 0.2 dB
(30 MHz to 4 GHz)

Directivity ± 0.2 dB in HSL (rotation around probe axis)
 ± 0.3 dB in tissue material (rotation normal to probe axis)

Dynamic Range 5 μ W/g to > 100 mW/g Linearity:
 ± 0.2 dB

Dimensions Overall length: 330 mm (Tip: 20 mm)
Tip diameter: 3.9 mm (Body: 12 mm)
Distance from probe tip to dipole centers: 2.0 mm

Application General dosimetry up to 4 GHz
Dosimetry in strong gradient fields
Compliance tests of mobile phones



Figure 4.ES3DV3 E-field Probe



Figure 5. ES3DV3 E-field probe

2.2.3. E-field Probe Calibration

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

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

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

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

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

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

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

2.3. Other Test Equipment

2.3.1. Device Holder for Transmitters

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

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

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



Figure 6 Device Holder

2.3.2. Phantom

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

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



Figure 7 Generic Twin Phantom

2.4. Scanning Procedure

The DASY5 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 DASY5 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

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 14 of 198

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 5x5x7 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 DASY5 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 5x5x7 measurement points with 8mm resolution amounting to 175 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 5x5x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

2.5. Data Storage and Evaluation

2.5.1. Data Storage

The DASY5 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.

2.5.2. Data Evaluation by SEMCAD

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

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

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

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

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

Report No.: RXA1208-0616SAR

Page 16 of 198

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.

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

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

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

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

ρ = equivalent tissue density in g/cm³

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

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

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

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

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

3. Laboratory Environment

Table 1: The Requirements of the Ambient Conditions

Temperature	Min. = 18°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.	

4. Tissue-equivalent Liquid

4.1. Tissue-equivalent Liquid Ingredients

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 2 and table 3 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

Table 2: Composition of the Head Tissue Equivalent Matter

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

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

Table 3: Composition of the Body Tissue Equivalent Matter

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

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

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

4.2. Tissue-equivalent Liquid Properties

Table 4: Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp °C
		ϵ_r	σ (s/m)	
835MHz (head)	Target value ± 5% window	41.50 39.43 — 43.58	0.90 0.86 — 0.95	22.0
	Measurement value 2012-4-23	41.39	0.90	21.5
1900MHz (head)	Target value ±5% window	40.00 38.00 — 42.00	1.40 1.33 — 1.47	22.0
	Measurement value 2012-4-23	40.82	1.41	21.5
	Measurement value 2012-8-18	40.85	1.39	21.5

Table 5: Dielectric Performance of Body Tissue Simulating Liquid

Frequency	Description	Dielectric Parameters		Temp °C
		ϵ_r	σ (s/m)	
835MHz (body)	Target value ±5% window	55.20 52.44 — 57.96	0.97 0.92 — 1.02	22.0
	Measurement value 2012-4-23	54.24	0.99	21.5
	Measurement value 2012-8-19	54.54	0.97	21.5
1900MHz (body)	Target value ±5% window	53.30 50.64 — 55.97	1.52 1.44 — 1.60	22.0
	Measurement value 2012-8-18	53.12	1.52	21.5

5. System Check

5.1. Description of 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 6 and table 7.

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

System check is performed regularly on all frequency bands where tests are performed with the DASY5 system.

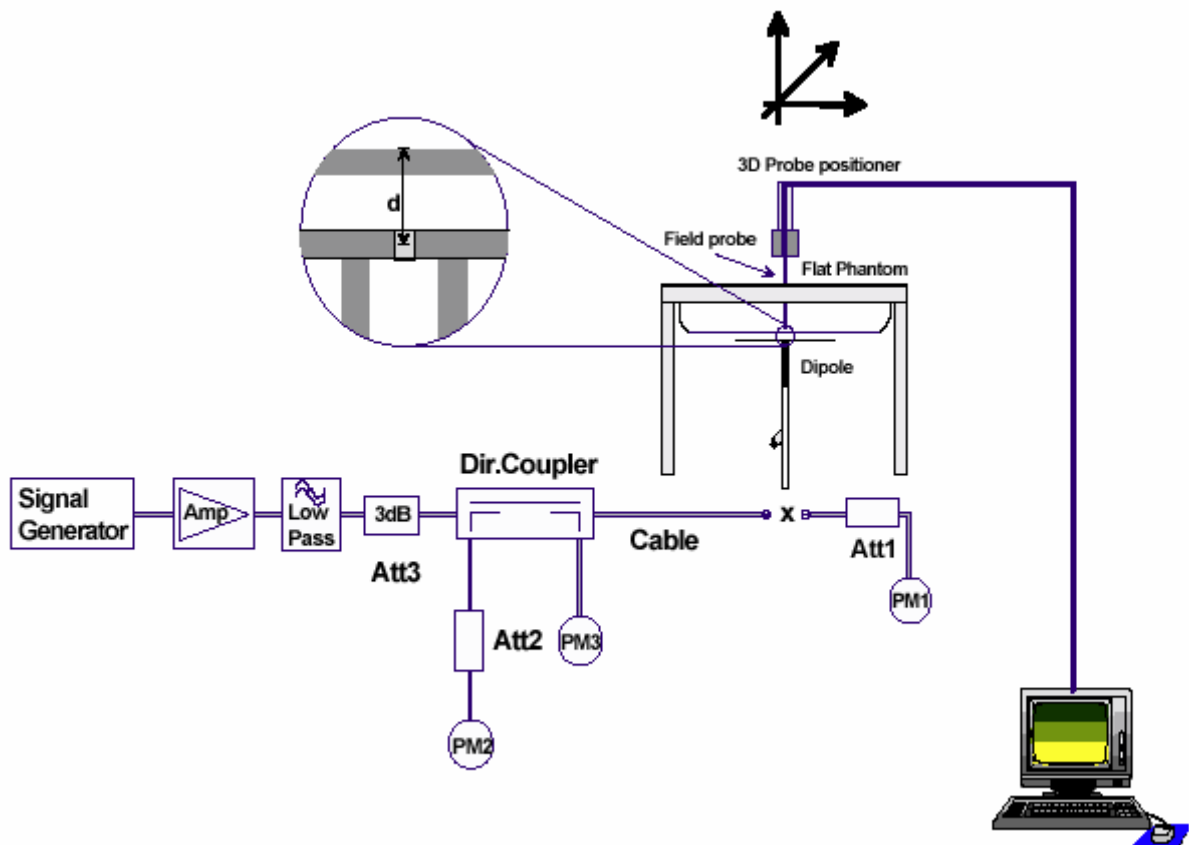


Figure 8 System Check Set-up

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

5.2. System Check Results

Table 6: System Check in Head Tissue Simulating Liquid

Frequency	Test Date	Dielectric Parameters		Temp (°C)	250mW Measured SAR _{1g}	1W Normalized SAR _{1g}	1W Target SAR _{1g} (±10% Deviation)
		ε _r	σ(s/m)				
835MHz	2012-4-23	41.39	0.90	21.5	2.45	9.80	9.34 (8.41~10.27)
1900MHz	2012-4-23	40.82	1.41	21.5	9.52	38.08	40.30 (36.27~ 44.33)
	2012-8-18	40.85	1.39	21.5	9.60	38.40	

Note: 1. The graph results see ANNEX B.
2. Target Values used derive from the calibration certificate.

Table 7: System Check in Body Tissue Simulating Liquid

Frequency	Test Date	Dielectric Parameters		Temp (°C)	250mW Measured SAR _{1g}	1W Normalized SAR _{1g}	1W Target SAR _{1g} (±10% Deviation)
		ε _r	σ(s/m)				
835MHz	2012-4-23	54.24	0.99	21.5	2.50	10.00	9.46 (8.51~10.41)
	2012-8-19	54.54	0.97	21.5	2.48	9.92	
1900MHz	2012-8-18	53.12	1.52	21.5	10.50	42.00	41.70 (37.53~45.87)

Note: 1. The graph results see ANNEX B.
2. Target Values used derive from the calibration certificate.

6. Operational Conditions during Test

6.1. 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 Radiofrequency 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 UMTS Band II, to 4132, 4183 and 4233 in the case of UMTS 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. 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.

6.2. Test Positions

6.2.1. Against Phantom Head

Measurements were made in "cheek" and "tilt" positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 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".

6.2.2. Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. The distance between the device and the phantom was kept 15mm.

6.3. Test Configuration

6.3.1. 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” for GSM 850, set to “0” for GSM 1900. Since the GPRS class is 10 for this EUT, it has at most 2 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 5; the EGPRS class is 10 for this EUT, it has at most 2 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 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.

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 8: 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

6.3.2. UMTS Test Configuration

6.3.2.1. 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 up bits 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.

6.3.2.2. Head SAR Measurements

SAR for head exposure configurations in voice mode is measured using a 12.2kbps RMC with TPC bits configured to all up bits. 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.

6.3.2.3. 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 up bits. 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.

6.3.3. 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 and 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 (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) 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 9: Subtests for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

Note2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1.A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 8$ ($A_{hs} = 30/15$) with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} =$

TA Technology (Shanghai) Co., Ltd.

Test Report

7 ($A_{HS}=24/15$) with $\beta_{HS}=24/15*\beta_c$.

Note3: CM=1 for $\beta_c/\beta_d =12/15$, $\beta_{HS}/\beta_c=24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d 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 (TFC1,TF1) to $\beta_c=11/15$ and $\beta_d=15/15$.

Table 10: 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 11: 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

6.3.4. HSUPA Test Configuration

Body SAR is also measured for HSPA when the maximum average output of each RF channel with HSPA active is at least ¼ dB higher than that measured without HSPA using 12.2 kbps RMC and the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.2 kbps RMC without HSPA.⁴⁰

Due to inner loop power control requirements in HSPA, a commercial communication test set should be used for the output power and SAR tests.⁴¹ The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA should be configured according to the β values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of 3 G device.

Table 12: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: $\Delta_{ACK}, \Delta_{NACK}$ and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

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

Table 13: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	11484	5.76
	4	4	10		20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.
 UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM.
 (TS25.306-7.3.0)

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

7. Test Results

7.1. Conducted Power Results

Table 14: Conducted Power Measurement Results

GSM 850		Burst Conducted Power(dBm)				Average power(dBm)		
		Channel 128	Channel 190	Channel 251		Channel 128	Channel 190	Channel 251
GSM		32.97	32.79	32.66	-9.03dB	23.94	23.76	23.63
GPRS (GMSK)	1Txslot	32.94	32.76	32.63	-9.03dB	23.91	23.73	23.60
	2Txslots	32.03	31.82	31.61	-6.02dB	26.01	25.8	25.59
EGPRS (GMSK)	1Txslot	32.93	32.74	32.63	-9.03dB	23.9	23.71	23.60
	2Txslots	32.01	31.81	31.6	-6.02dB	25.99	25.79	25.58
GSM 1900		Burst Conducted Power(dBm)				Average power(dBm)		
		Channel 512	Channel 661	Channel 810		Channel 512	Channel 661	Channel 810
GSM		29.49	29.64	30.11	-9.03dB	20.46	20.61	21.08
GPRS (GMSK)	1Txslot	29.47	29.63	30.1	-9.03dB	20.44	20.6	21.07
	2Txslots	28.32	28.67	29.19	-6.02dB	22.3	22.65	23.17
EGPRS (GMSK)	1Txslot	29.47	29.63	30.08	-9.03dB	20.44	20.6	21.05
	2Txslots	28.31	28.67	29.19	-6.02dB	22.29	22.65	23.17

Note:

1) Division Factors

To average the power, the division factor is as follows:

1Txslot = 1 transmit time slot out of 8 time slots

=> conducted power divided by (8/1) => -9.03 dB

2Txslots = 2 transmit time slots out of 8 time slots

=> conducted power divided by (8/2) => -6.02 dB

2) Average power numbers

The maximum power numbers are marks in bold.

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

Report No.: RXA1208-0616SAR

Page 29 of 198

UMTS Band II		Conducted Power (dBm)		
		Channel 9262	Channel 9400	Channel 9538
RMC	12.2kbps RMC	23.04	22.93	22.95
	64kbps RMC	23.02	22.88	22.89
	144kbps RMC	23.04	22.92	22.93
	384kbps RMC	23.04	22.93	22.93
HSDPA	Sub - Test 1	20.94	20.94	20.96
	Sub - Test 2	20.95	20.93	20.98
	Sub - Test 3	20.97	20.94	20.98
	Sub - Test 4	20.95	20.94	20.99
HSUPA	Sub - Test 1	19.95	19.93	20.01
	Sub - Test 2	18.67	18.66	18.72
	Sub - Test 3	19.19	19.15	19.21
	Sub - Test 4	18.66	18.64	18.7
	Sub - Test 5	19.98	19.95	20.02
UMTS Band V		Conducted Power (dBm)		
		Channel 4132	Channel 4183	Channel 4233
RMC	12.2kbps RMC	23.39	23.25	23.22
	64kbps RMC	23.37	23.24	23.22
	144kbps RMC	23.35	23,21	23,2
	384kbps RMC	23.36	23.23	23,19
HSDPA	Sub - Test 1	21.35	21.25	21.16
	Sub - Test 2	21.34	21.22	21.14
	Sub - Test 3	21.35	21.25	21.16
	Sub - Test 4	21.33	21.24	21.18
HSUPA	Sub - Test 1	20.14	20.04	20
	Sub - Test 2	18.81	18.7	18.69
	Sub - Test 3	19.33	19.21	19.2
	Sub - Test 4	18.8	18.72	18.71
	Sub - Test 5	20.12	20.03	19.98

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 30 of 198

7.2. SAR Test Results

7.2.1. 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 with Battery 1					
Left hand, Touch Cheek	High/251	0.555	0.745	0.043	Figure 15
	Middle/190	0.478	0.647	0.119	Figure 16
	Low/128	0.390	0.523	0.055	Figure 17
Left hand, Tilt 15 Degree	High/251	0.316	0.422	-0.016	Figure 18
	Middle/190	0.292	0.388	0.059	Figure 19
	Low/128	0.201	0.266	-0.008	Figure 20
Right hand, Touch Cheek	High/251	0.553	0.732	0.042	Figure 21
	Middle/190	0.481	0.637	0.144	Figure 22
	Low/128	0.379	0.500	0.029	Figure 23
Right hand, Tilt 15 Degree	High/251	0.299	0.399	0.015	Figure 24
	Middle/190	0.263	0.349	0.003	Figure 25
	Low/128	0.175	0.232	-0.009	Figure 26
Test position of Body with Battery 1 (Distance 15mm)					
Towards Ground (2Txslots)	High/251	0.871	1.190	-0.076	Figure 27
	Middle/190	0.802(max.cube)	1.100(max.cube)	-0.010	Figure 28
	Low/128	0.830	1.140	-0.044	Figure 29
Towards Phantom (2Txslots)	High/251	0.500	0.677	-0.009	Figure 30
	Middle/190	0.481	0.651	-0.075	Figure 31
	Low/128	0.457	0.616	-0.037	Figure 32
Worst Case Position of Body with EGPRS (Battery 1, GMSK, Distance 15mm)					
Towards Ground (2Txslots)	High/251	0.863(max.cube)	1.180(max.cube)	-0.025	Figure 33
Worst Case Position of Body with Stereo Headset 1 and Battery 1 (Distance 15mm)					
Towards Ground (GSM)	High/251	0.512	0.703	-0.099	Figure 34
Worst Case Position of Body with Stereo Headset 2 and Battery 1 (Distance 15mm)					
Towards Ground (GSM)	High/251	0.499	0.688	-0.056	Figure 35

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

Report No.: RXA1208-0616SAR

Page 31 of 198

Worst Case Position of Body with Battery 2 (Distance 15mm)

Towards Ground (2Txslots)	High/251	0.809	1.110	-0.057	Figure 36
---------------------------	----------	-------	-------	--------	-----------

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

2. 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 ($< 0.8\text{W/kg}$), testing at the high and low channels is optional.
3. When multiple slots can be used, SAR should be tested to account for the maximum source-based time-averaged output power.
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.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above.

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

Report No.: RXA1208-0616SAR

Page 32 of 198

7.2.2. GSM 1900 (GPRS/EGPRS)

Table 16: 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 with Battery 1					
Left hand, Touch Cheek	High/810	0.444	0.754	0.064	Figure 37
	Middle/661	0.503	0.835	0.098	Figure 38
	Low/512	0.490	0.799	0.105	Figure 39
Left hand, Tilt 15 Degree	High/810	0.123	0.207	0.050	Figure 40
	Middle/661	0.126	0.209	0.074	Figure 41
	Low/512	0.110	0.180	-0.038	Figure 42
Right hand, Touch Cheek	High/810	0.396(max.cube)	0.678(max.cube)	0.050	Figure 43
	Middle/661	0.432(max.cube)	0.722(max.cube)	0.042	Figure 44
	Low/512	0.462	0.763	0.093	Figure 45
Right hand, Tilt 15 Degree	High/810	0.148	0.250	0.000	Figure 46
	Middle/661	0.154	0.257	0.023	Figure 47
	Low/512	0.115	0.189	0.072	Figure 48
Test position of Body with Battery 1 (Distance 15mm)					
Towards Ground (2Txslots)	High/810	0.299(max.cube)	0.472(max.cube)	0.070	Figure 49
	Middle/661	0.223	0.357	-0.034	Figure 50
	Low/512	0.177	0.285	0.054	Figure 51
Towards Phantom (2Txslots)	High/810	0.262	0.415	-0.028	Figure 52
	Middle/661	0.203	0.322	-0.001	Figure 53
	Low/512	0.158	0.252	-0.068	Figure 54
Worst Case Position of Body with EGPRS (Battery 1, GMSK, Distance 15mm)					
Towards Ground (2Txslots)	High/810	0.310(max.cube)	0.494(max.cube)	-0.006	Figure 55
Worst Case Position of Body with Stereo Headset 1 and Battery 1 (Distance 15mm)					
Towards Ground (GSM)	High/810	0.231	0.371	-0.012	Figure 56
Worst Case Position of Body with Stereo Headset 2 and Battery 1 (Distance 15mm)					
Towards Ground (GSM)	High/810	0.211	0.338	0.085	Figure 57
Note: 1.The value with blue color is the maximum SAR Value of each test band.					

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

Report No.: RXA1208-0616SAR

Page 33 of 198

2. 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 ($< 0.8\text{W/kg}$), testing at the high and low channels is optional.
3. When multiple slots can be used, SAR should be tested to account for the maximum source-based time-averaged output power.
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.
5. The (max.cube) labeling indicates that during the grid scanning an additional peak was found which was within 2.0dB of the highest peak. The value of the highest cube is given in the table above.

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 34 of 198

7.2.3. UMTS Band II (WCDMA/HSDPA/HSUPA)

Table 17: SAR Values [UMTS Band II (WCDMA/HSDPA/HSUPA)]

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 with Battery 1					
Left hand, Touch Cheek	High/9538	0.760	1.230	0.076	Figure 58
	Middle/9400	0.778	1.250	0.009	Figure 59
	Low/9262	0.744	1.230	0.050	Figure 60
Left hand, Tilt 15 Degree	High/9538	0.152	0.259	-0.016	Figure 61
	Middle/9400	0.153	0.257	0.059	Figure 62
	Low/9262	0.189	0.311	0.010	Figure 63
Right hand, Touch Cheek	High/9538	0.711	1.190	0.000	Figure 64
	Middle/9400	0.742	1.230	0.004	Figure 65
	Low/9262	0.735	1.210	0.019	Figure 66
Right hand, Tilt 15 Degree	High/9538	0.182	0.312	0.029	Figure 67
	Middle/9400	0.180	0.305	0.049	Figure 68
	Low/9262	0.172	0.290	-0.006	Figure 69
Worst Case Position of Head with Battery 2					
Left hand, Touch Cheek	Middle/9400	0.825	1.330	-0.051	Figure 70
Test position of Body with Battery 1 (Distance 15mm)					
Towards Ground	High/9538	0.354(max.cube)	0.570(max.cube)	0.026	Figure 71
	Middle/9400	0.346(max.cube)	0.557(max.cube)	-0.008	Figure 72
	Low/9262	0.324	0.521	0.001	Figure 73
Towards Phantom	High/9538	0.311	0.496	-0.036	Figure 74
	Middle/9400	0.317	0.505	-0.136	Figure 75
	Low/9262	0.307	0.488	-0.035	Figure 76
Worst Case Position of Body with Stereo Headset 1 and Battery 1 (Distance 15mm)					
Towards Ground	High/9538	0.357(max.cube)	0.572(max.cube)	-0.035	Figure 77
Worst Case Position of Body with Stereo Headset 2 and Battery 1 (Distance 15mm)					
Towards Ground	High/9538	0.353(max.cube)	0.563(max.cube)	0.035	Figure 78

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

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

Report No.: RXA1208-0616SAR

Page 35 of 198

2. 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 ($< 0.8\text{W/kg}$), testing at the high and low channels is optional.
3. WCDMA mode were tested under RMC 12.2kbps with HSPA (HSDPA/HSUPA) inactive per KDB Publication 941225 D01. HSPA (HSDPA/HSUPA) SAR for body was not required since the average output power of the HSPA (HSDPA/HSUPA) subtests was not more than 0.25 dB higher than the RMC level and the maximum SAR for 12.2kbps RMC was less than 75% SAR limit.
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.

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 36 of 198

7.2.4. UMTS Band V (WCDMA/HSDPA/HSUPA)

Table 18: SAR Values [UMTS Band V (WCDMA/HSDPA/HSUPA)]

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 with Battery 1					
Left hand, Touch Cheek	High/4233	0.644	0.864	0.041	Figure 79
	Middle/4183	0.501	0.674	0.021	Figure 80
	Low/4132	0.540	0.725	0.034	Figure 81
Left hand, Tilt 15 Degree	High/4233	0.366	0.488	0.084	Figure 82
	Middle/4183	0.293	0.389	0.008	Figure 83
	Low/4132	0.268	0.355	0.030	Figure 84
Right hand, Touch Cheek	High/4233	0.733	0.971	-0.018	Figure 85
	Middle/4183	0.557	0.741	-0.172	Figure 86
	Low/4132	0.630	0.834	0.020	Figure 87
Right hand, Tilt 15 Degree	High/4233	0.377	0.503	0.026	Figure 88
	Middle/4183	0.305	0.405	0.031	Figure 89
	Low/4132	0.327	0.435	0.006	Figure 90
Test position of Body with Battery 1 (Distance 15mm)					
Towards Ground	High/4233	0.666	0.917	0.033	Figure 91
	Middle/4183	0.621	0.856	-0.006	Figure 92
	Low/4132	0.653	0.902	-0.007	Figure 93
Towards Phantom	High/4233	0.444	0.602	0.006	Figure 94
	Middle/4183	0.363	0.491	0.008	Figure 95
	Low/4132	0.392	0.531	-0.001	Figure 96
Worst Case Position of Body with Stereo Headset 1 and Battery 1 (Distance 15mm)					
Towards Ground	High/4233	0.577(max.cube)	0.797(max.cube)	0.038	Figure 97
Worst Case Position of Body with Stereo Headset 2 and Battery 1 (Distance 15mm)					
Towards Ground	High/4233	0.546(max.cube)	0.753(max.cube)	0.027	Figure 98

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

2. 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.

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

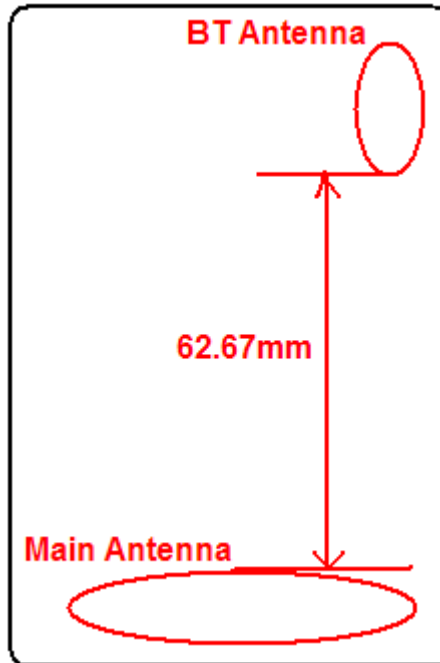
Report No.: RXA1208-0616SAR

Page 37 of 198

3. WCDMA mode were tested under RMC 12.2kbps with HSPA (HSDPA/HSUPA) inactive per KDB Publication 941225 D01. HSPA (HSDPA/HSUPA) SAR for body was not required since the average output power of the HSPA (HSDPA/HSUPA) subtests was not more than 0.25 dB higher than the RMC level and the maximum SAR for 12.2kbps RMC was less than 75% SAR limit.
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.

7.2.5. Bluetooth Function

The distance between BT antenna and GSM/UMTS antenna is $>5\text{cm}$. The location of the antennas inside EUT is shown in Annex J:



The output power of BT antenna is as following:

Channel	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz
GFSK(dBm)	6.09	6.19	7.97
EDR2M-4_DQPSK(dBm)	5.95	6.05	7.84
EDR3M-8DPSK(dBm)	6.30	6.44	8.26

Output Power Thresholds for Unlicensed Transmitters

	2.45	5.15 - 5.35	5.47 - 5.85	GHz
P_{Ref}	12	6	5	mW
Device output power should be rounded to the nearest mW to compare with values specified in this table.				

Stand-alone SAR

According to the output power measurement result and the distance between BT antenna and GSM/UMTS antenna we can draw the conclusion that:

BT antenna is $>5\text{cm}$ from GSM/UMTS antenna, stand-alone SAR are not required for BT, because the output power of BT transmitter is $\leq 2P_{\text{Ref}}=13.8\text{dBm}$.

TA Technology (Shanghai) Co., Ltd.

Test Report

Report No.: RXA1208-0616SAR

Page 39 of 198

Simultaneous SAR

About BT and GSM/UMTS Antenna,

SAR _{1g} (W/kg)						
Test Position	GSM 850	GSM 1900	UMTS Band II	UMTS Band V	BT	MAX. Σ SAR _{1g}
Left hand, Touch cheek	0.745	0.835	1.330	0.864	0	1.330
Left hand, Tilt 15 Degree	0.422	0.209	0.311	0.488	0	0.488
Right hand, Touch cheek	0.732	0.763	1.230	0.971	0	1.230
Right hand, Tilt 15 Degree	0.399	0.257	0.312	0.503	0	0.503
Body, Towards Ground	1.190	0.494	0.572	0.917	0	1.190
Body, Towards Phantom	0.677	0.415	0.505	0.602	0	0.677

Note: 1. The value with blue color is the maximum Σ SAR_{1g} Value.

2. MAX. Σ SAR_{1g} = Unlicensed SAR_{MAX} + Licensed SAR_{MAX}

3. Stand alone SAR for BT is not required. Its SAR is considered 0 in the 1-g SAR summing process to determine simultaneous transmission SAR evaluation requirements.

BT antenna is > 5cm from GSM/UMTS Antenna. (GSM/UMTS Antenna SAR_{MAX})1.330 +(BT Antenna SAR_{MAX})0 =1.330 <1.6, So the Simultaneous SAR are not required for BT and GSM/UMTS antenna.

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

Report No.: RXA1208-0616SAR

Page 40 of 198

8. 700MHz to 3GHz Measurement Uncertainty

No.	source	Type	Uncertainty Value (%)	Probability Distribution	k	c _i	Standard uncertainty u _i (%)	Degree of freedom V _{eff} or V _i
1	System repetivity	A	0.5	N	1	1	0.5	9
Measurement system								
2	-probe calibration	B	6.0	N	1	1	6.0	∞
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	71
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	∞

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

Report No.: RXA1208-0616SAR

Page 41 of 198

21	-liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.64	1.8	∞
22	-liquid conductivity (measurement uncertainty)	B	2.5	N	1	0.64	1.6	9
23	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
24	-liquid permittivity (measurement uncertainty)	B	2.5	N	1	0.6	1.5	9
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{24} c_i^2 u_i^2}$					11.50	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N	k=2	23.00		

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

Report No.: RXA1208-0616SAR

Page 42 of 198

9. Main Test Instruments

Table 19: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 12, 2011	One year
02	Dielectric Probe Kit	Agilent 85070E	US44020115	No Calibration Requested	
03	Power meter	Agilent E4417A	GB41291714	March 11, 2012	One year
04	Power sensor	Agilent N8481H	MY50350004	September 25, 2011	One year
05	Power sensor	E9327A	US40441622	September 24, 2011	One year
06	Signal Generator	HP 8341B	2730A00804	September 12, 2011	One year
07	Dual directional coupler	778D-012	50519	March 26, 2012	One year
08	Amplifier	IXA-020	0401	No Calibration Requested	
09	BTS	E5515C	MY48360988	December 2, 2011	One year
10	E-field Probe	EX3DV4	3753	January 4, 2012	One year
11	E-field Probe	ES3DV3	3189	June 22, 2012	One year
12	DAE	DAE4	871	November 22,2011	One year
13	DAE	DAE4	1317	January 23, 2012	One year
14	Validation Kit 835MHz	D835V2	4d020	August 26, 2011	One year
15	Validation Kit 1900MHz	D1900V2	5d060	August 31, 2011	One year
16	Temperature Probe	JM222	AA1009129	March 15, 2012	One year
17	Hygrothermograph	WS-1	64591	September 28, 2011	One year

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

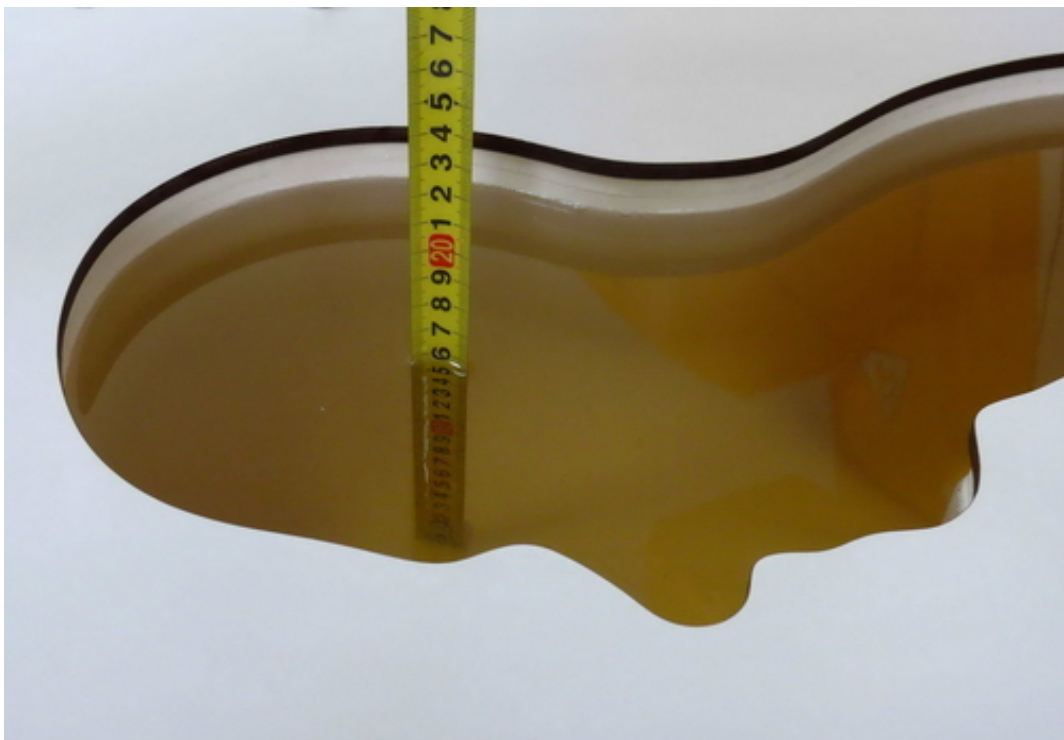
ANNEX A: Test Layout



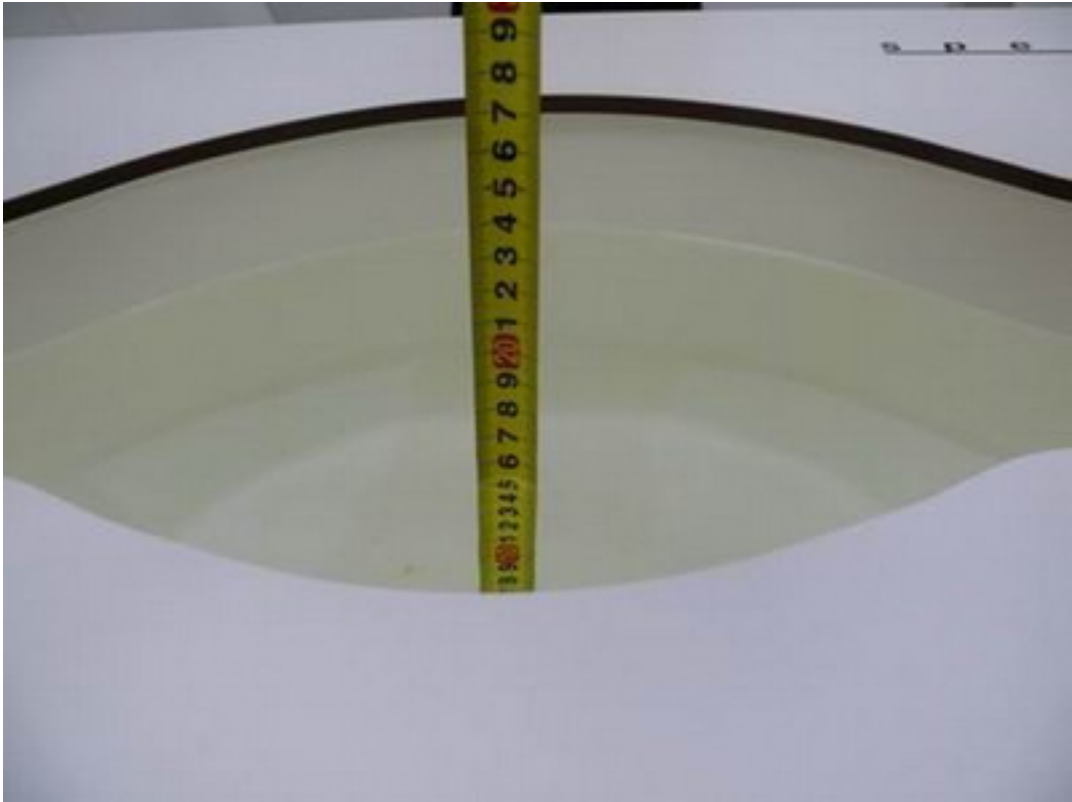
Picture 1: Specific Absorption Rate Test Layout



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)

ANNEX B: System Check Results

System Performance Check at 835 MHz Head TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date/Time: 4/23/2012 11:24:00 PM

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.90$ mho/m; $\epsilon_r = 41.39$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=15mm, Pin=250mW/Area Scan (101x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.63 mW/g

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

Reference Value = 54.7 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.63 mW/g

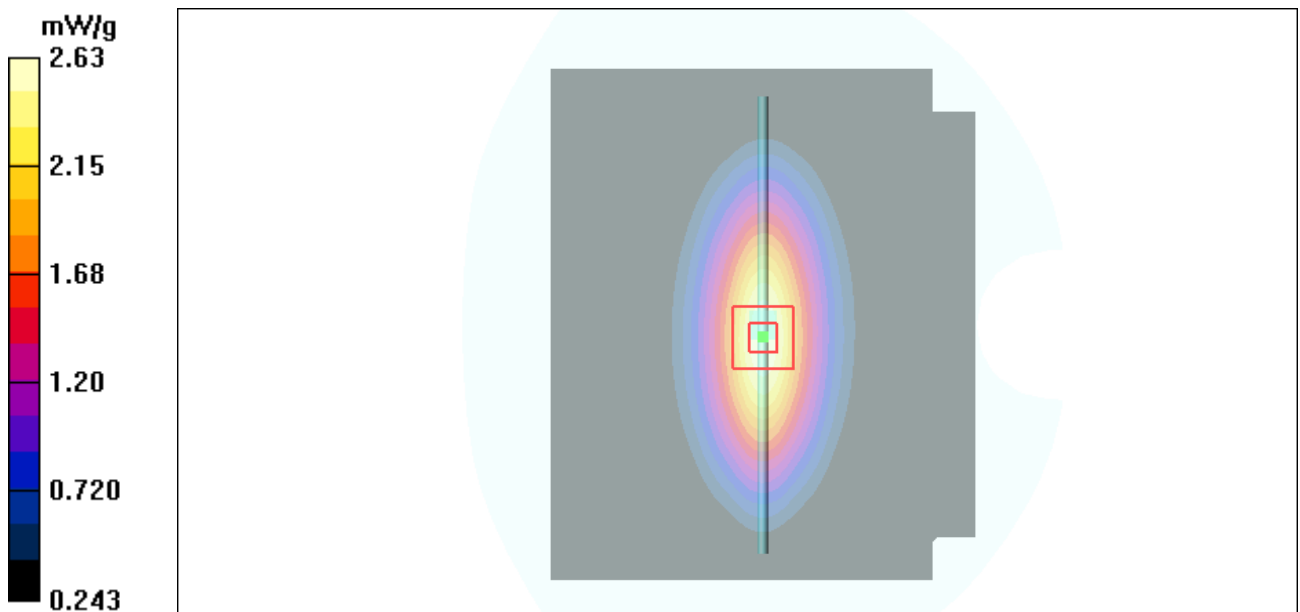


Figure 9 System Performance Check 835MHz 250mW

System Performance Check at 835 MHz Body TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date/Time: 4/23/2012 12:10:41 AM

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 54.24$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.18, 9.18, 9.18); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=15mm, Pin=250mW/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.69 mW/g

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

Reference Value = 52.6 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 3.72 W/kg

SAR(1 g) = 2.5 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.69 mW/g

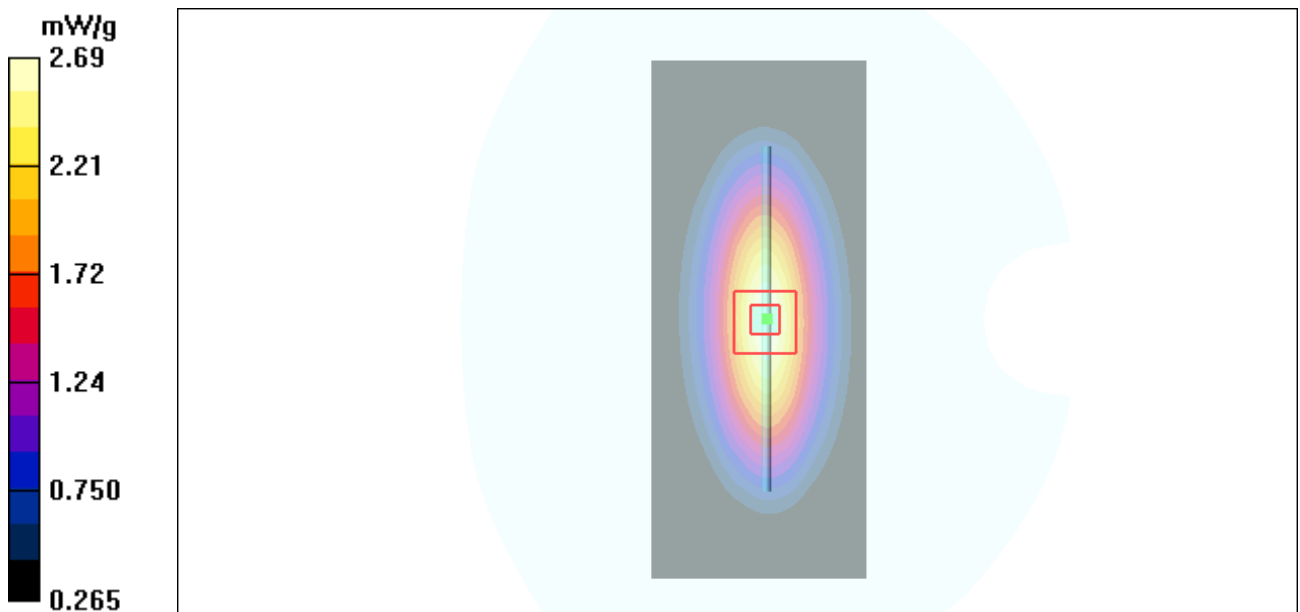


Figure 10 System Performance Check 835MHz 250mW

System Performance Check at 835 MHz Body TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date/Time: 8/19/2012 2:00:53 PM

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 54.54$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=15mm, Pin=250mW/Area Scan (101x121x1): 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 = 52.8 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 3.69 W/kg

SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.64 mW/g

Maximum value of SAR (measured) = 2.68 mW/g

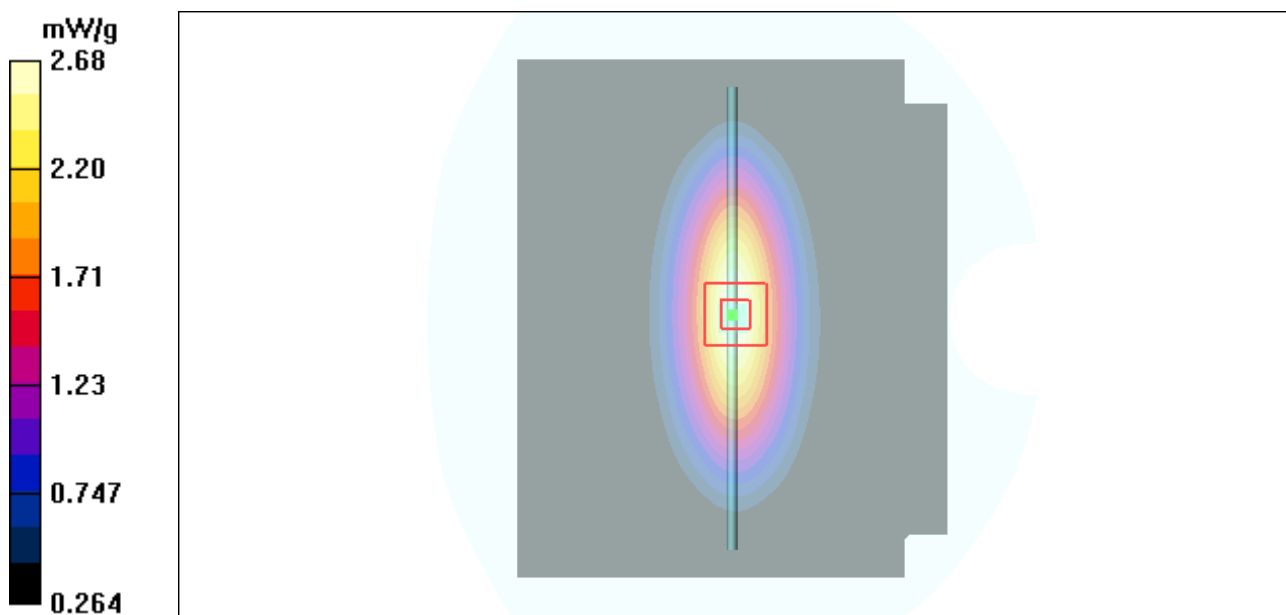


Figure 11 System Performance Check 835MHz 250mW

System Performance Check at 1900 MHz Head TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d060

Date/Time: 4/23/2012 1:30:10 AM

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.82$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.6 mW/g

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

Reference Value = 88.5 V/m; Power Drift = -0.173 dB

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 9.52 mW/g; SAR(10 g) = 4.93 mW/g

Maximum value of SAR (measured) = 10.7 mW/g

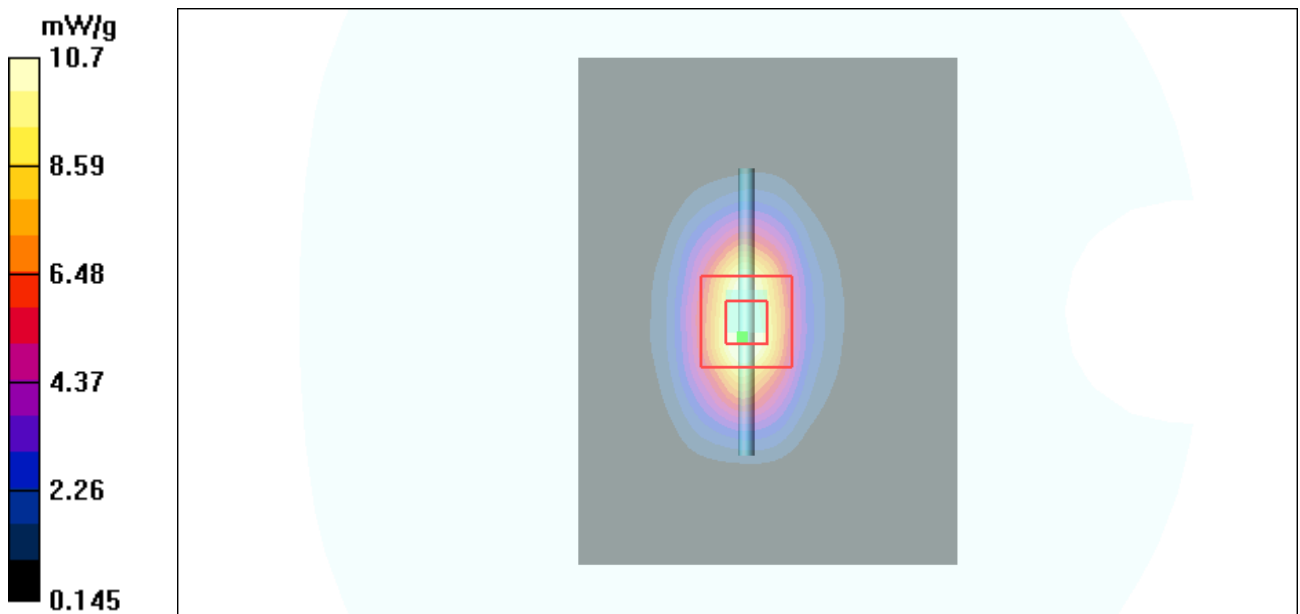


Figure 12 System Performance Check 1900MHz 250mW

System Performance Check at 1900 MHz Head TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d060

Date/Time: 8/18/2012 7:20:54 AM

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.85$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.5 mW/g

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

Reference Value = 87.1 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 18.0 W/kg

SAR(1 g) = 9.6 mW/g; SAR(10 g) = 4.98 mW/g

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

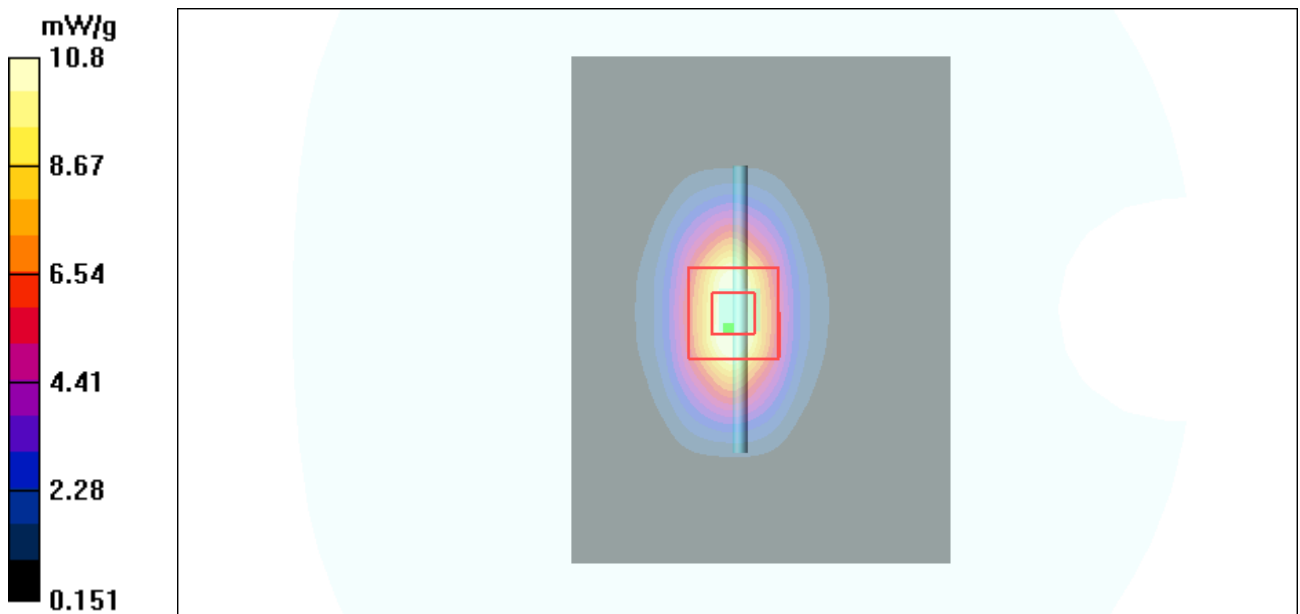


Figure 13 System Performance Check 1900MHz 250mW

System Performance Check at 1900 MHz Body TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d060

Date/Time: 8/18/2012 8:35:48 AM

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 53.12$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.8 mW/g

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

Reference Value = 87.0 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.48 mW/g

Maximum value of SAR (measured) = 11.8 mW/g

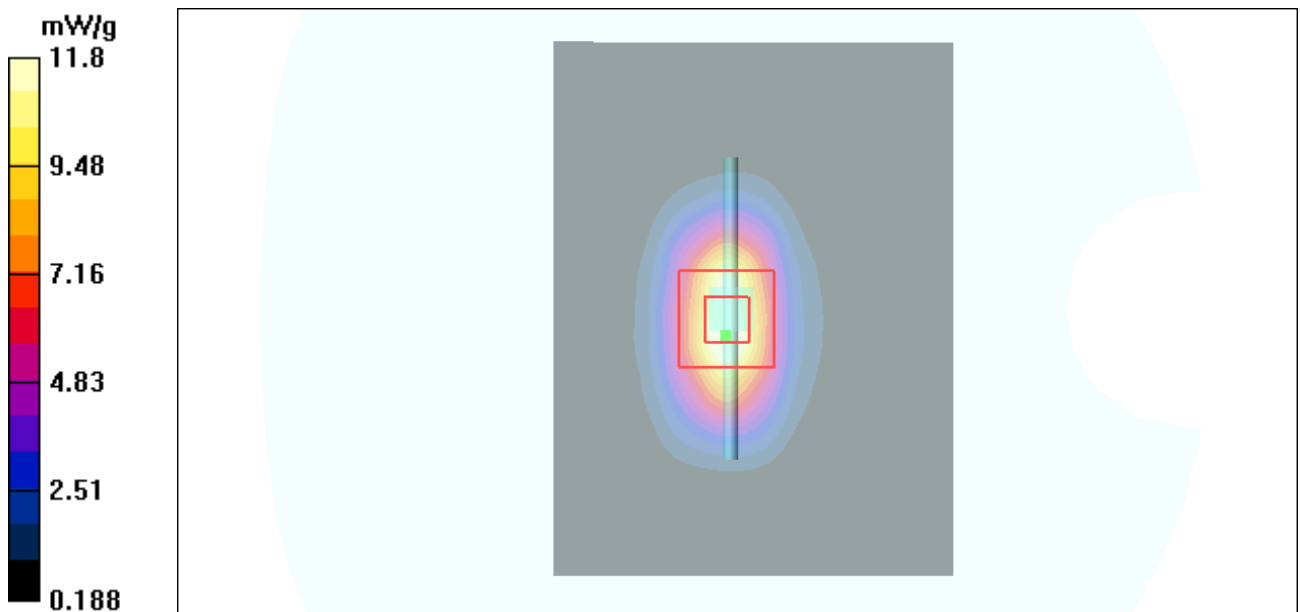


Figure 14 System Performance Check 1900MHz 250mW

ANNEX C: Graph Results

GSM 850 Left Cheek High (Battery 1)

Date/Time: 4/24/2012 3:17:23 AM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.782 mW/g

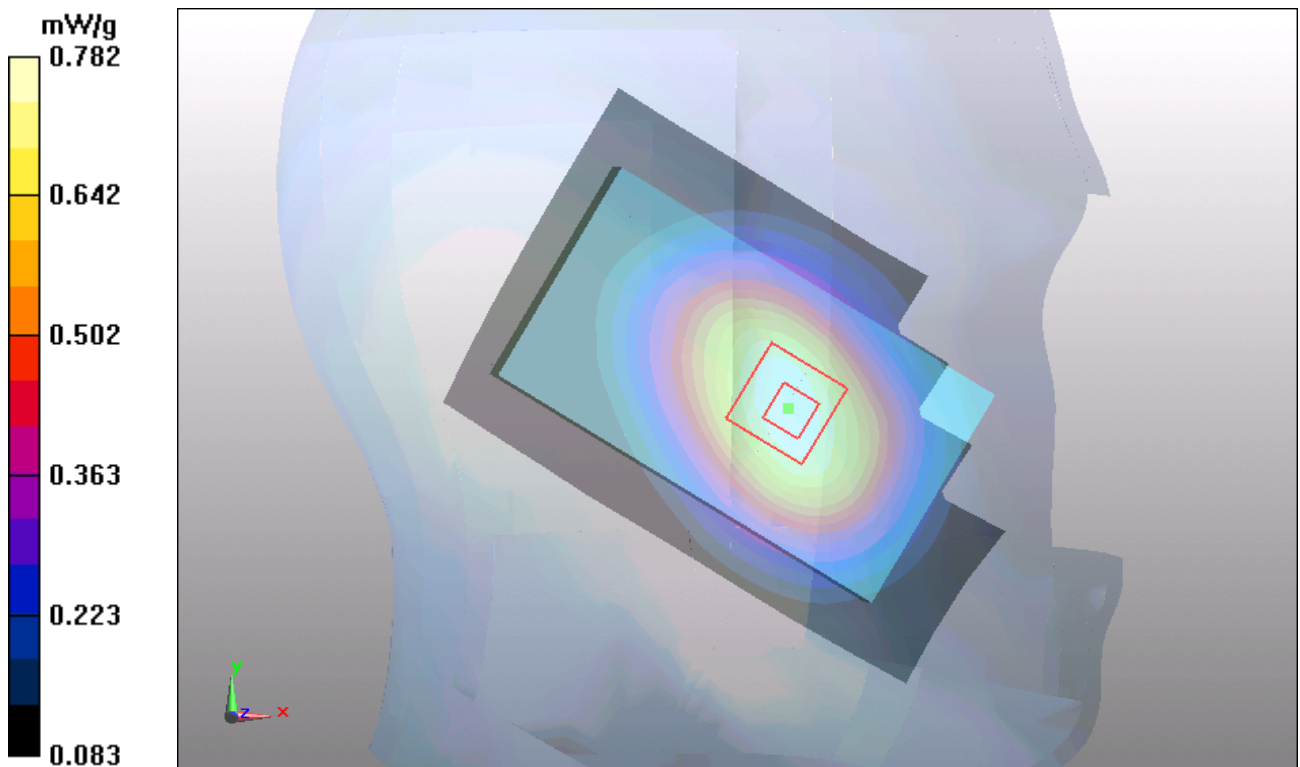
Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.935 W/kg

SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.555 mW/g

Maximum value of SAR (measured) = 0.782 mW/g



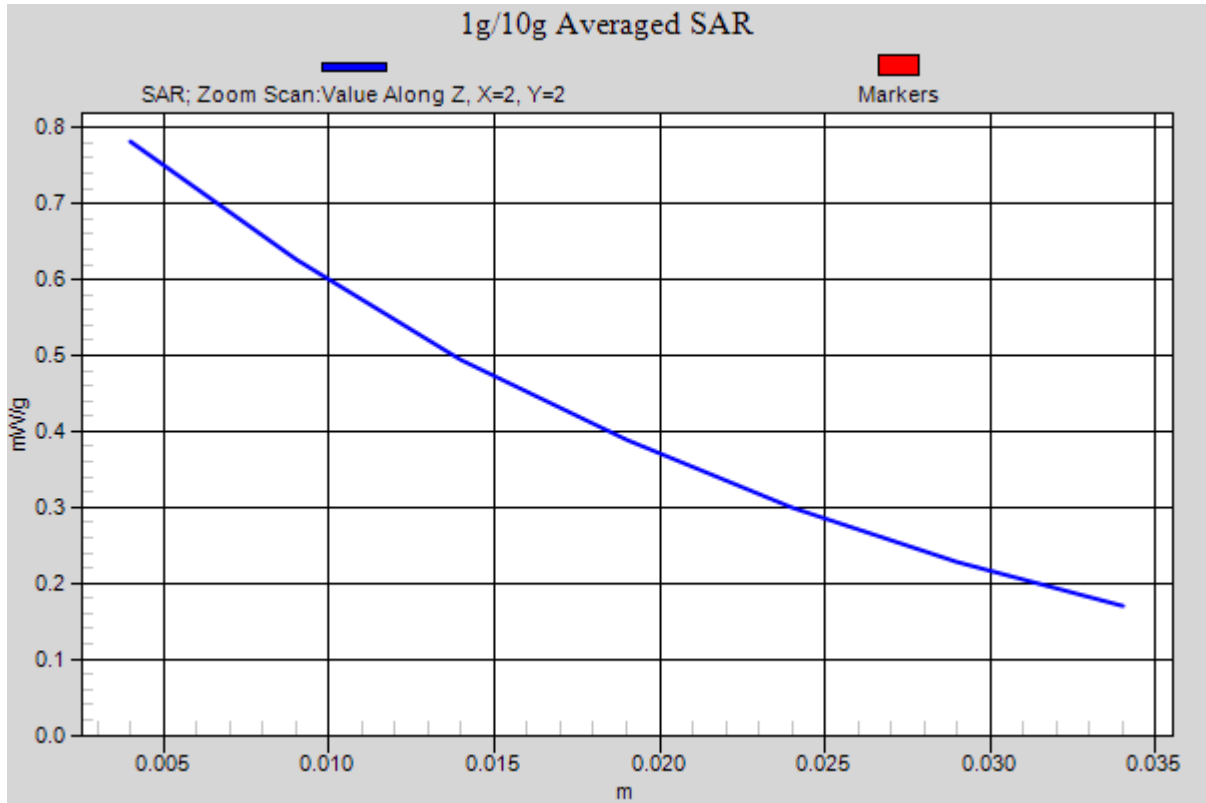


Figure 15 Left Hand Touch Cheek GSM 850 Channel 251

GSM 850 Left Cheek Middle (Battery 1)

Date/Time: 4/24/2012 12:16:56 PM

Communication System: GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 837$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.685 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = 0.119 dB

Peak SAR (extrapolated) = 0.811 W/kg

SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.478 mW/g

Maximum value of SAR (measured) = 0.680 mW/g

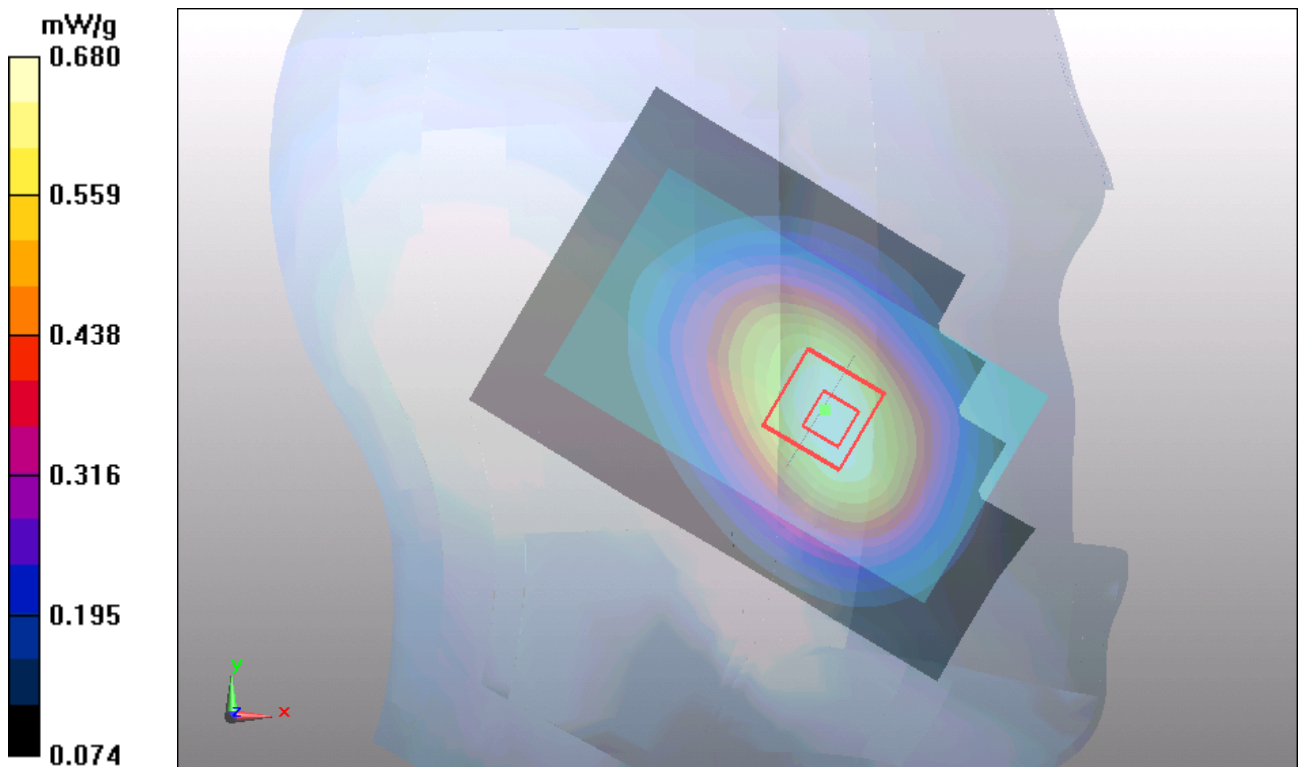


Figure 16 Left Hand Touch Cheek GSM 850 Channel 190

GSM 850 Left Cheek Low (Battery 1)

Date/Time: 4/24/2012 3:34:12 AM,

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 0.663 W/kg

SAR(1 g) = 0.523 mW/g; SAR(10 g) = 0.390 mW/g

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

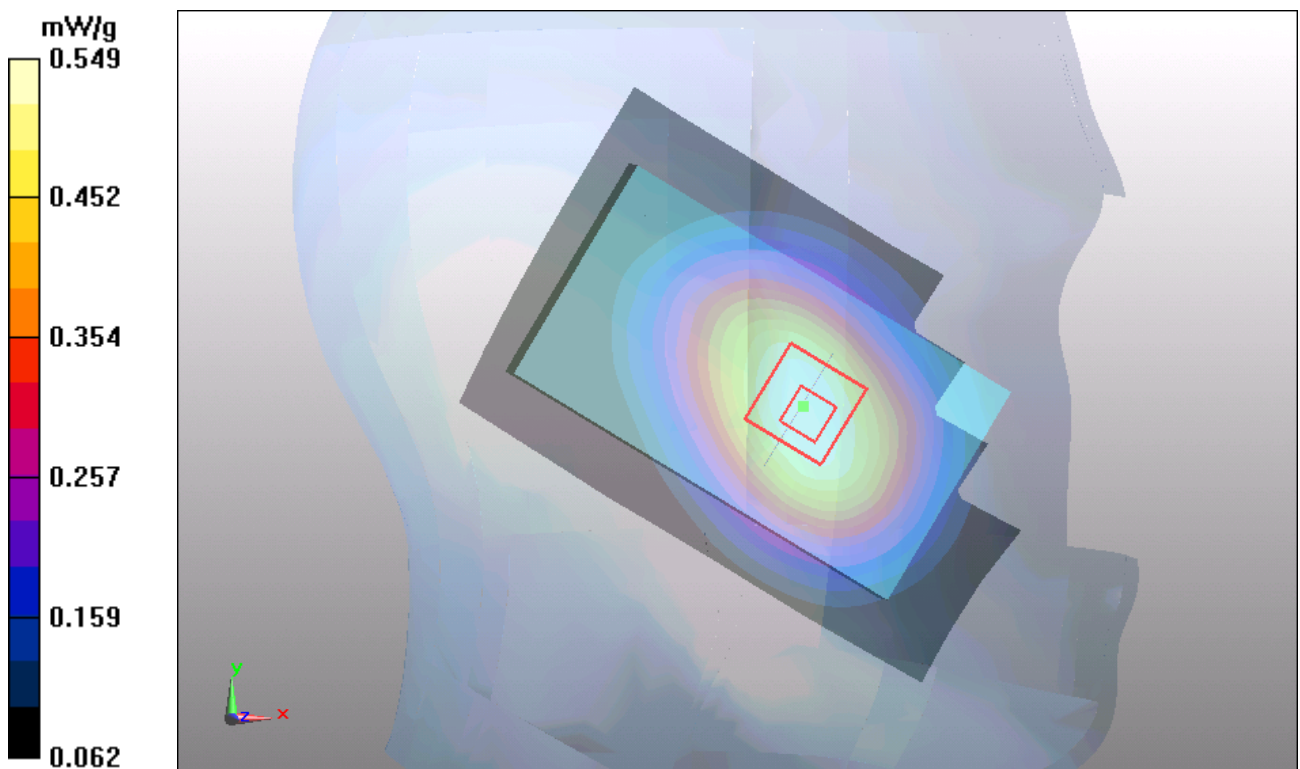


Figure 17 Left Hand Touch Cheek GSM 850 Channel 128

GSM 850 Left Tilt High (Battery 1)

Date/Time: 4/24/2012 4:51:27 AM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.442 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.532 W/kg

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 0.445 mW/g

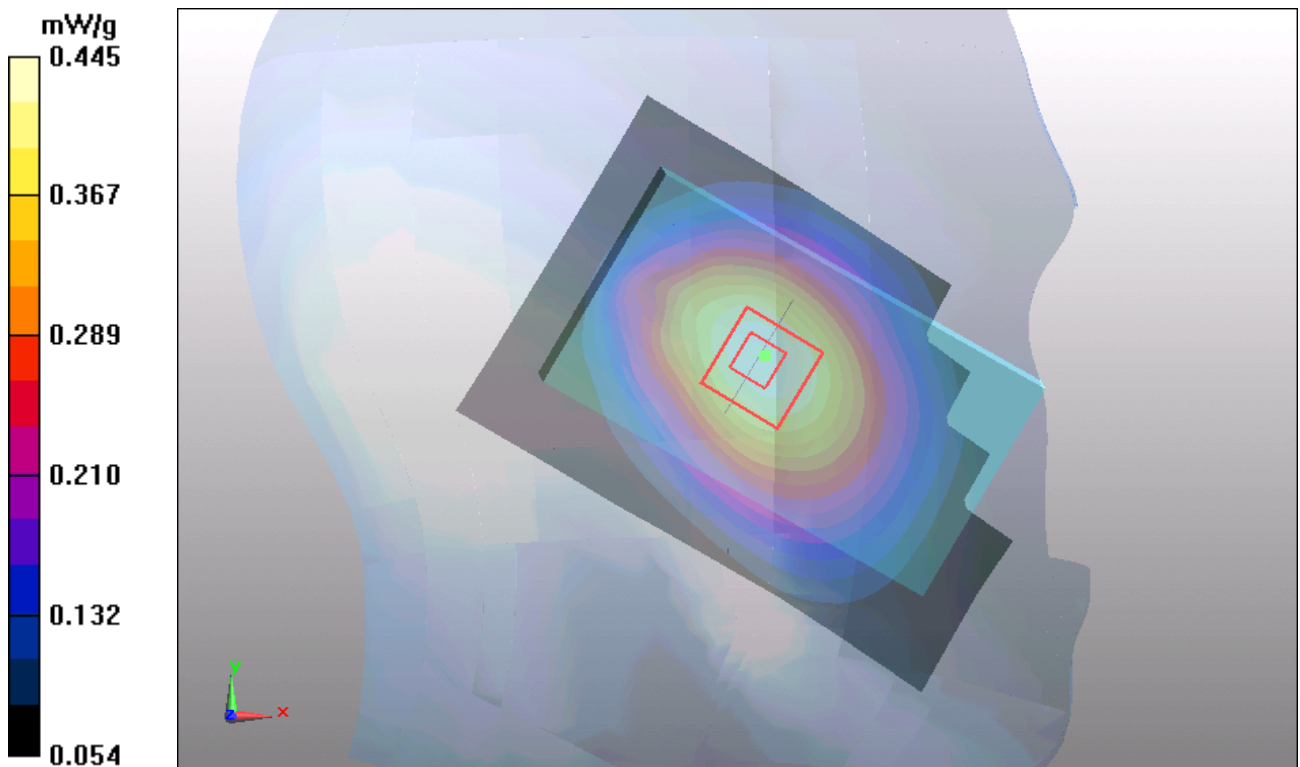


Figure 18 Left Hand Tilt 15° GSM 850 Channel 251

GSM 850 Left Tilt Middle (Battery 1)

Date/Time: 4/24/2012 4:12:59 AM

Communication System: GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 837$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.3 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.486 W/kg

SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.292 mW/g

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

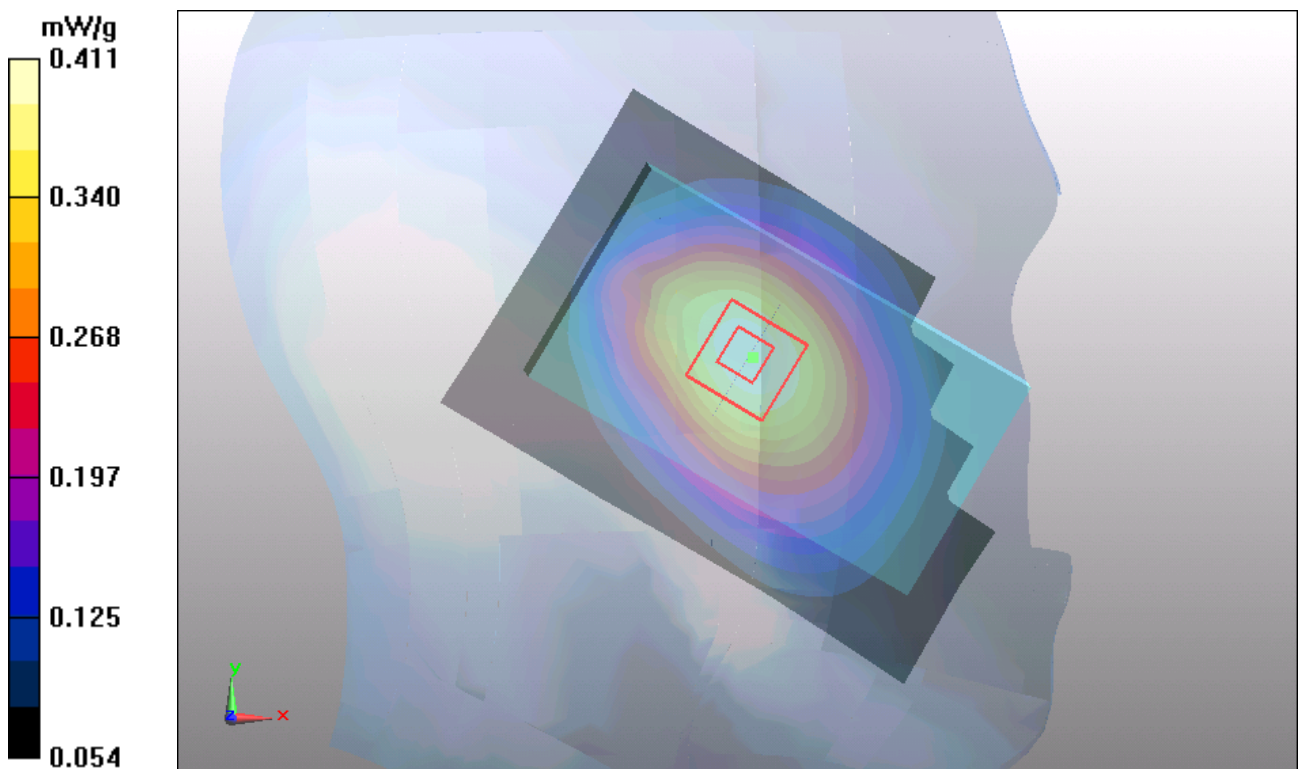


Figure 19 Left Hand Tilt 15° GSM 850 Channel 190

GSM 850 Left Tilt Low (Battery 1)

Date/Time: 4/24/2012 5:15:12 AM

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.292 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.282 mW/g

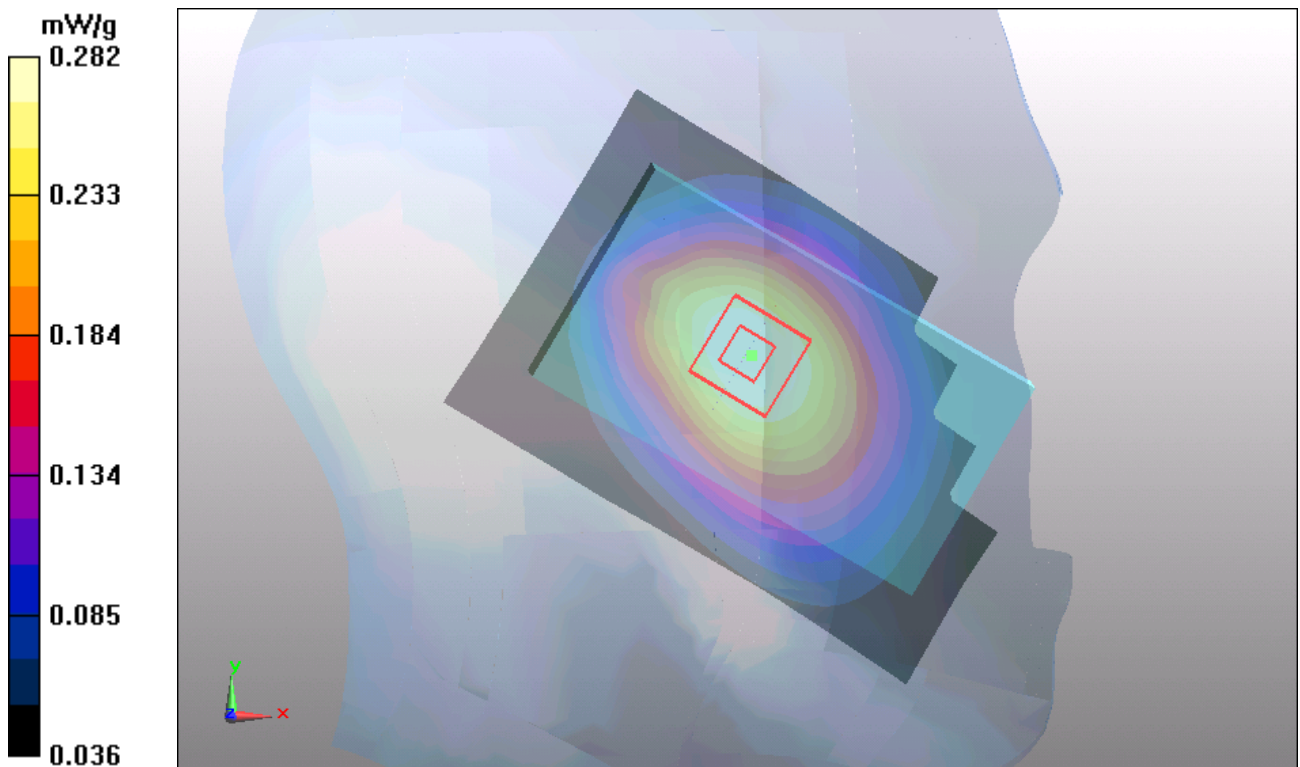


Figure 20 Left Hand Tilt 15° GSM 850 Channel 128

GSM 850 Right Cheek High (Battery 1)

Date/Time: 4/24/2012 7:26:04 AM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.760 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.904 W/kg

SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.553 mW/g

Maximum value of SAR (measured) = 0.775 mW/g

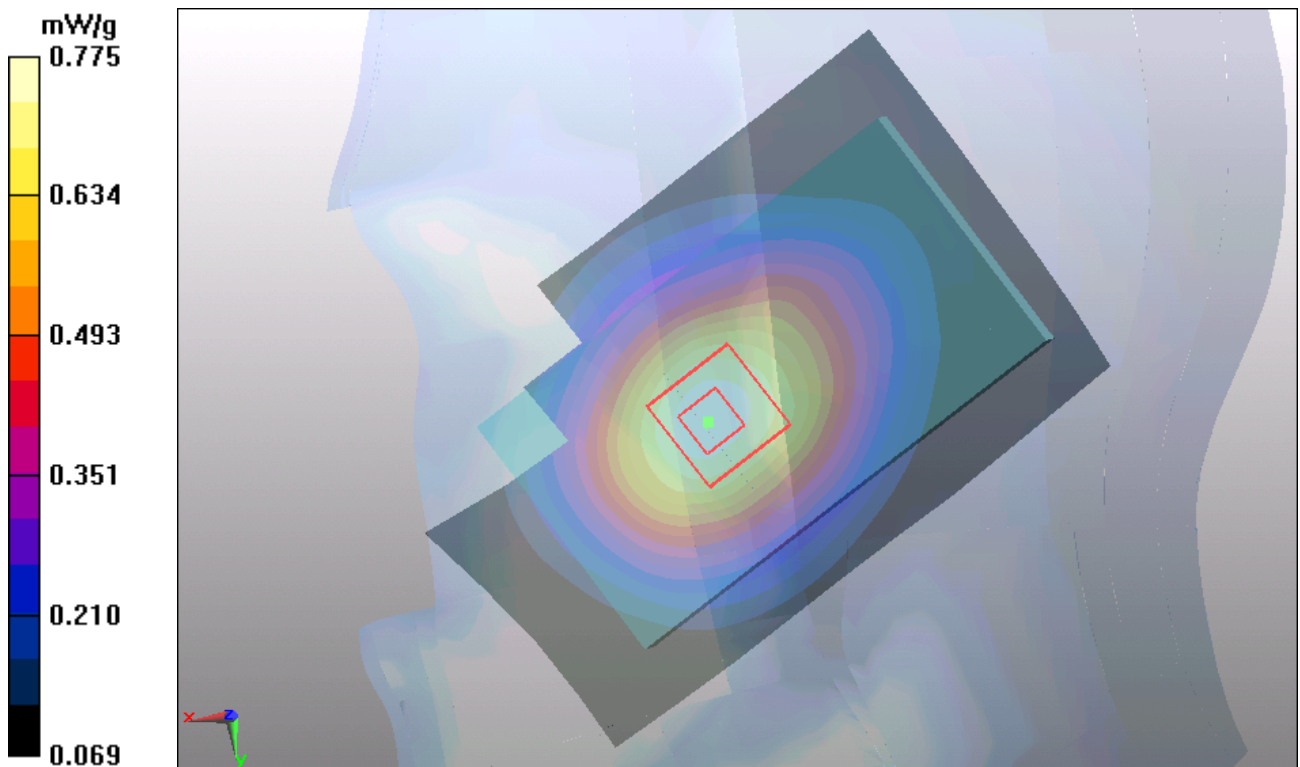


Figure 21 Right Hand Touch Cheek GSM 850 Channel 251

GSM 850 Right Cheek Middle (Battery 1)

Date/Time: 4/24/2012 12:36:16 PM

Communication System: GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 837$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.678 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.5 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 0.783 W/kg

SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.671 mW/g

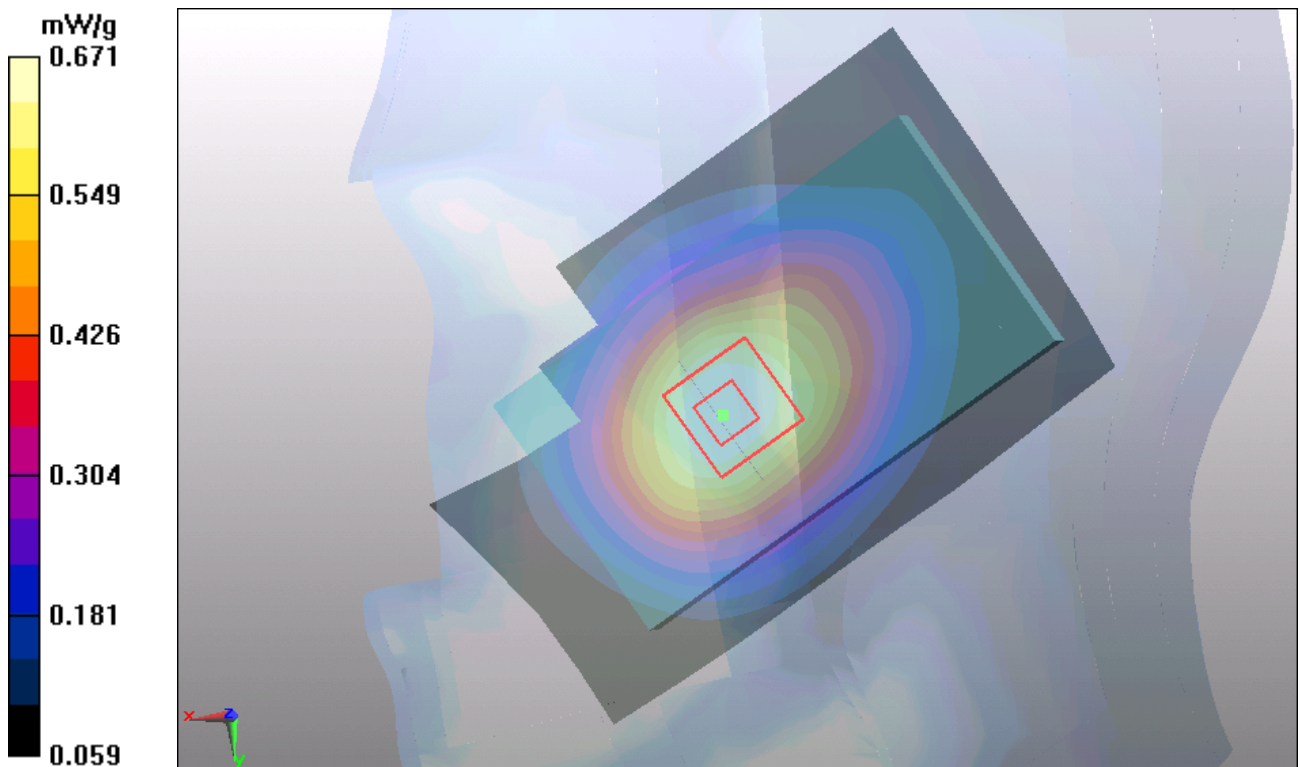


Figure 22 Right Hand Touch Cheek GSM 850 Channel 190

GSM 850 Right Cheek Low (Battery 1)

Date/Time: 4/24/2012 6:47:51 AM

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.529 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.613 W/kg

SAR(1 g) = 0.500 mW/g; SAR(10 g) = 0.379 mW/g

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

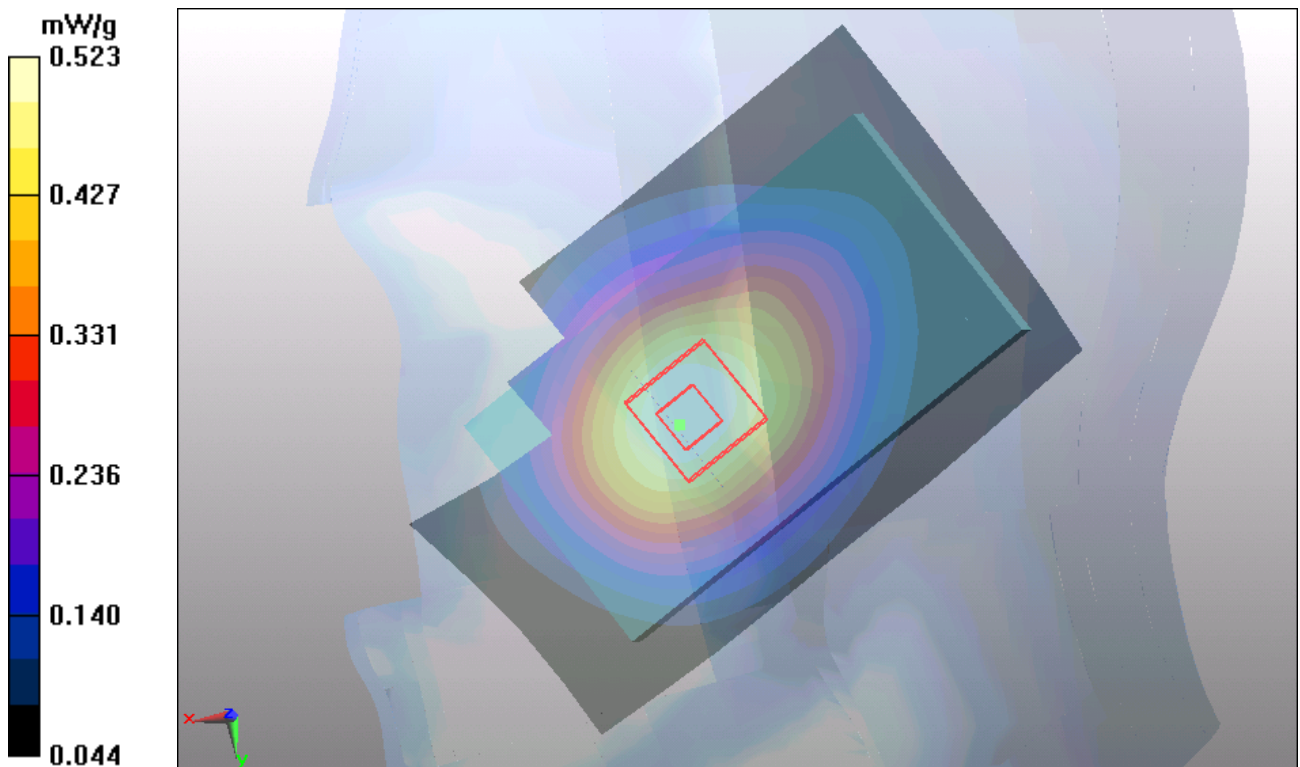


Figure 23 Right Hand Touch Cheek GSM 850 Channel 128

GSM 850 Right Tilt High (Battery 1)

Date/Time: 4/24/2012 7:44:13 AM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.421 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.6 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 0.502 W/kg

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.299 mW/g

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

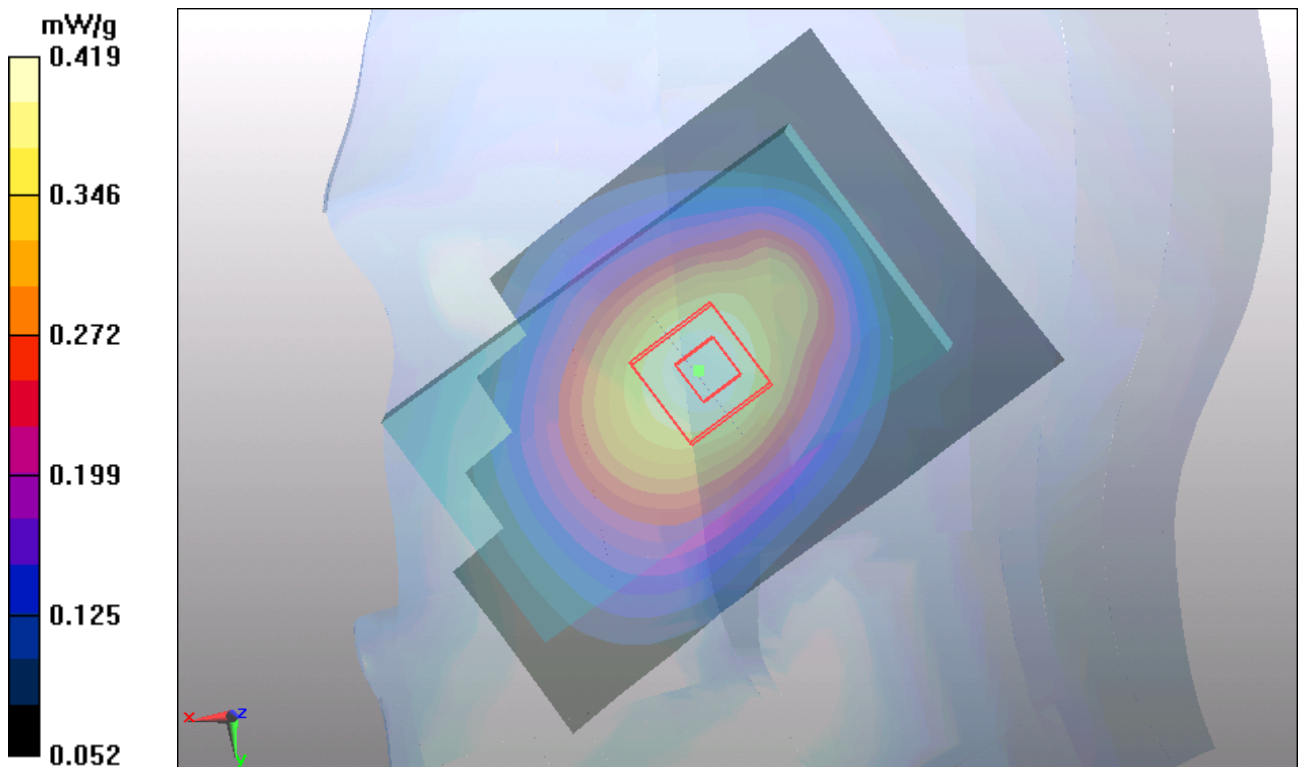


Figure 24 Right Hand Tilt 15° GSM 850 Channel 251

GSM 850 Right Tilt Middle (Battery 1)

Date/Time: 4/24/2012 8:01:09 AM

Communication System: GSM; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 837$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.378 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 0.436 W/kg

SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.263 mW/g

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

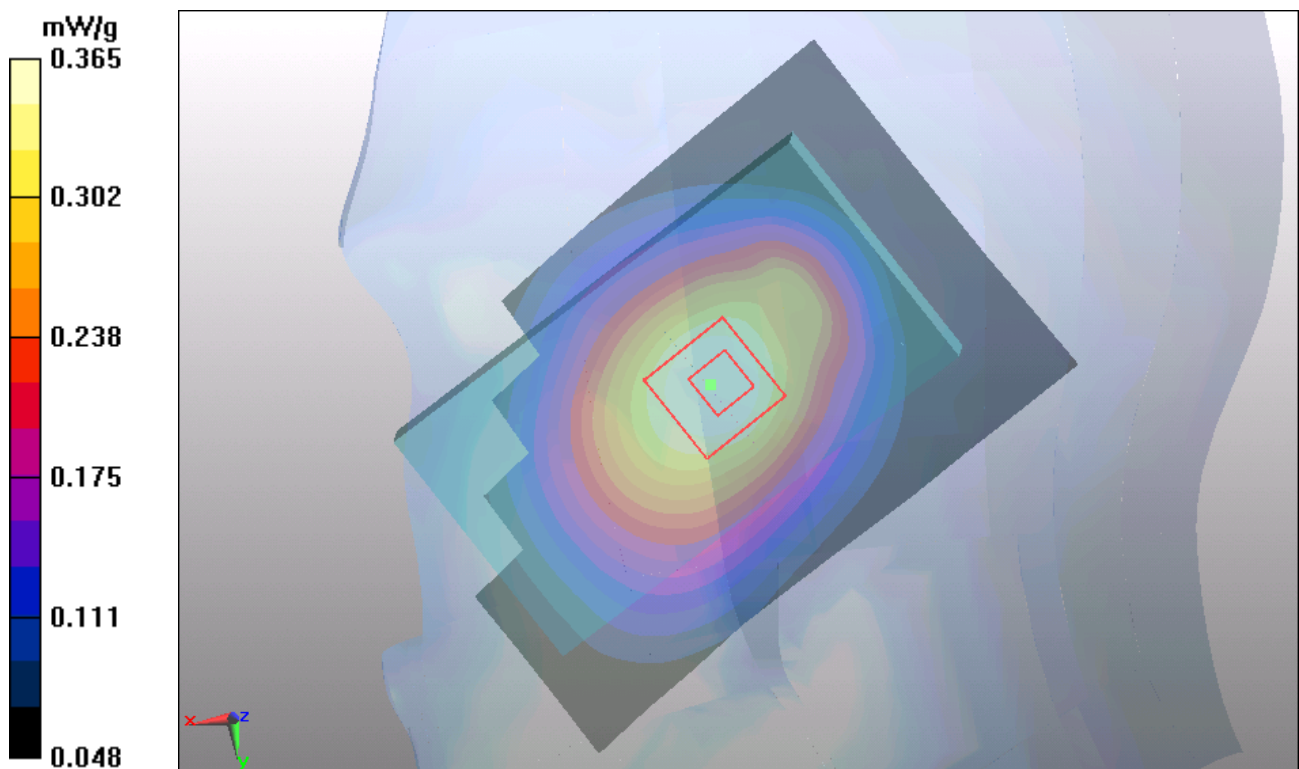


Figure 25 Right Hand Tilt 15° GSM 850 Channel 190

GSM 850 Right Tilt Low (Battery 1)

Date/Time: 4/24/2012 8:17:51 AM

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(9.02, 9.02, 9.02); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.257 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.9 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.243 mW/g

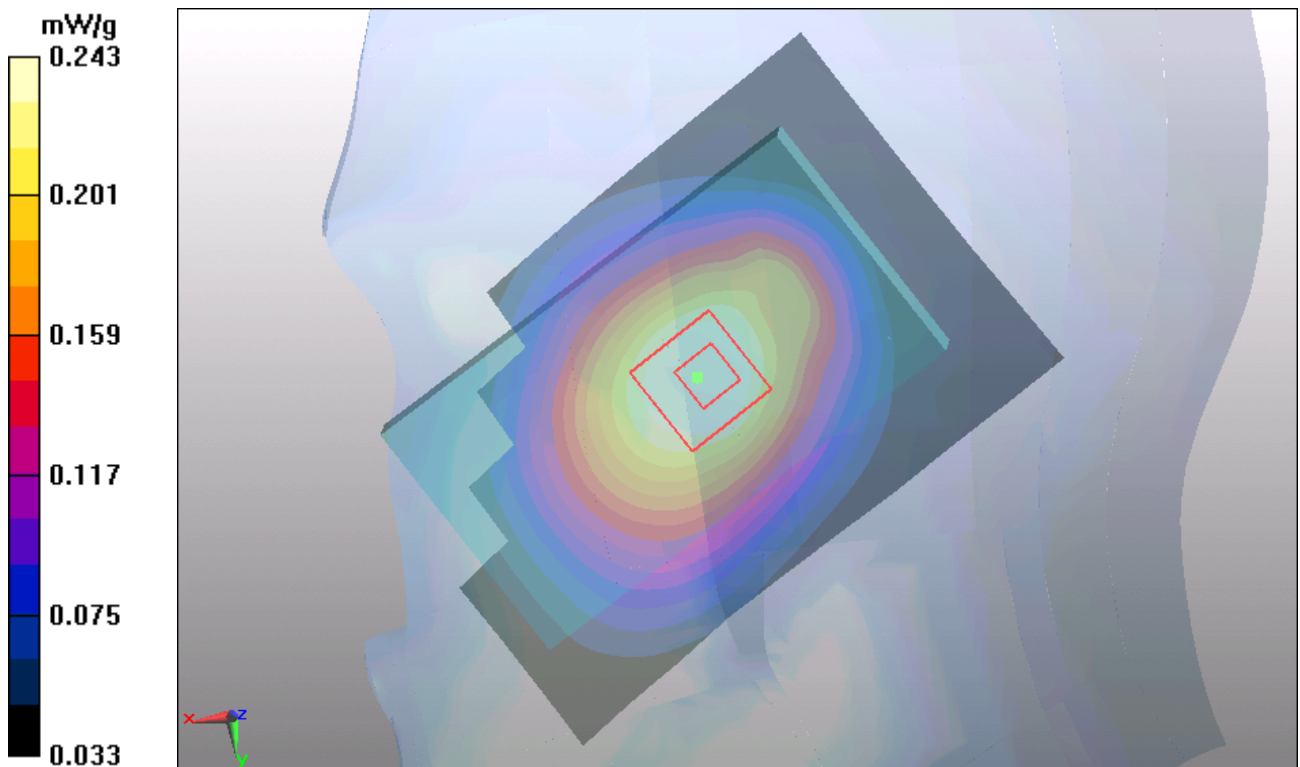


Figure 26 Right Hand Tilt 15° GSM 850 Channel 128

GSM 850 GPRS (2Txslots) Towards Ground High (Battery 1)

Date/Time: 8/19/2012 4:38:11 PM

Communication System: GPRS 2TX ; Frequency: 848.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

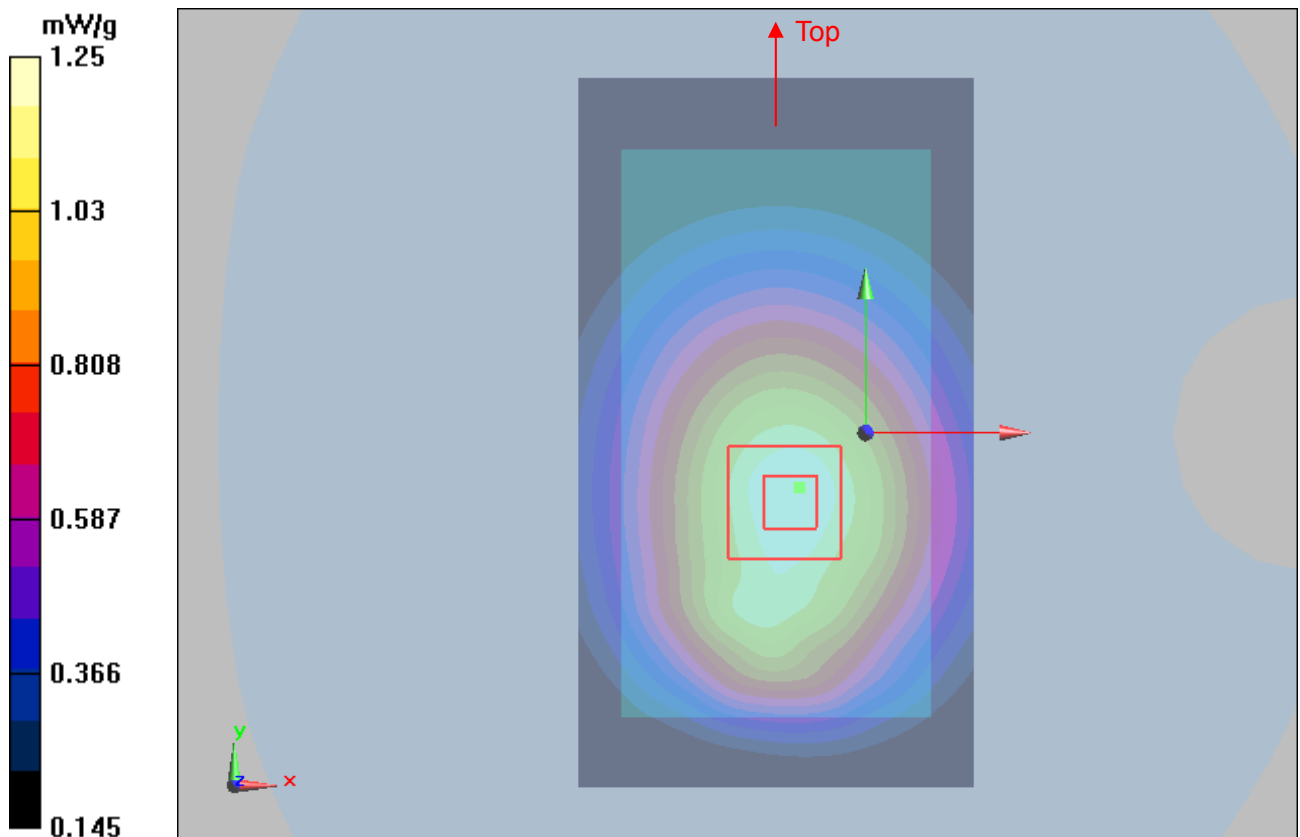
Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.871 mW/g

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



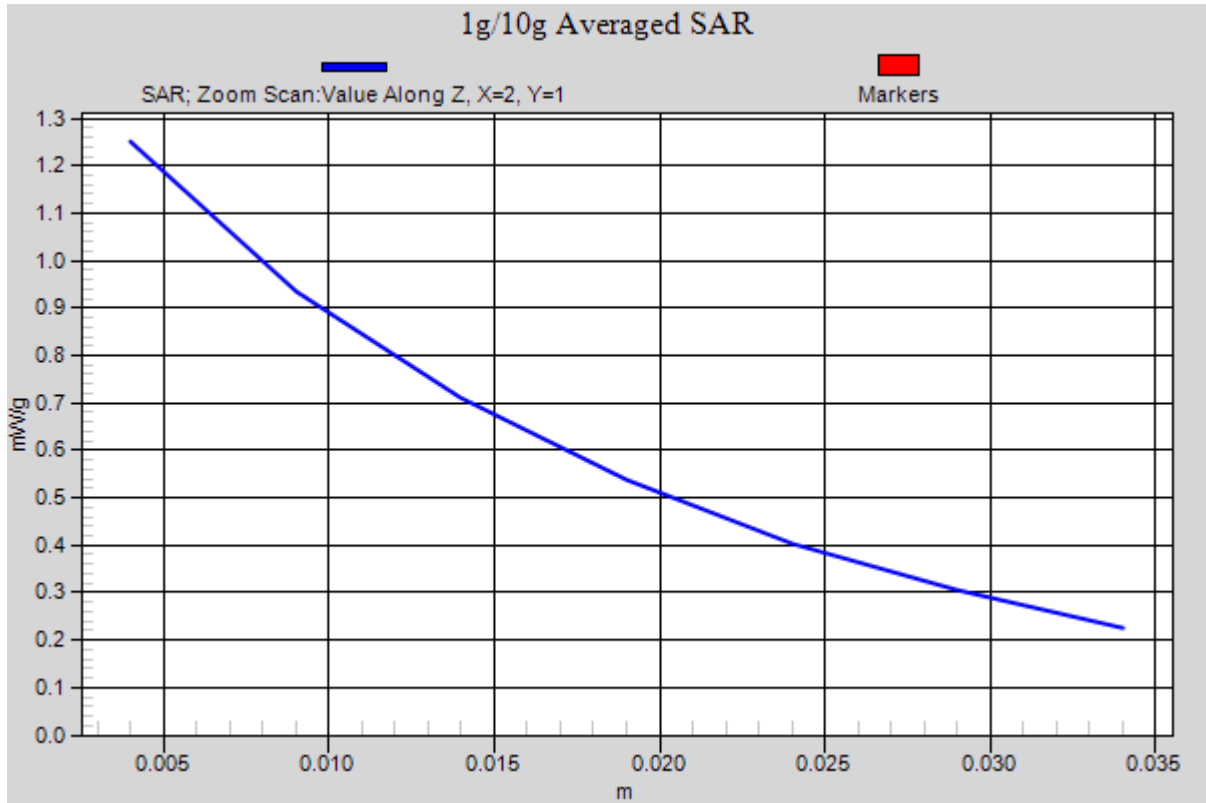


Figure 27 Body, Towards Ground, GSM 850 GPRS (2Txslots) Channel 251

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

Report No.: RXA1208-0616SAR

Page 67 of 198

GSM 850 GPRS (2Txslots) Towards Ground Middle (Battery 1)

Date/Time: 8/19/2012 4:53:27 PM

Communication System: GPRS 2TX ; Frequency: 836.6 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 837$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 54.5$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Towards Ground Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 32.9 V/m; Power Drift = -0.00952 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.802 mW/g

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

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

Reference Value = 32.9 V/m; Power Drift = -0.00952 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.758 mW/g

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

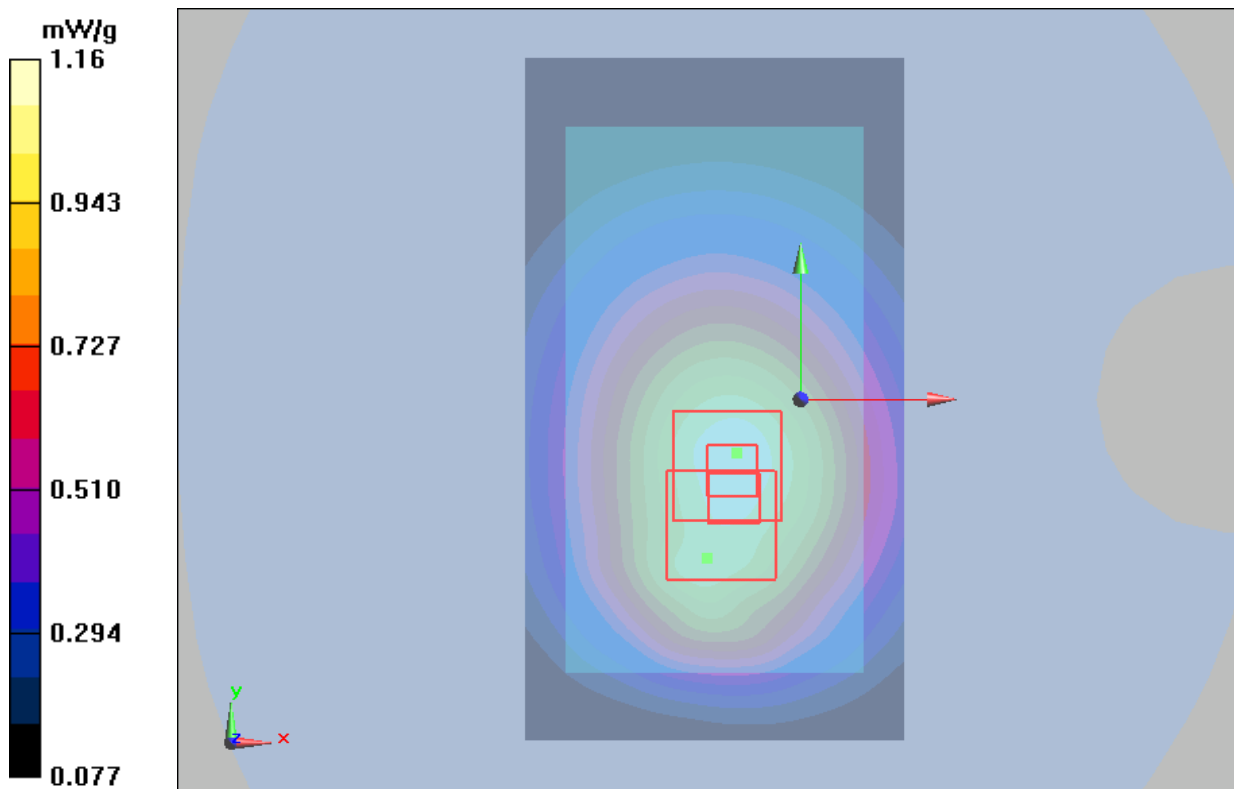


Figure 28 Body, Towards Ground, GSM 850 GPRS (2Txslots) Channel 190

GSM 850 GPRS (2Txslots) Towards Ground Low (Battery 1)

Date/Time: 8/19/2012 4:19:27 PM

Communication System: GPRS 2TX ; Frequency: 824.2 MHz;Duty Cycle: 1:4.14954

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.958$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.2 mW/g

Towards Ground Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 34.2 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.830 mW/g

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

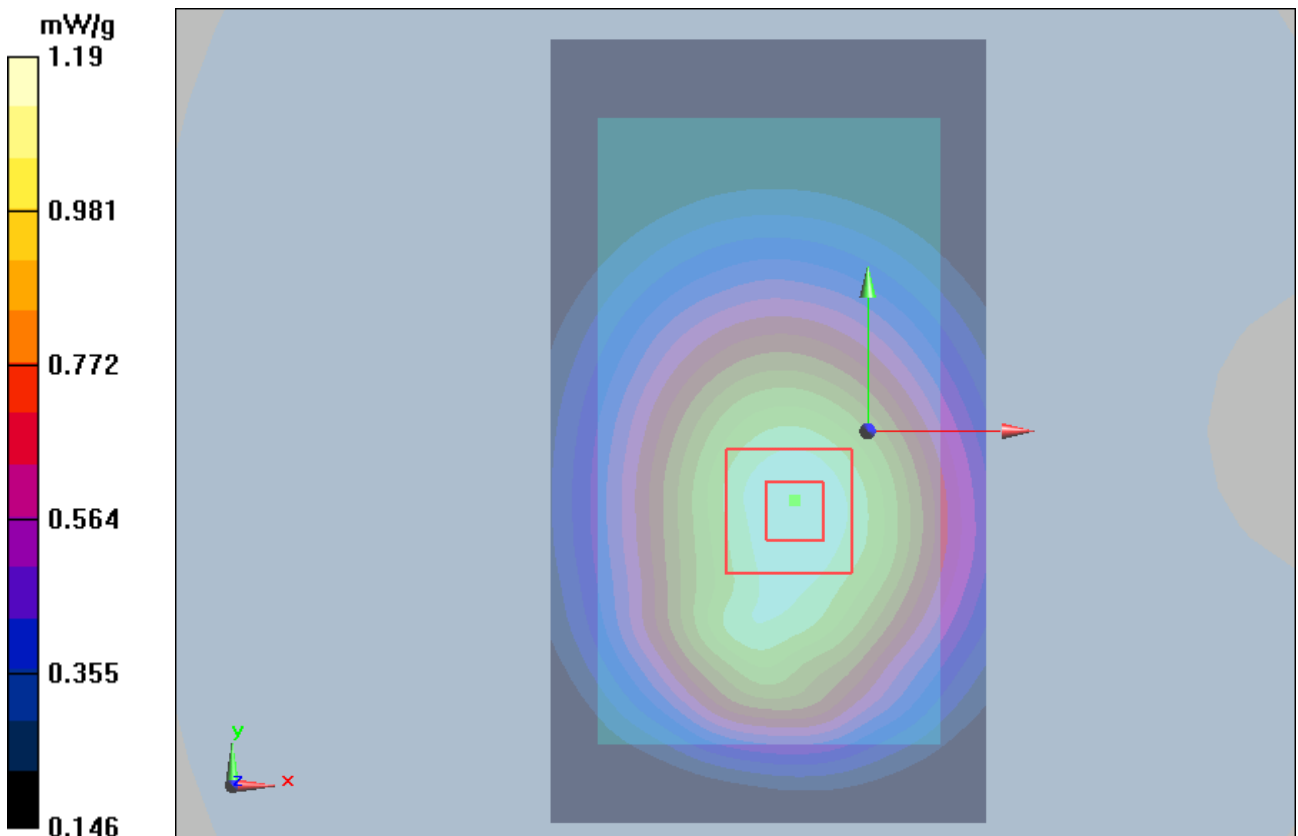


Figure 29 Body, Towards Ground, GSM 850 GPRS (2Txslots) Channel 128

GSM 850 GPRS (2Txslots) Towards Phantom High (Battery 1)

Date/Time: 8/19/2012 3:47:25 PM

Communication System: GPRS 2TX ; Frequency: 848.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.711 mW/g

Towards Phantom High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.7 V/m; Power Drift = -0.00912 dB

Peak SAR (extrapolated) = 0.867 W/kg

SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.500 mW/g

Maximum value of SAR (measured) = 0.717 mW/g

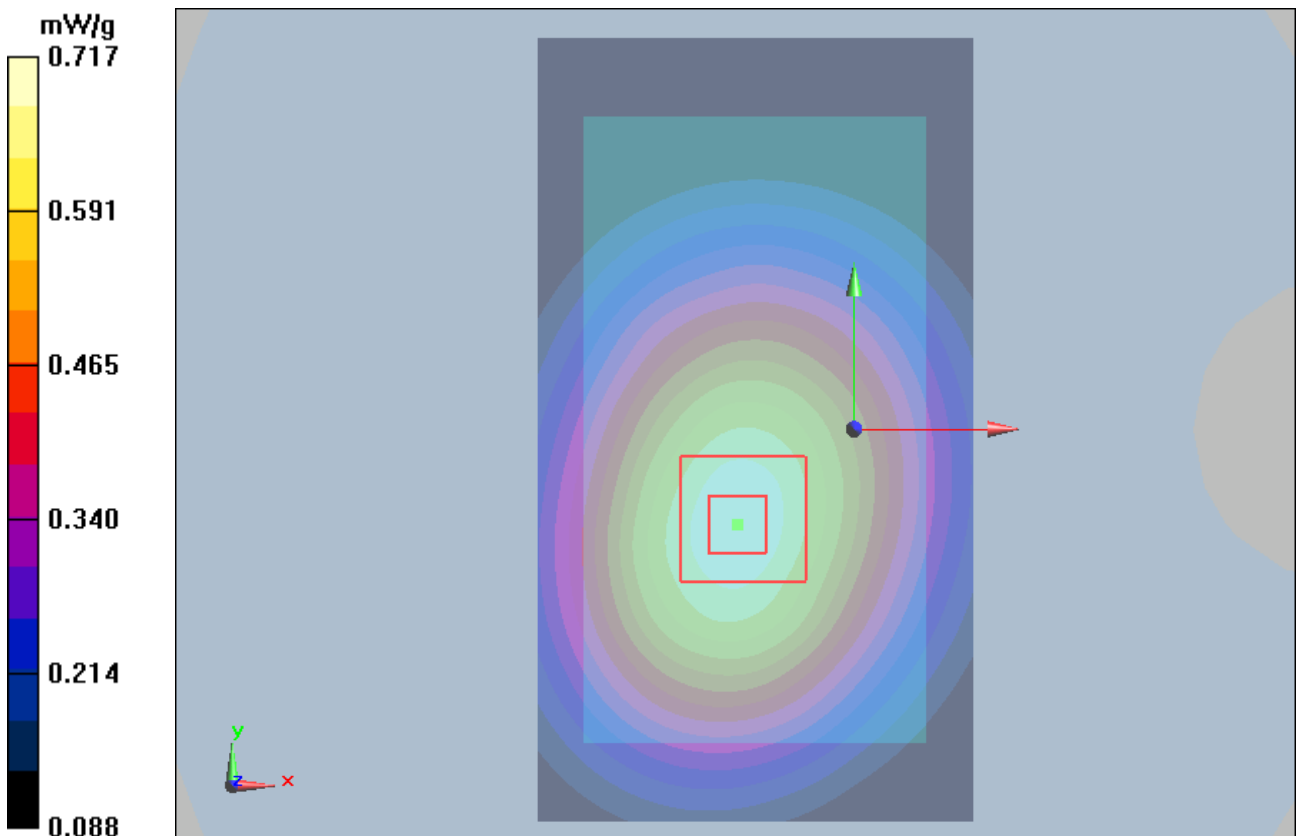


Figure 30 Body, Towards Phantom, GSM 850 GPRS (2Txslots) Channel 251

GSM 850 GPRS (2Txslots) Towards Phantom Middle (Battery 1)

Date/Time: 8/19/2012 3:19:11 PM

Communication System: GPRS 2TX ; Frequency: 836.6 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 837$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 54.5$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.701 mW/g

Towards Phantom Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.5 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 0.836 W/kg

SAR(1 g) = 0.651 mW/g; SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.688 mW/g

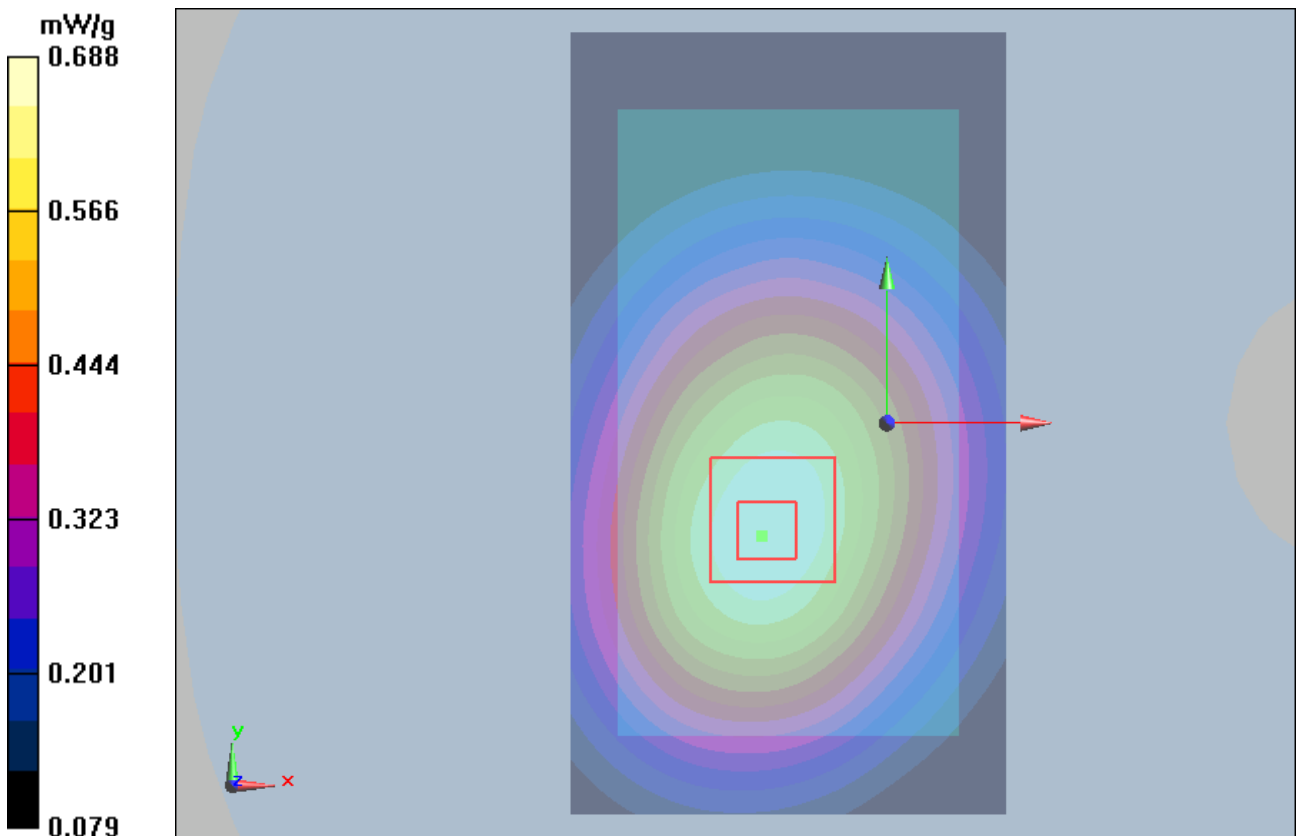


Figure 31 Body, Towards Phantom, GSM 850 GPRS (2Txslots) Channel 190

GSM 850 GPRS (2Txslots) Towards Phantom Low (Battery 1)

Date/Time: 8/19/2012 4:01:59 PM

Communication System: GPRS 2TX ; Frequency: 824.2 MHz; Duty Cycle: 1:4.14954

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.958$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.659 mW/g

Towards Phantom Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.7 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.792 W/kg

SAR(1 g) = 0.616 mW/g; SAR(10 g) = 0.457 mW/g

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

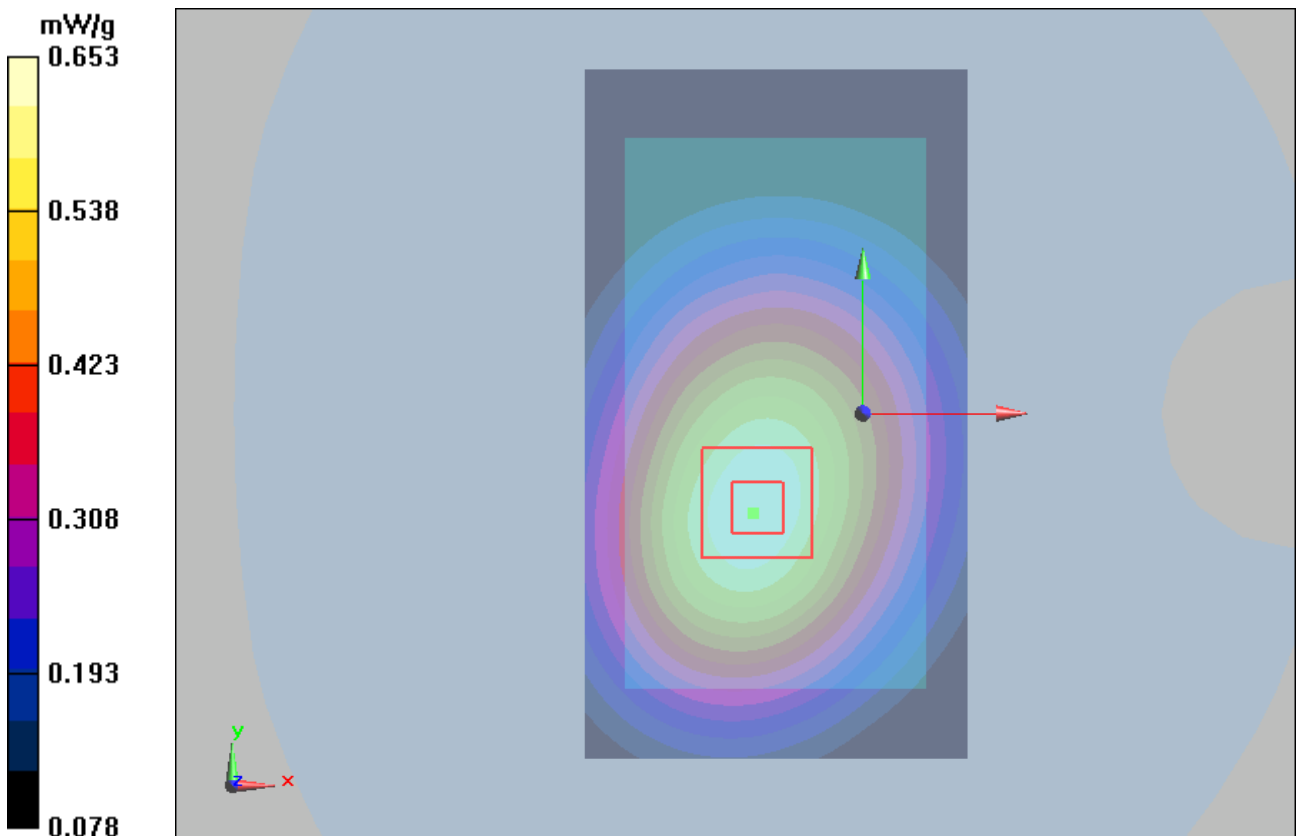


Figure 32 Body, Towards Phantom, GSM 850 GPRS (2Txslots) Channel 128

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

Report No.: RXA1208-0616SAR

Page 72 of 198

GSM 850 EGPRS (2Txslots) Towards Ground High (Battery 1)

Date/Time: 8/19/2012 5:16:17 PM

Communication System: EGPRS 2TX; Frequency: 848.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.2 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.863 mW/g

Maximum value of SAR (measured) = 1.24 mW/g

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

Reference Value = 34.2 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.811 mW/g

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

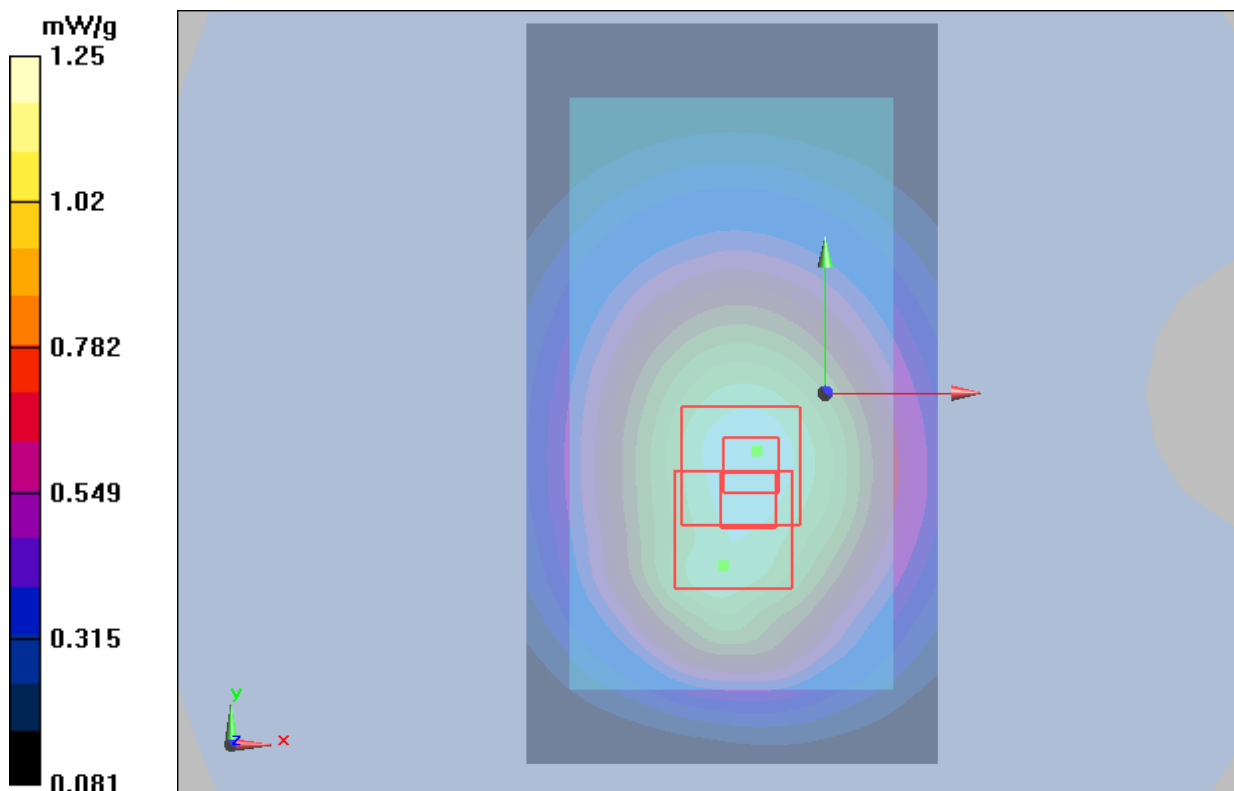


Figure 33 Body, Towards Ground, GSM 850 EGPRS (2Txslots) Channel 251

GSM 850 with Stereo Headset 1 Towards Ground High (Battery 1)

Date/Time: 8/19/2012 5:41:51 PM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.743 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 25.8 V/m; Power Drift = -0.099 dB

Peak SAR (extrapolated) = 0.929 W/kg

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.512 mW/g

Maximum value of SAR (measured) = 0.738 mW/g

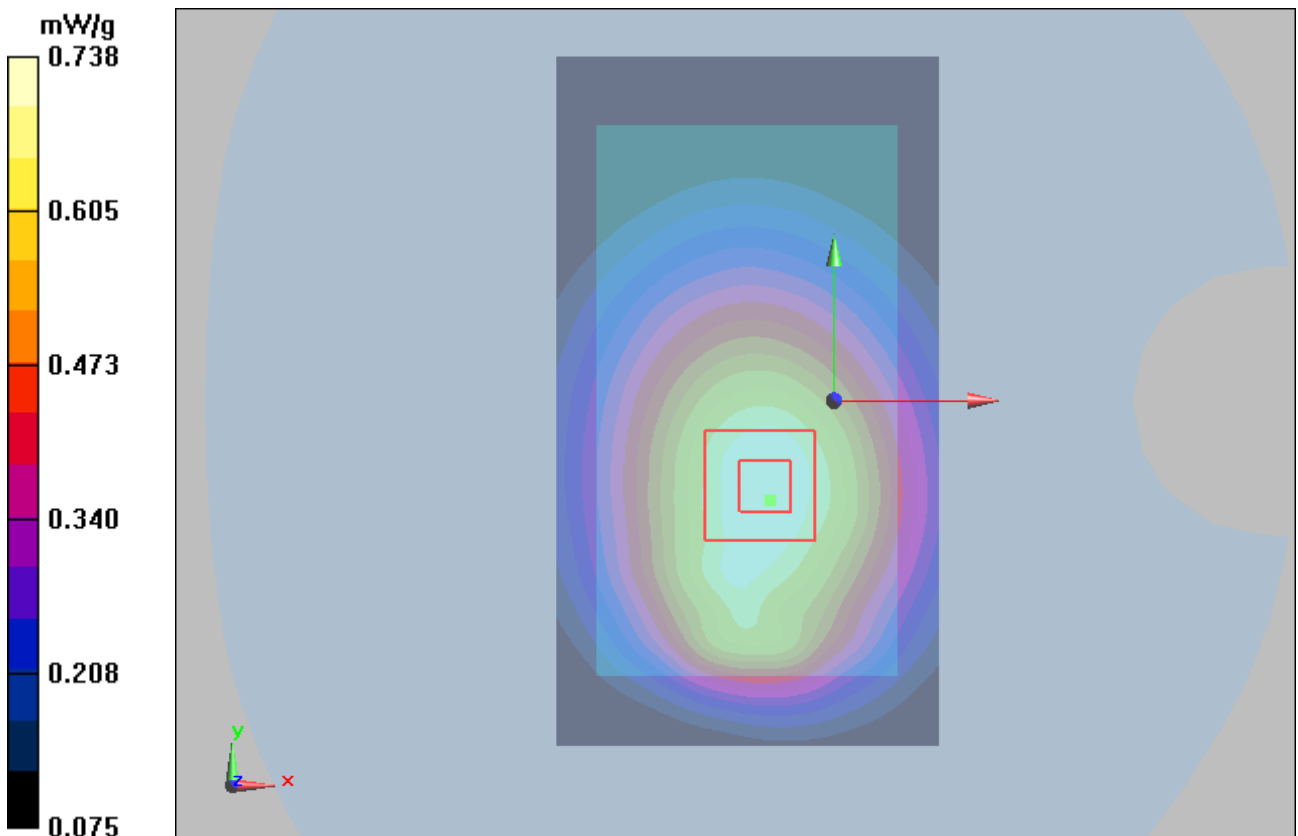


Figure 34 Body with Stereo Headset 1, Towards Ground, GSM 850 Channel 251

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

Report No.: RXA1208-0616SAR

Page 74 of 198

GSM 850 with Stereo Headset 2 Towards Ground High (Battery 1)

Date/Time: 8/19/2012 5:57:10 PM

Communication System: GSM; Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.722 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.4 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.912 W/kg

SAR(1 g) = 0.688 mW/g; SAR(10 g) = 0.499 mW/g

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

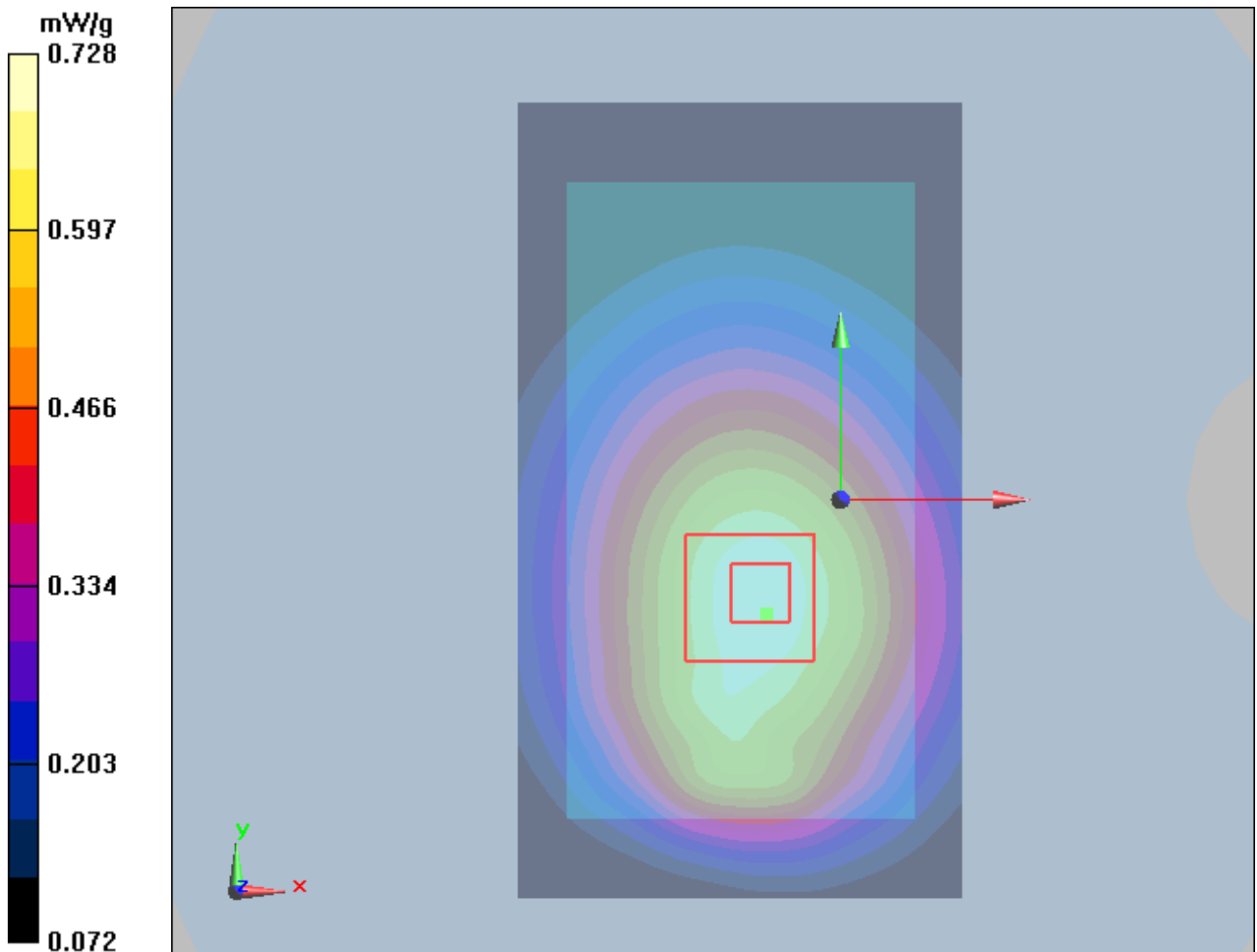


Figure 35 Body with Stereo Headset 2, Towards Ground, GSM 850 Channel 251

GSM 850 GPRS (2Txslots) Towards Ground High (Battery 2)

Date/Time: 8/19/2012 6:14:39 PM

Communication System: GPRS 2TX ; Frequency: 848.8 MHz;Duty Cycle: 1:4.14954

Medium parameters used: $f = 849$ MHz; $\sigma = 0.984$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.19 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 33.6 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.809 mW/g

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

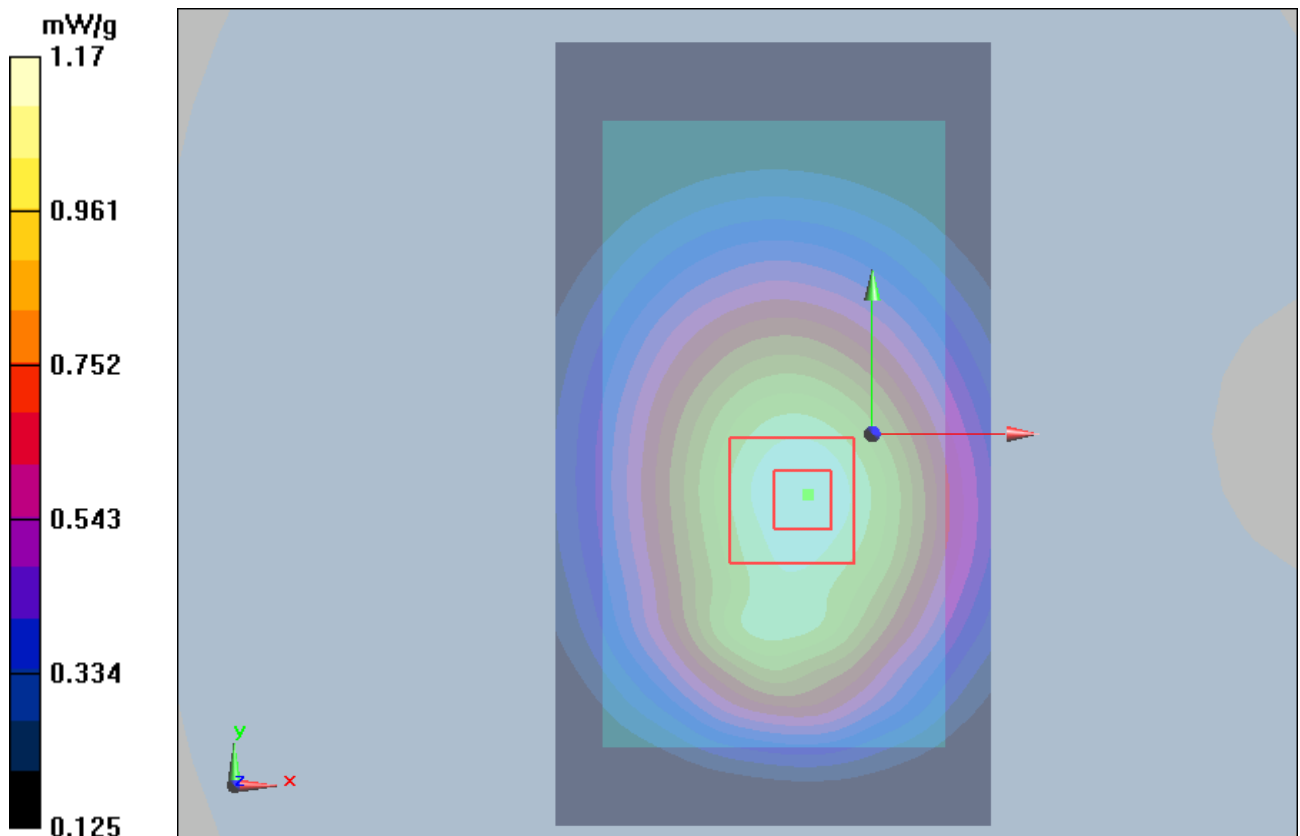


Figure 36 Body, Towards Ground, GSM 850 GPRS (2Txslots) Channel 251

GSM 1900 Left Cheek High (Battery 1)

Date/Time: 4/23/2012 3:00:02 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.49 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.754 mW/g; SAR(10 g) = 0.444 mW/g

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

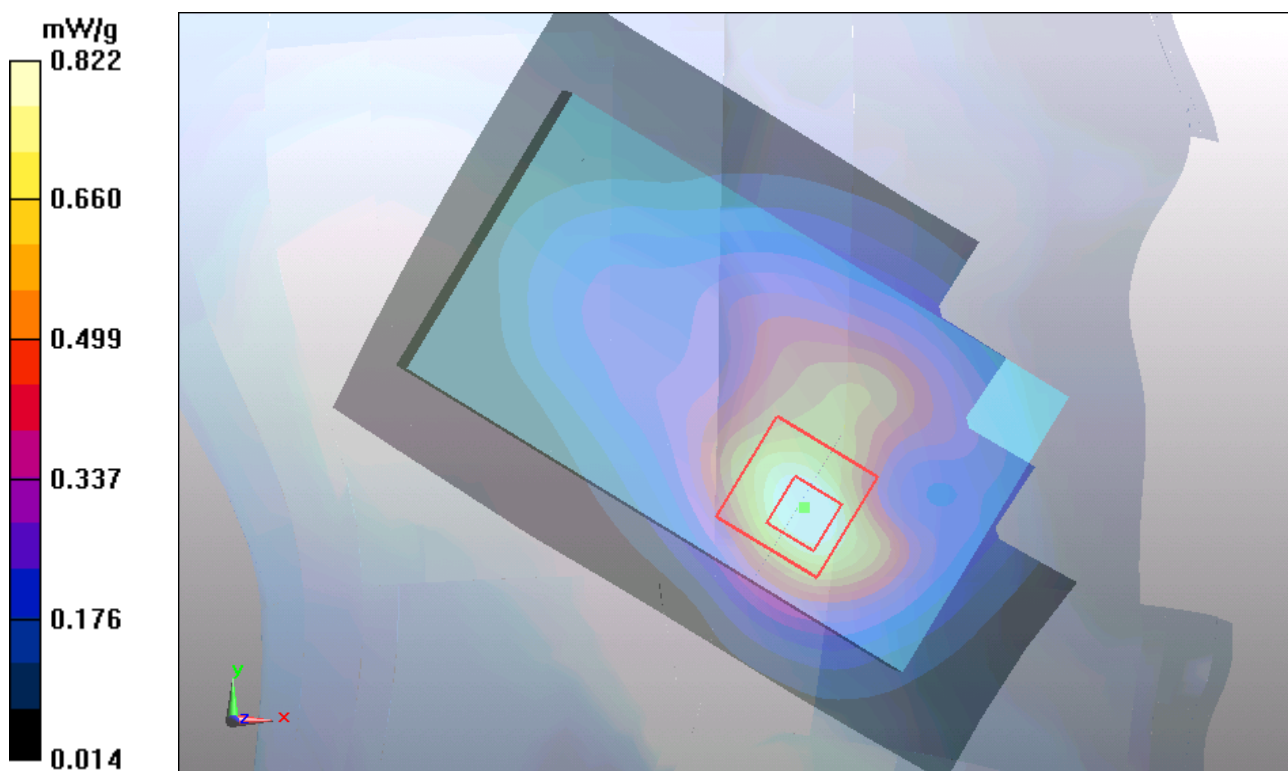


Figure 37 Left Hand Touch Cheek GSM 1900 Channel 810

GSM 1900 Left Cheek Middle (Battery 1)

Date/Time: 4/23/2012 2:38:18 PM

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

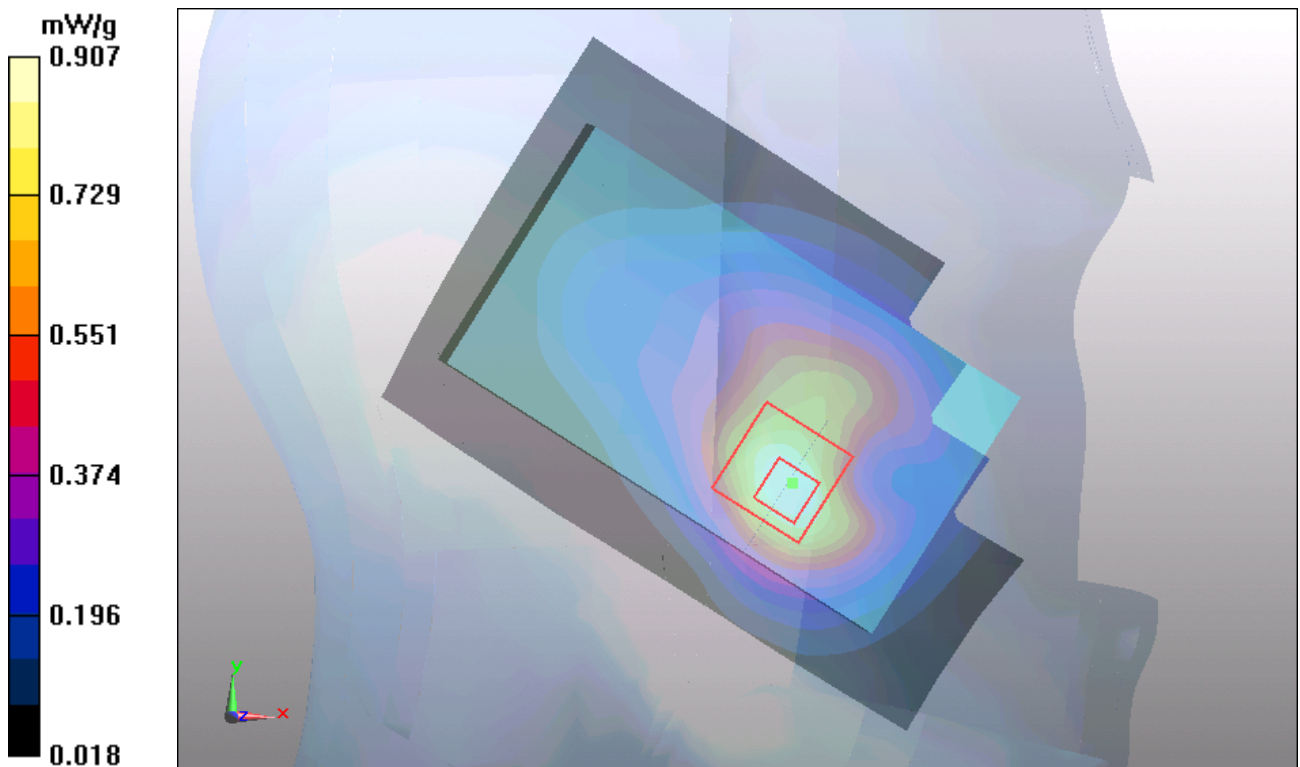
Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.24 V/m; Power Drift = 0.098 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.835 mW/g; SAR(10 g) = 0.503 mW/g

Maximum value of SAR (measured) = 0.907 mW/g



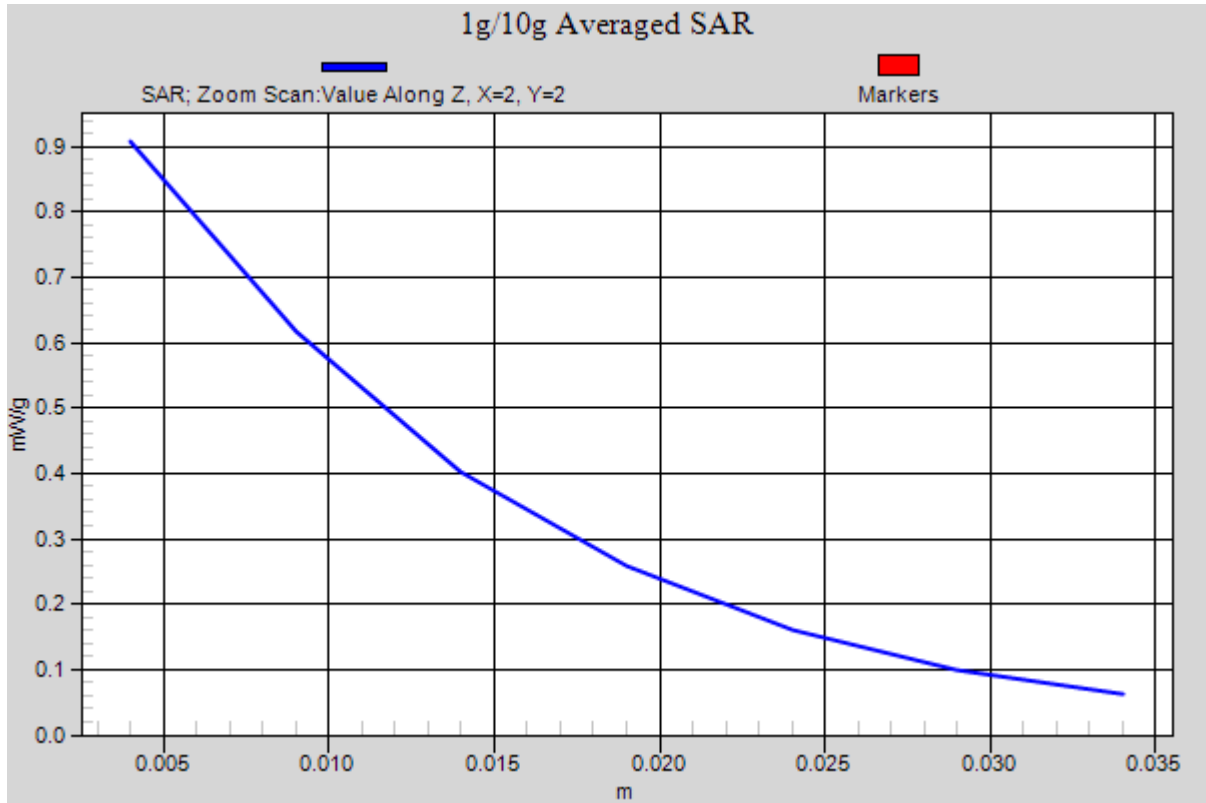


Figure 38 Left Hand Touch Cheek GSM 1900 Channel 661

GSM 1900 Left Cheek Low (Battery 1)

Date/Time: 4/23/2012 3:21:31 PM

Communication System: GSM; Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.79 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.799 mW/g; SAR(10 g) = 0.490 mW/g

Maximum value of SAR (measured) = 0.854 mW/g

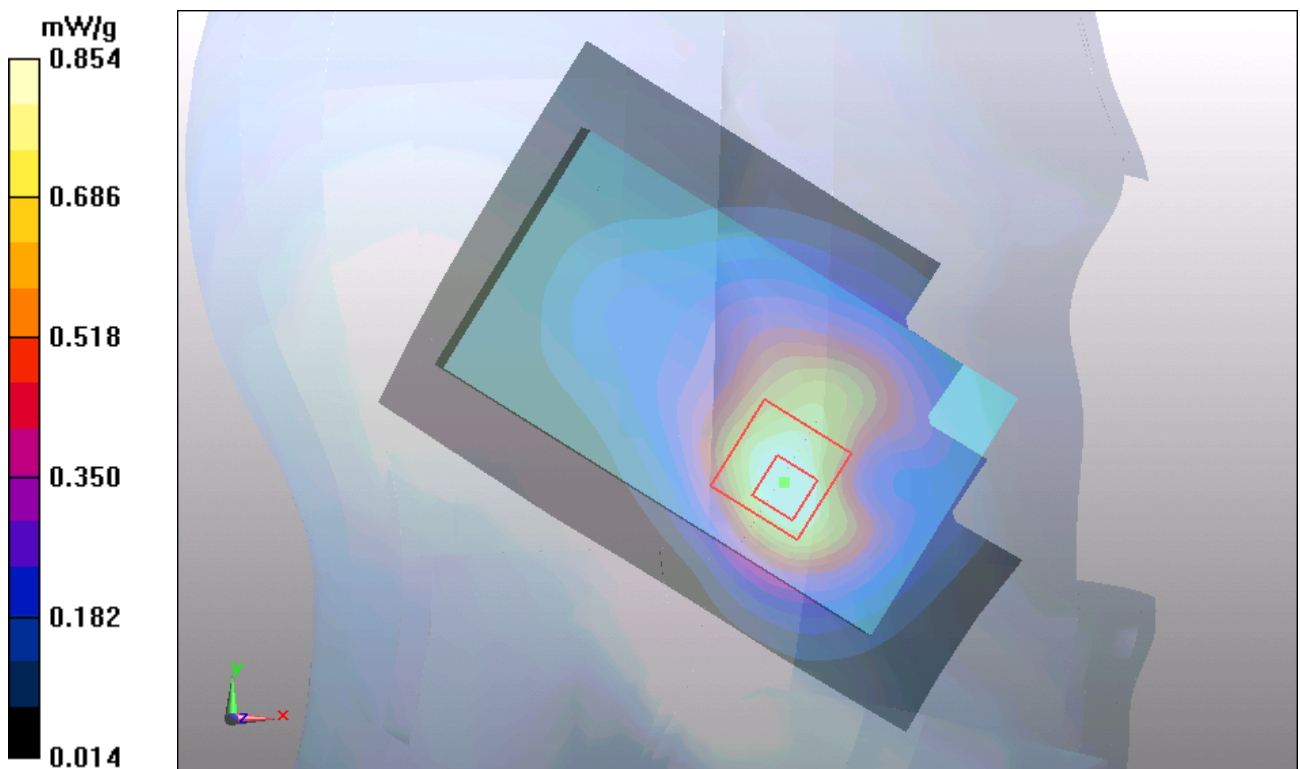


Figure 39 Left Hand Touch Cheek GSM 1900 Channel 512

GSM 1900 Left Tilt High (Battery 1)

Date/Time: 4/23/2012 3:57:45 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.334 W/kg

SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.123 mW/g

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

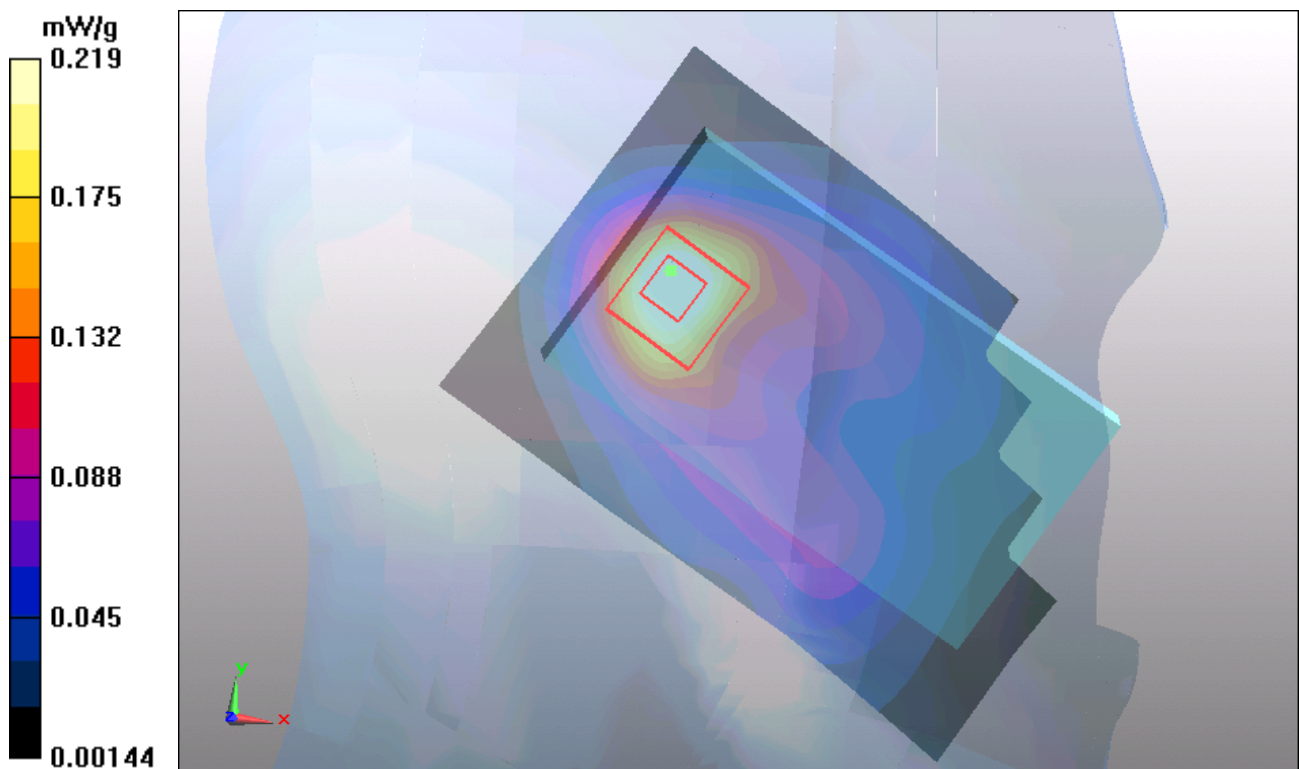


Figure 40 Left Hand Tilt 15° GSM 1900 Channel 810

GSM 1900 Left Tilt Middle (Battery 1)

Date/Time: 4/23/2012 3:40:42 PM

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.224 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 0.328 W/kg

SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.126 mW/g

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

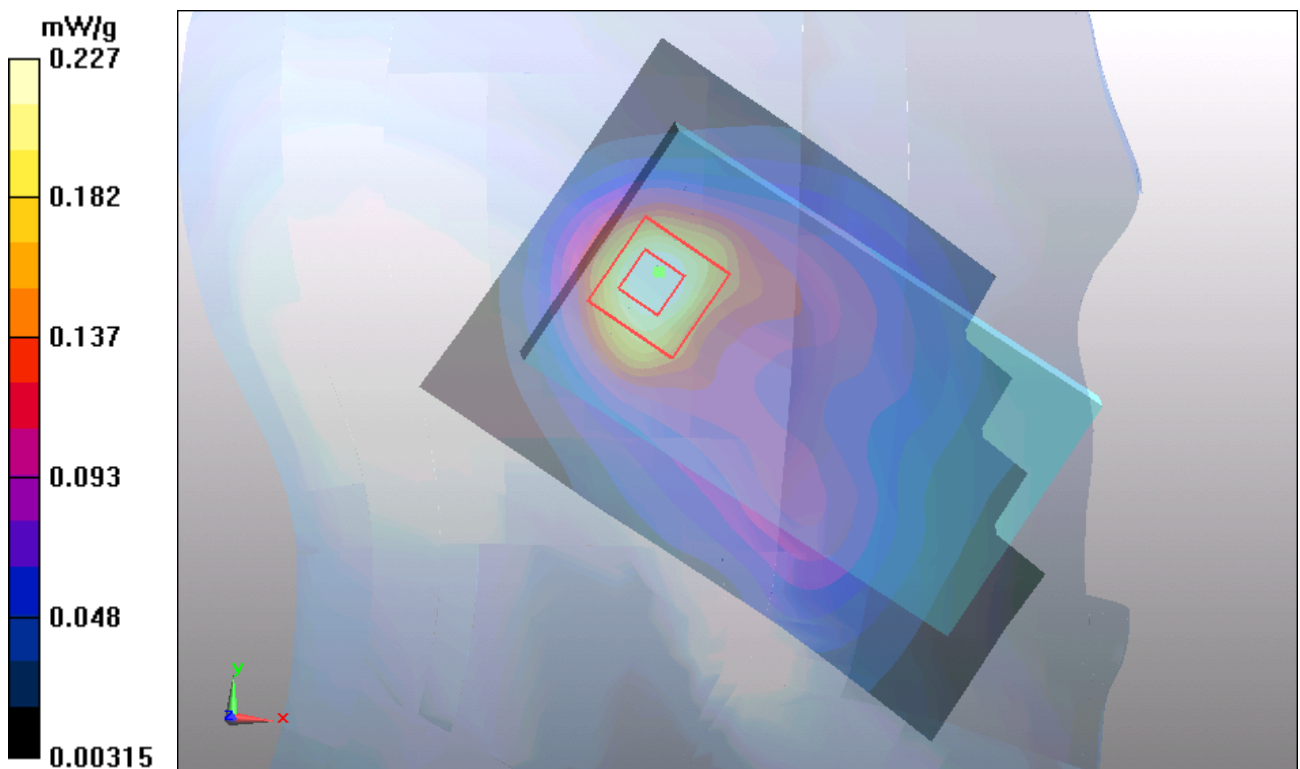


Figure 41 Left Hand Tilt 15° GSM 1900 Channel 661

GSM 1900 Left Tilt Low (Battery 1)

Date/Time: 4/23/2012 4:14:45 PM

Communication System: GSM; Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.197 mW/g

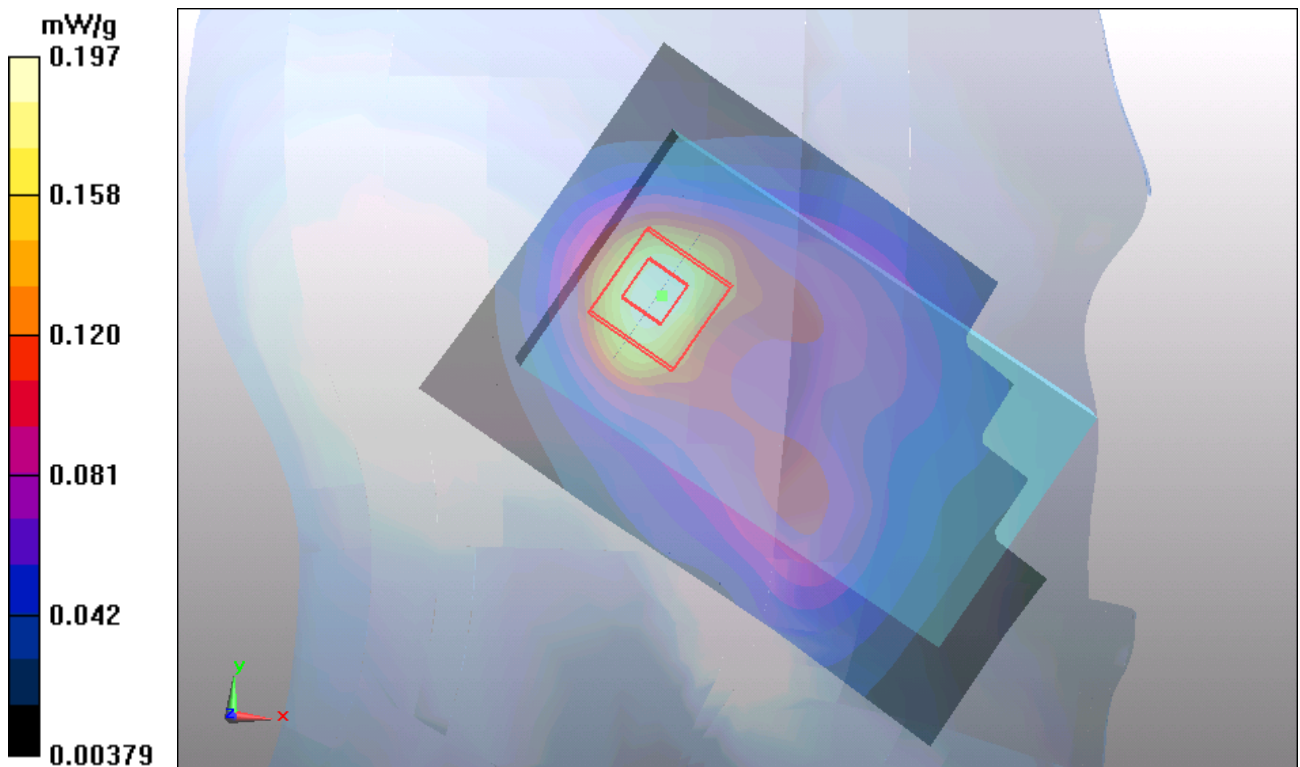


Figure 42 Left Hand Tilt 15° GSM 1900 Channel 512

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

Report No.: RXA1208-0616SAR

Page 83 of 198

GSM 1900 Right Cheek High (Battery 1)

Date/Time: 4/23/2012 4:50:55 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.775 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.97 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.678 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 0.745 mW/g

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

Reference Value = 8.97 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.971 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.361 mW/g

Maximum value of SAR (measured) = 0.673 mW/g

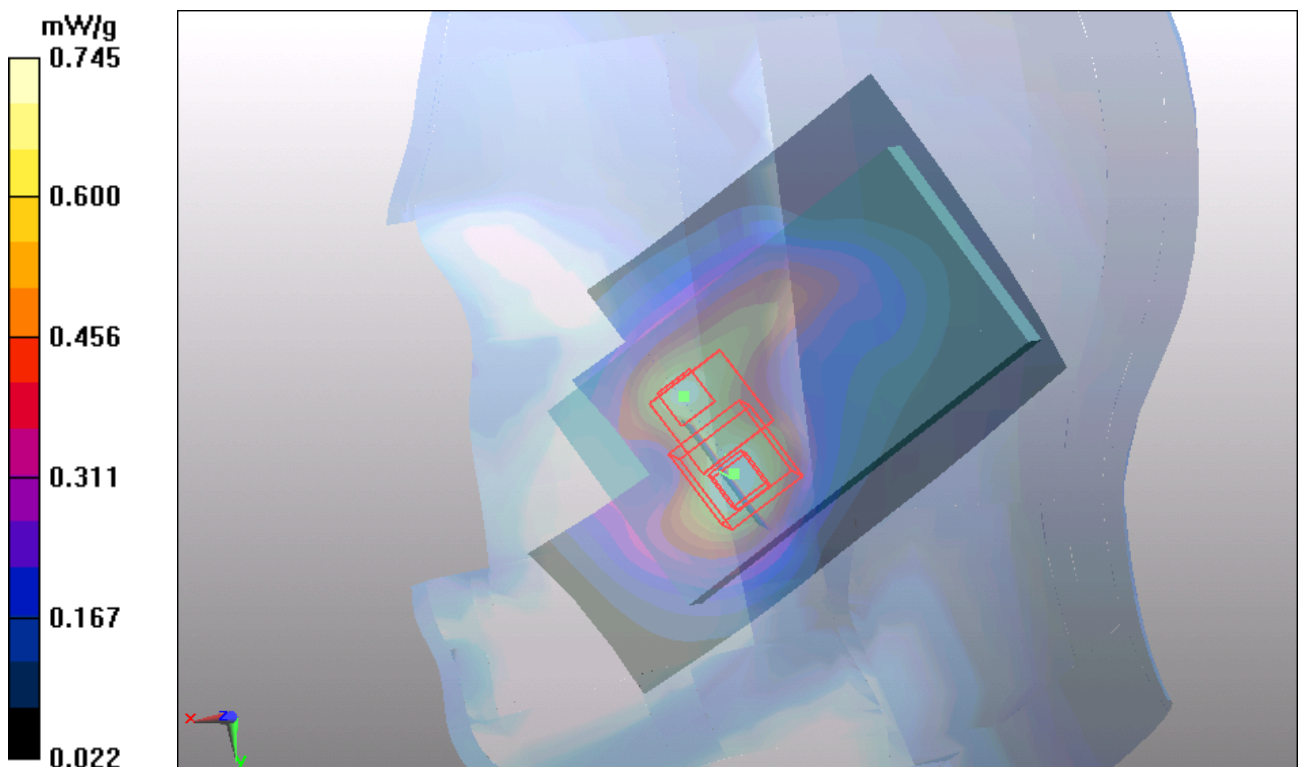


Figure 43 Right Hand Touch Cheek GSM 1900 Channel 810

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

Report No.: RXA1208-0616SAR

Page 84 of 198

GSM 1900 Right Cheek Middle (Battery 1)

Date/Time: 4/23/2012 5:14:22 PM

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.69 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.722 mW/g; SAR(10 g) = 0.432 mW/g

Maximum value of SAR (measured) = 0.790 mW/g

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

Reference Value = 8.69 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.405 mW/g

Maximum value of SAR (measured) = 0.735 mW/g

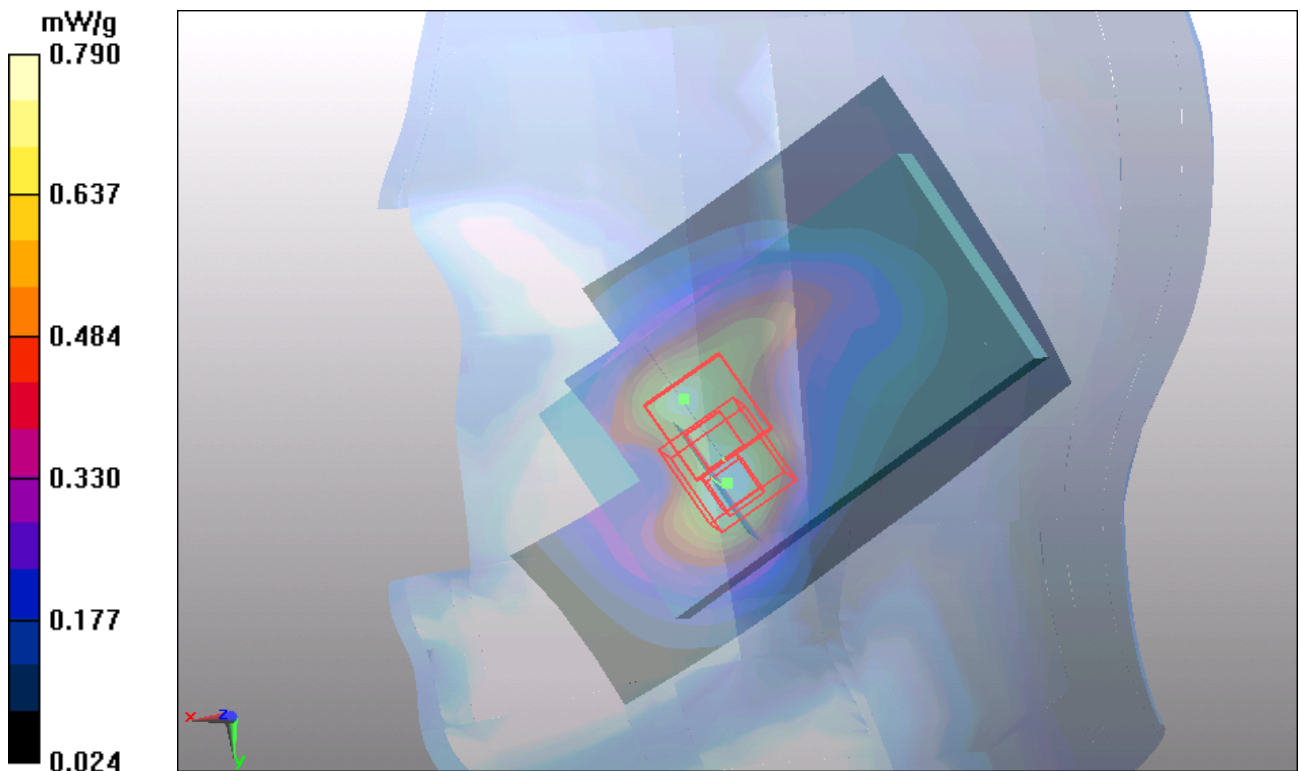


Figure 44 Right Hand Touch Cheek GSM 1900 Channel 661

GSM 1900 Right Cheek Low (Battery 1)

Date/Time: 4/23/2012 4:36:12 PM

Communication System: GSM; Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.812 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.99 V/m; Power Drift = 0.093 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.763 mW/g; SAR(10 g) = 0.462 mW/g

Maximum value of SAR (measured) = 0.805 mW/g

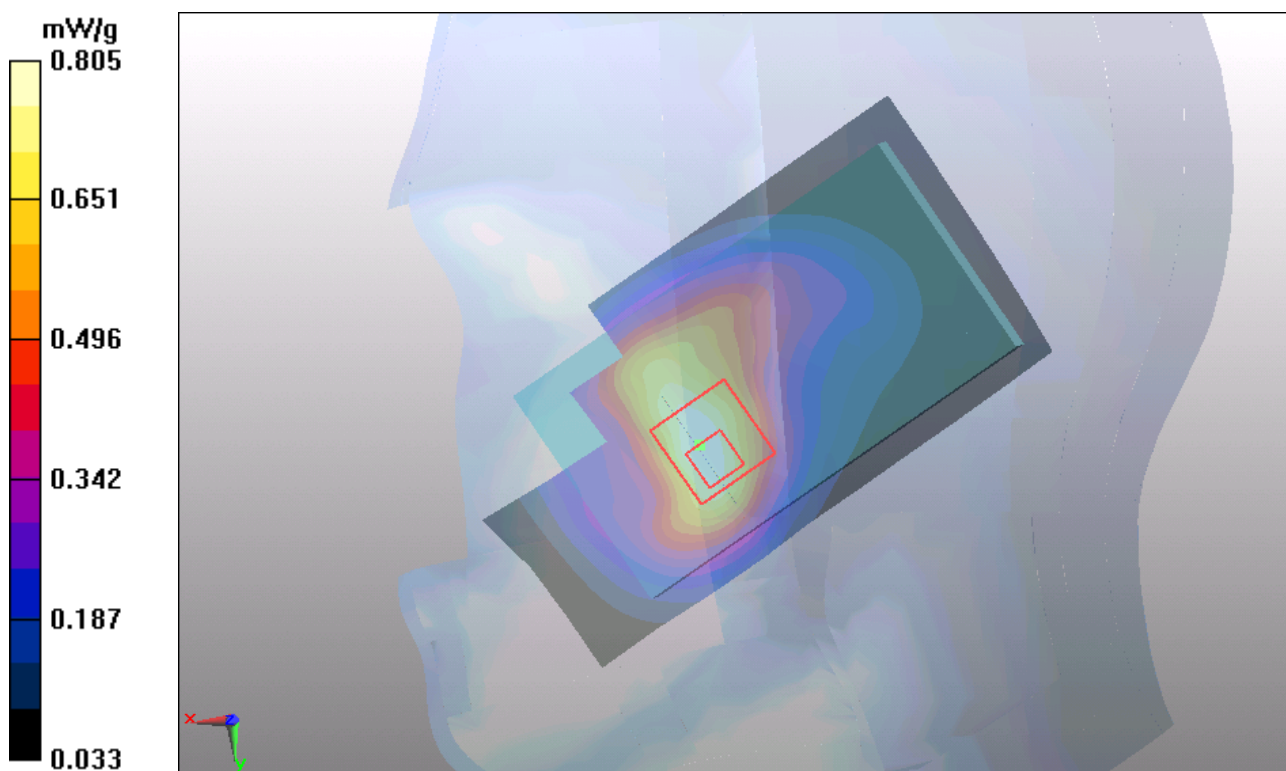


Figure 45 Right Hand Touch Cheek GSM 1900 Channel 512

GSM 1900 Right Tilt High (Battery 1)

Date/Time: 4/23/2012 5:53:55 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.291 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.407 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.148 mW/g

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

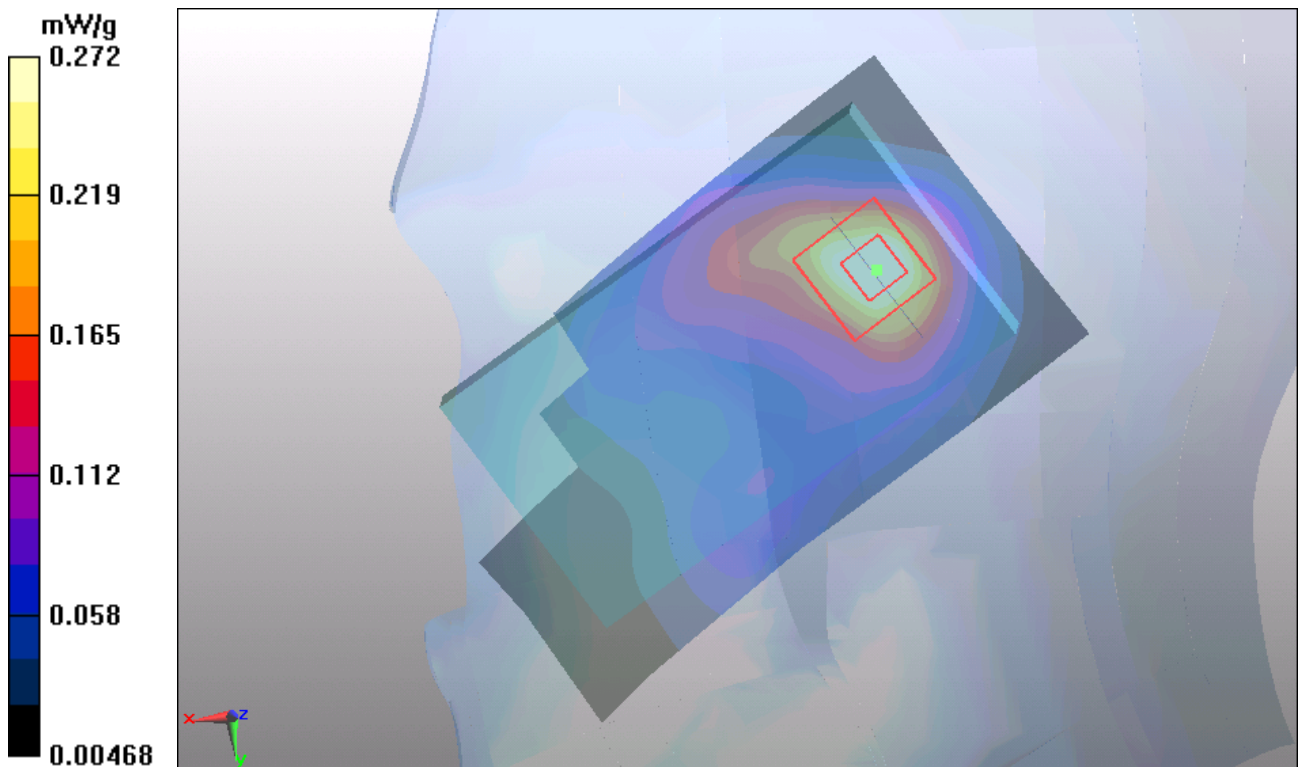


Figure 46 Right Hand Tilt 15° GSM 1900 Channel 810

GSM 1900 Right Tilt Middle (Battery 1)

Date/Time: 4/23/2012 5:39:04 PM

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.299 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.5 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.405 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.279 mW/g

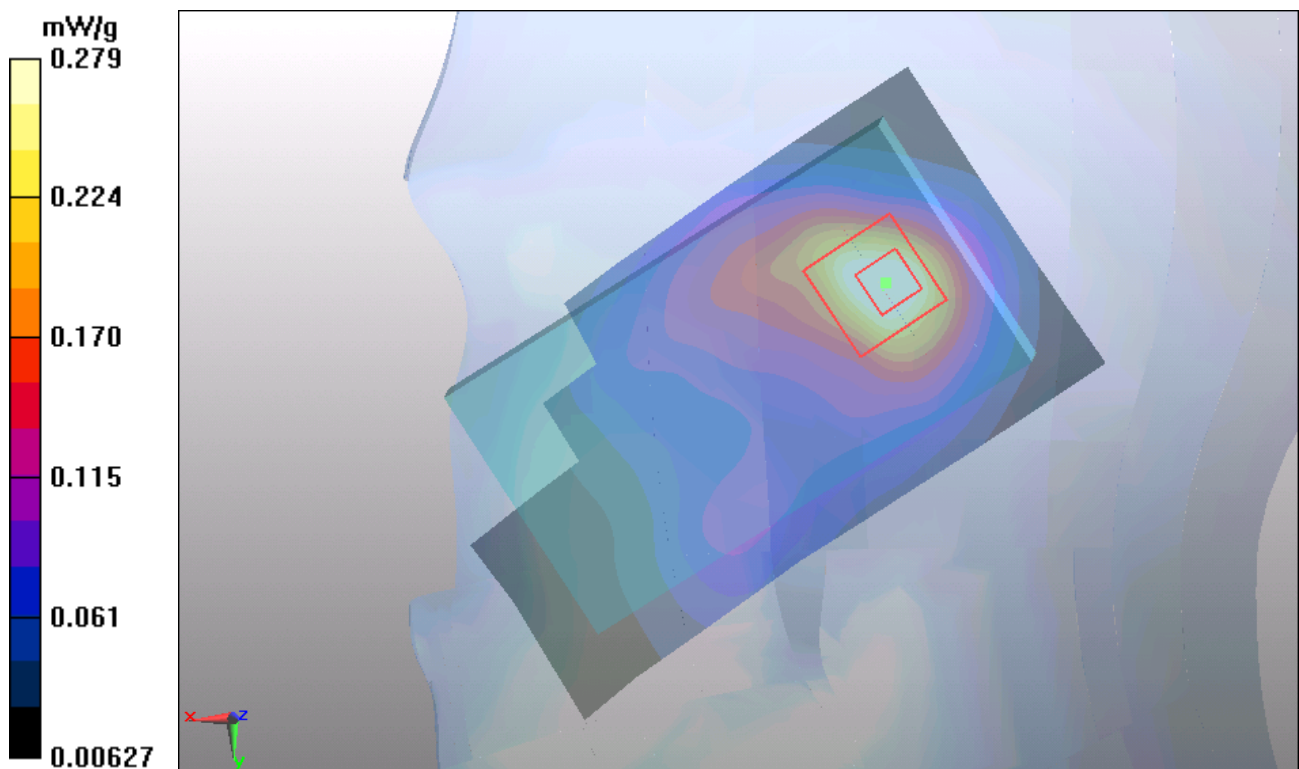


Figure 47 Right Hand Tilt 15° GSM 1900 Channel 661

GSM 1900 Right Tilt Low (Battery 1)

Date/Time: 4/23/2012 10:10:20 PM

Communication System: GSM; Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: EX3DV4 - SN3753; ConvF(8.05, 8.05, 8.05); Calibrated: 1/4/2012

Electronics: DAE4 Sn871; Calibrated: 11/22/2011

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.218 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.294 W/kg

SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.207 mW/g

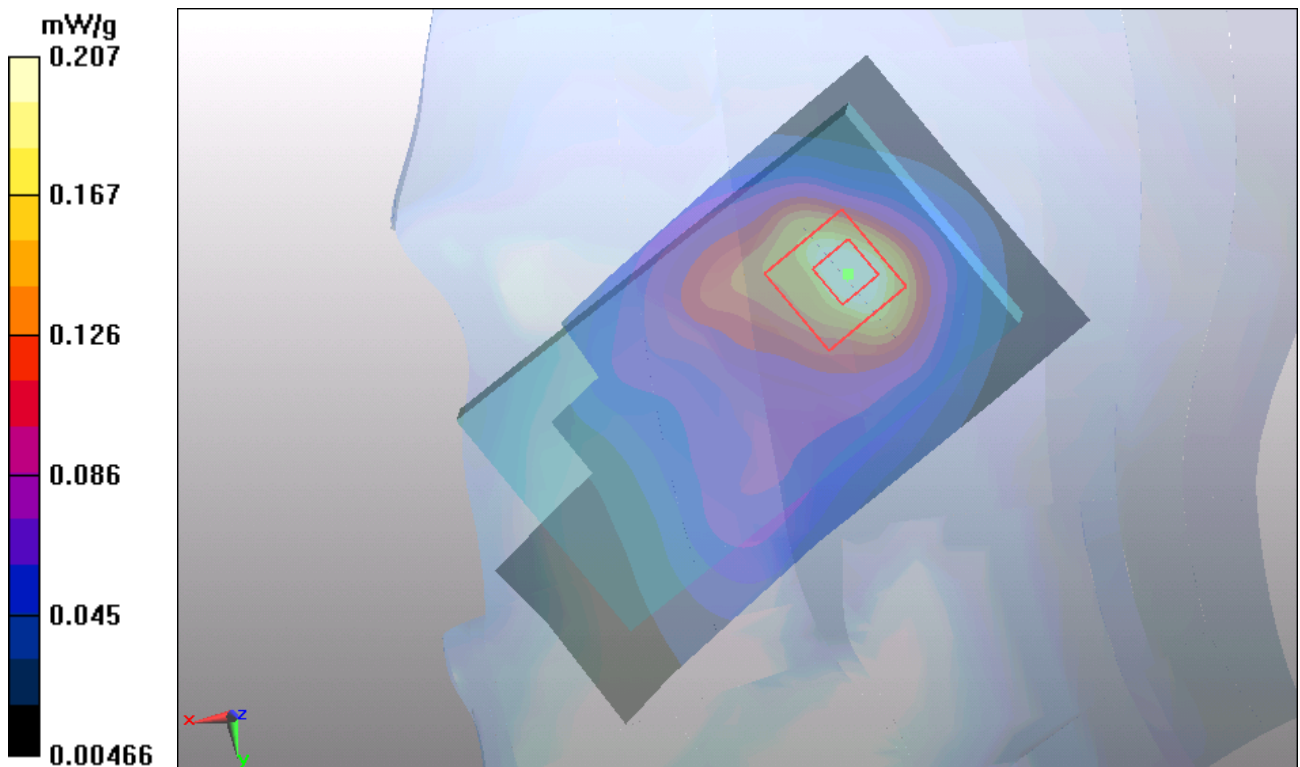


Figure 48 Right Hand Tilt 15° GSM 1900 Channel 512

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

Report No.: RXA1208-0616SAR

Page 89 of 198

GSM 1900 GPRS (2Txslots) Towards Ground High (Battery 1)

Date/Time: 8/18/2012 7:15:45 PM

Communication System: GPRS 2TX ; Frequency: 1909.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.514 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = 0.070 dB

Peak SAR (extrapolated) = 0.744 W/kg

SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.291 mW/g

Maximum value of SAR (measured) = 0.494 mW/g

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

Reference Value = 11.5 V/m; Power Drift = 0.070 dB

Peak SAR (extrapolated) = 0.731 W/kg

SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.299 mW/g

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

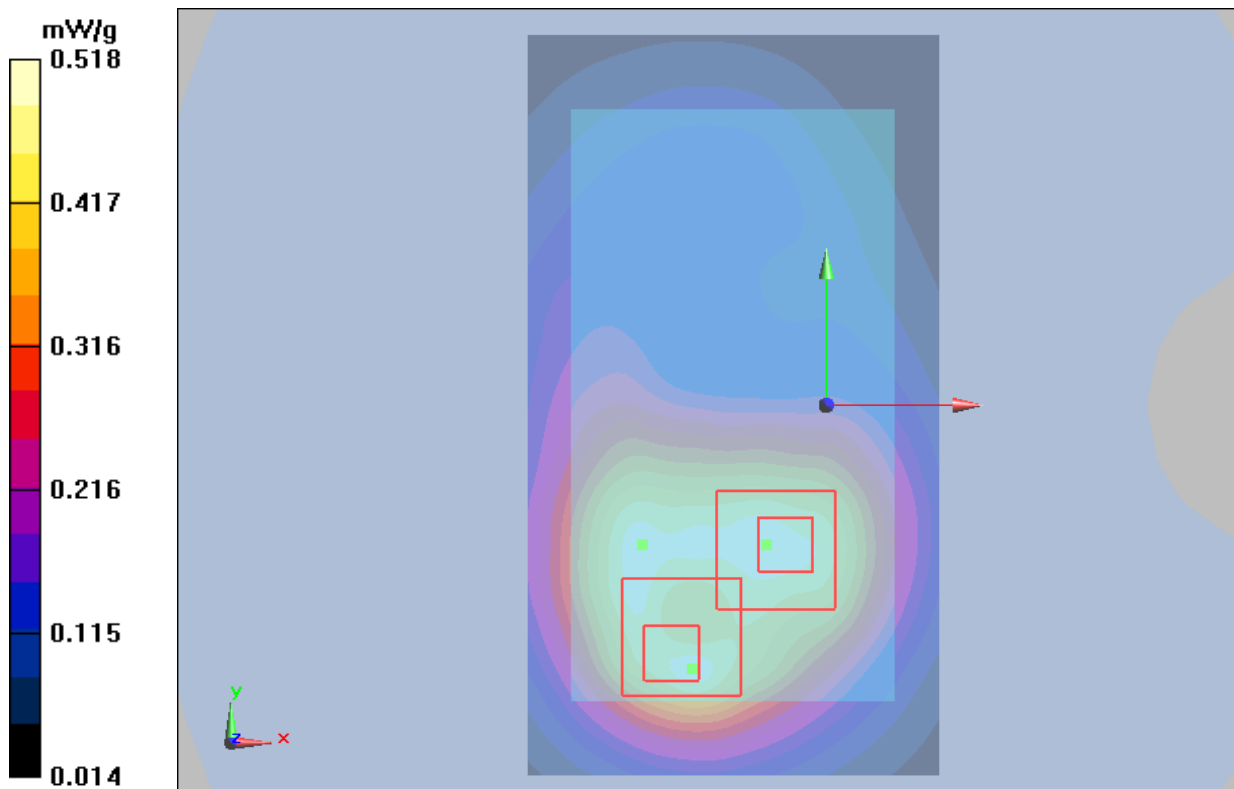


Figure 49 Body, Towards Ground, GSM 1900 GPRS (2Txslots) Channel 810

GSM 1900 GPRS (2Txslots) Towards Ground Middle (Battery 1)

Date/Time: 8/18/2012 7:01:45 PM

Communication System: GPRS 2TX ; Frequency: 1880 MHz;Duty Cycle: 1:4.14954

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.399 mW/g

Towards Ground Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 10.3 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 0.582 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 0.393 mW/g

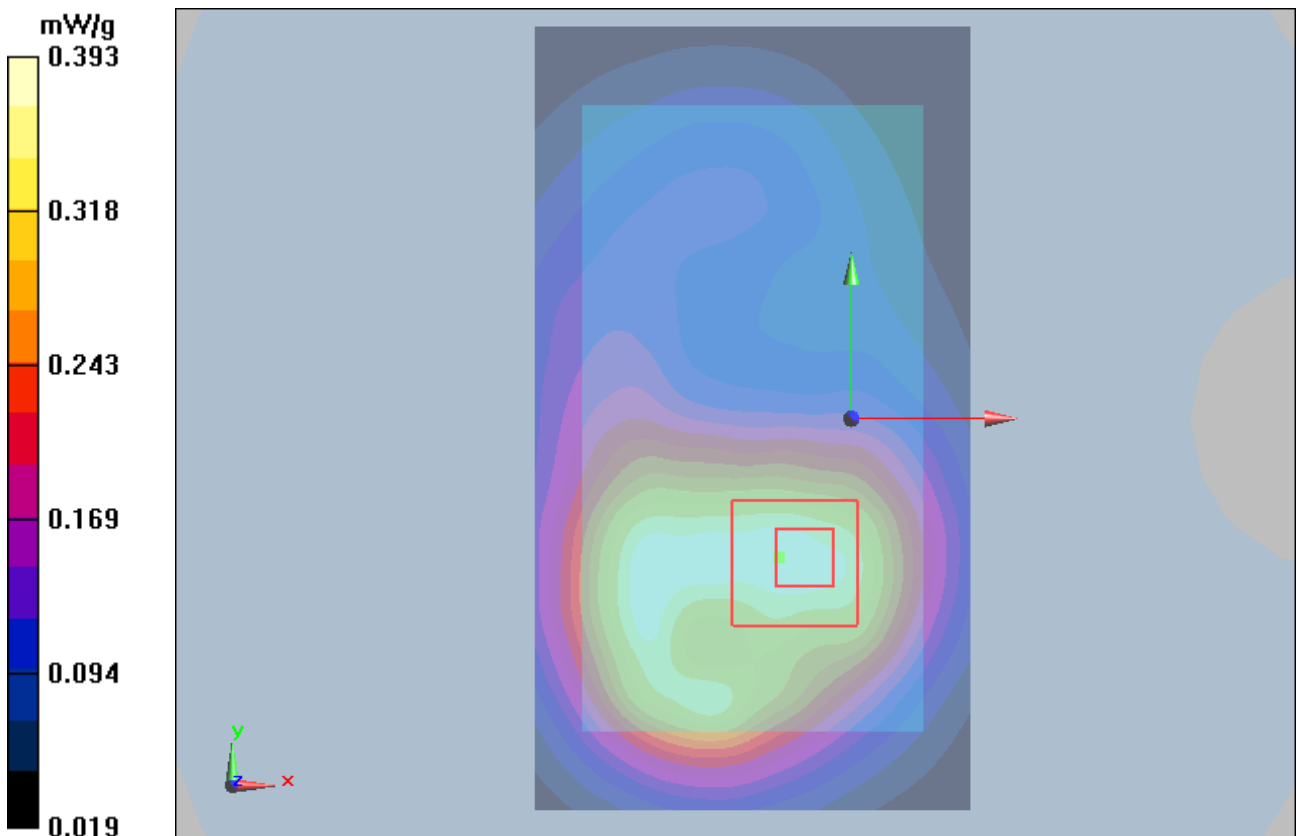


Figure 50 Body, Towards Ground, GSM 1900 GPRS (2Txslots) Channel 661

GSM 1900 GPRS (2Txslots) Towards Ground Low (Battery 1)

Date/Time: 8/18/2012 7:36:24 PM

Communication System: GPRS 2TX ; Frequency: 1850.2 MHz;Duty Cycle: 1:4.14954

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.307 mW/g

Towards Ground Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 9.11 V/m; Power Drift = 0.054 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.304 mW/g

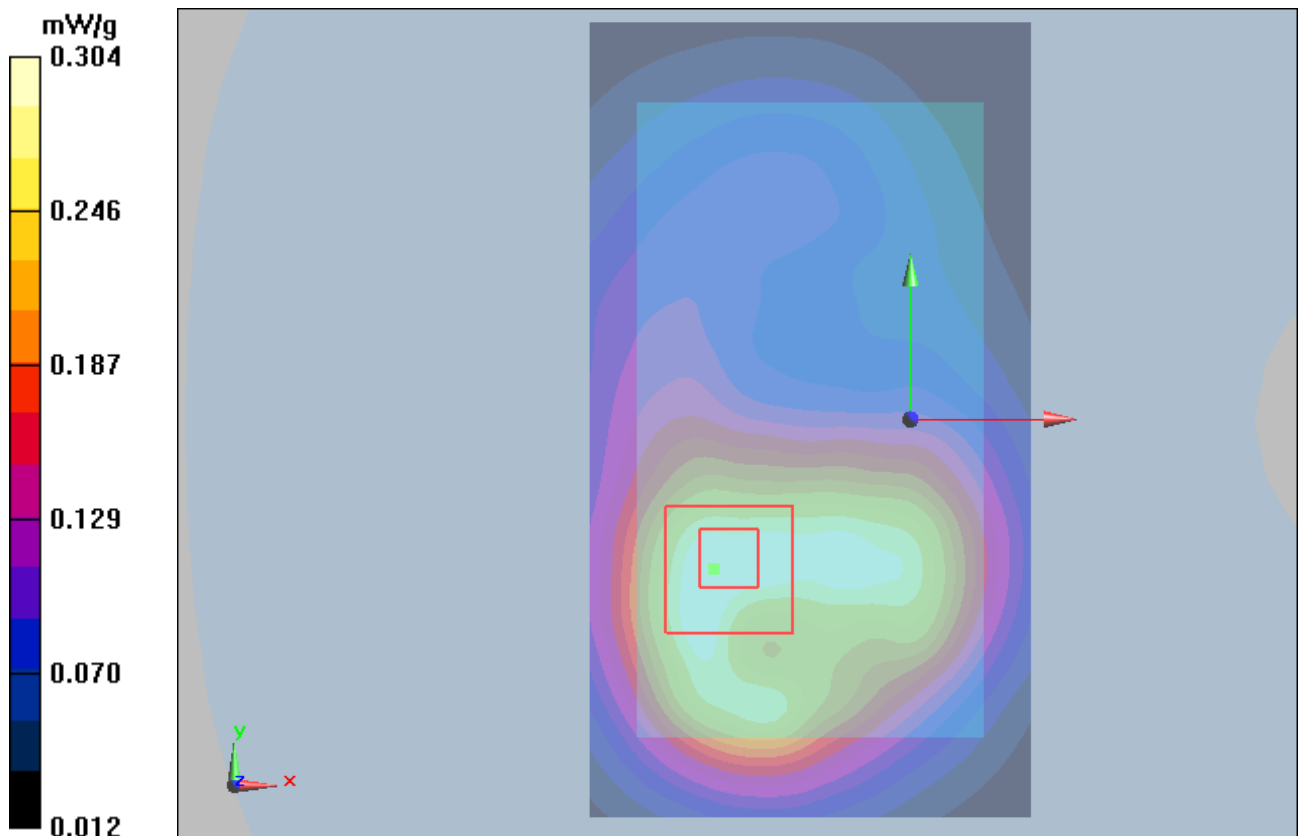


Figure 51 Body, Towards Ground, GSM 1900 GPRS (2Txslots) Channel 512

GSM 1900 GPRS (2Txslots) Towards Phantom High (Battery 1)

Date/Time: 8/18/2012 6:32:58 PM

Communication System: GPRS 2TX ; Frequency: 1909.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.444 mW/g

Towards Phantom High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.653 W/kg

SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.262 mW/g

Maximum value of SAR (measured) = 0.445 mW/g

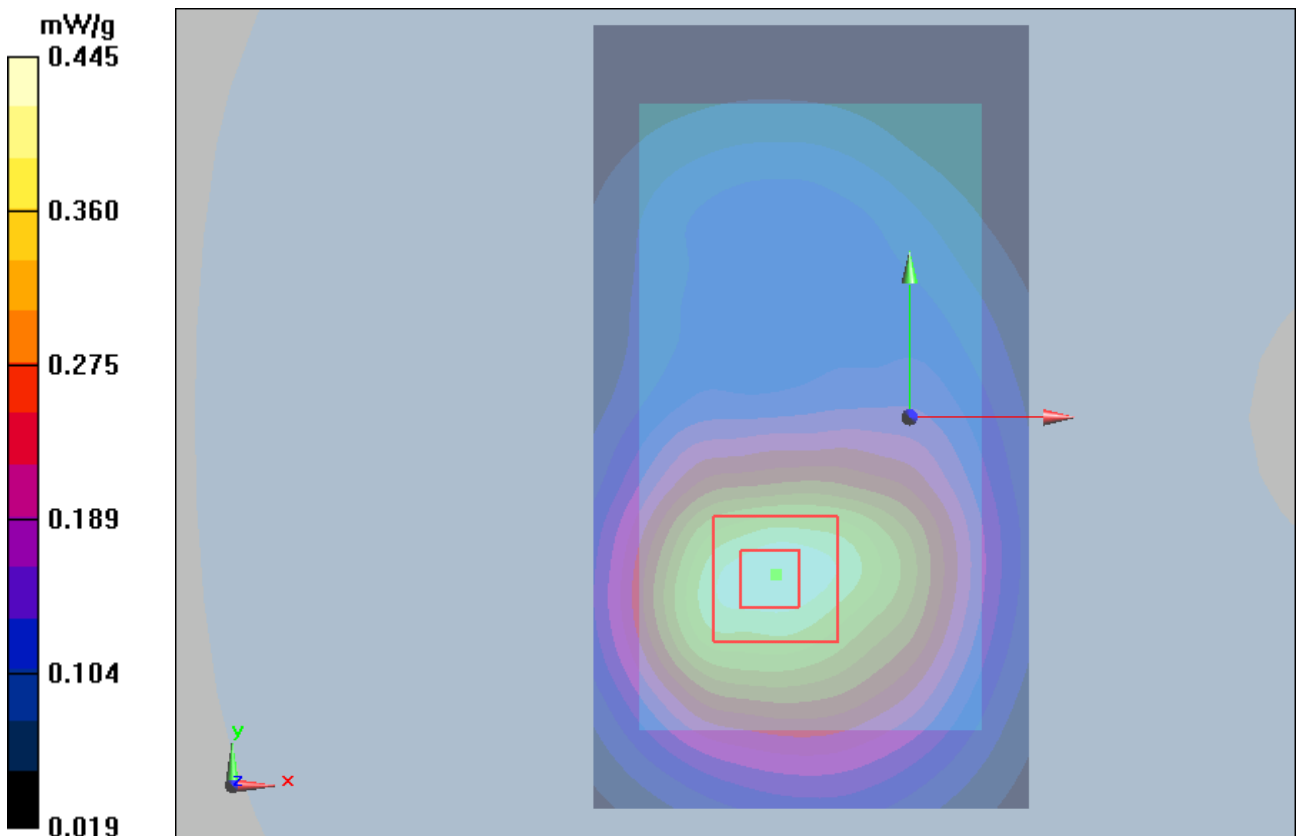


Figure 52 Body, Towards Phantom, GSM 1900 GPRS (2Txslots) Channel 810

GSM 1900 GPRS (2Txslots) Towards Phantom Middle (Battery 1)

Date/Time: 8/18/2012 6:46:42 PM

Communication System: GPRS 2TX ; Frequency: 1880 MHz;Duty Cycle: 1:4.14954

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.344 mW/g

Towards Phantom Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 9.09 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.501 W/kg

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.203 mW/g

Maximum value of SAR (measured) = 0.343 mW/g

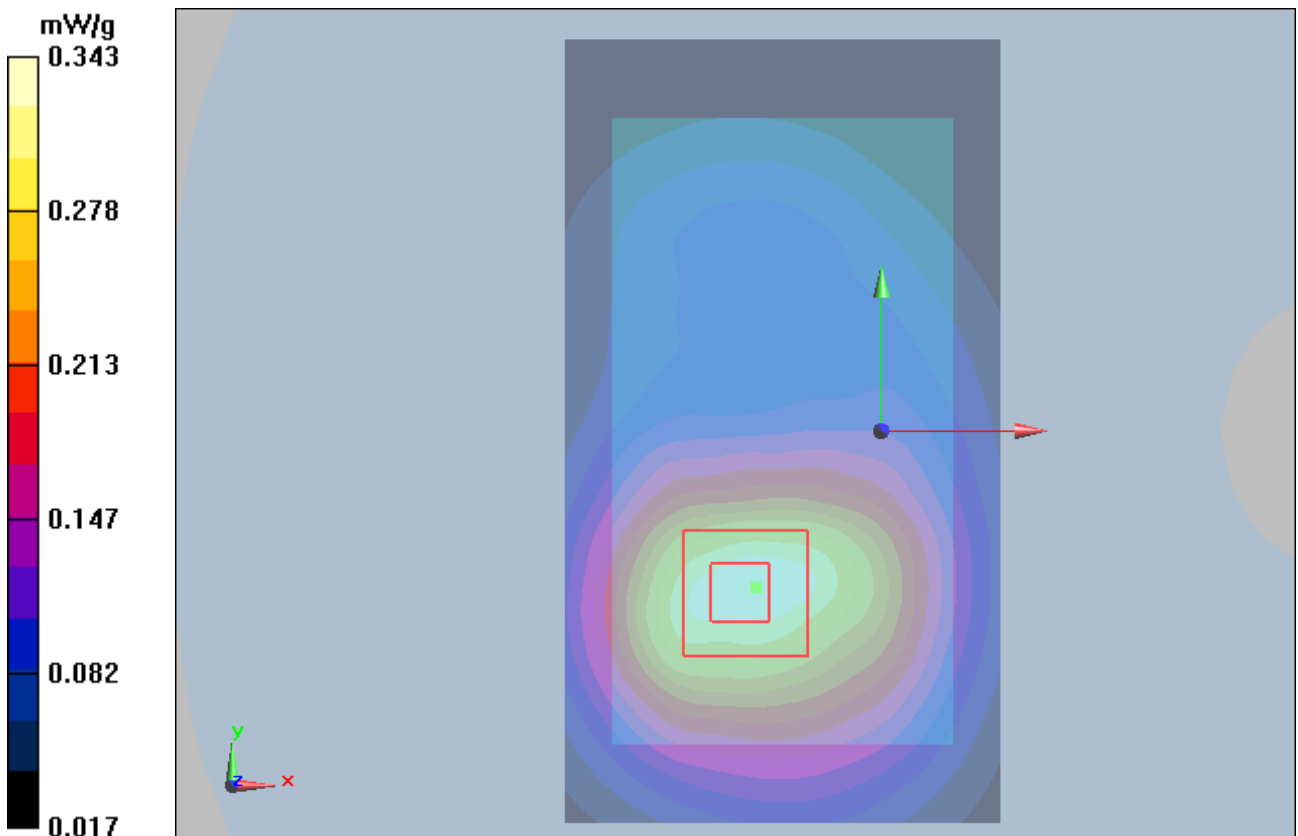


Figure 53 Body, Towards Phantom, GSM 1900 GPRS (2Txslots) Channel 661

GSM 1900 GPRS (2Txslots) Towards Phantom Low (Battery 1)

Date/Time: 8/18/2012 6:19:12 PM

Communication System: GPRS 2TX ; Frequency: 1850.2 MHz;Duty Cycle: 1:4.14954

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.268 mW/g

Towards Phantom Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.397 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.158 mW/g

Maximum value of SAR (measured) = 0.269 mW/g

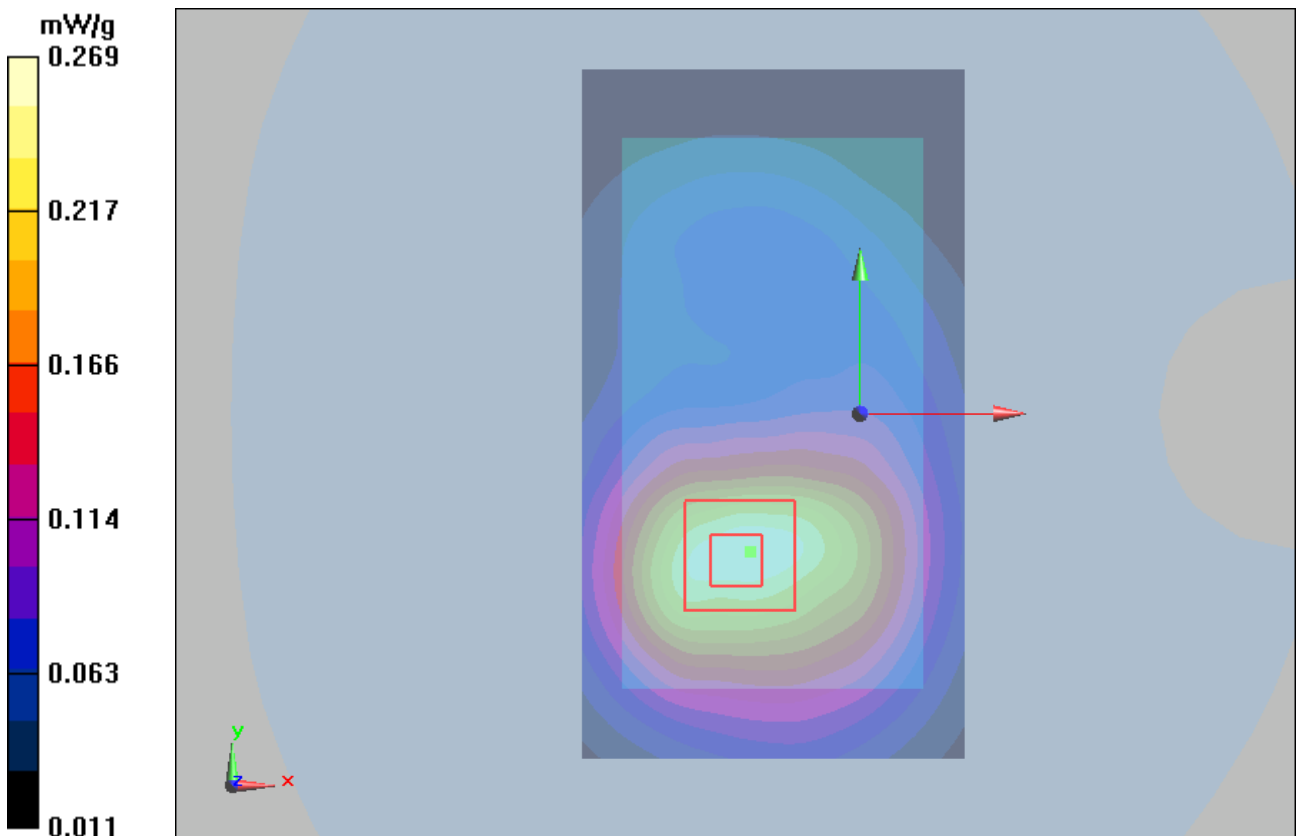


Figure 54 Body, Towards Phantom, GSM 1900 GPRS (2Txslots) Channel 512

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

Report No.: RXA1208-0616SAR

Page 95 of 198

GSM 1900 EGPRS (2Txslots) Towards Ground High (Battery 1)

Date/Time: 8/18/2012 8:18:40 PM

Communication System: EGPRS 2TX; Frequency: 1909.8 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.00609 dB

Peak SAR (extrapolated) = 0.788 W/kg

SAR(1 g) = 0.494 mW/g; SAR(10 g) = 0.310 mW/g

Maximum value of SAR (measured) = 0.525 mW/g

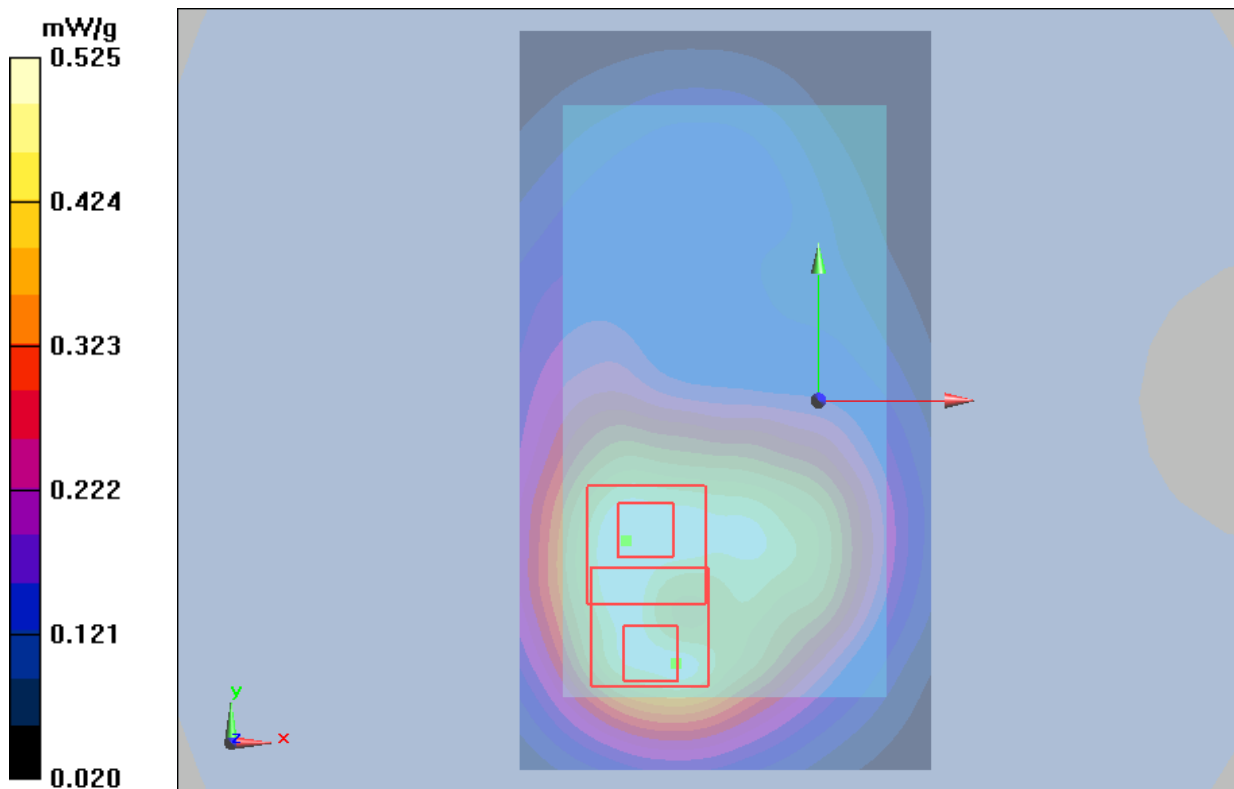
Towards Ground High/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.2 V/m; Power Drift = -0.00609 dB

Peak SAR (extrapolated) = 0.757 W/kg

SAR(1 g) = 0.484 mW/g; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 0.522 mW/g



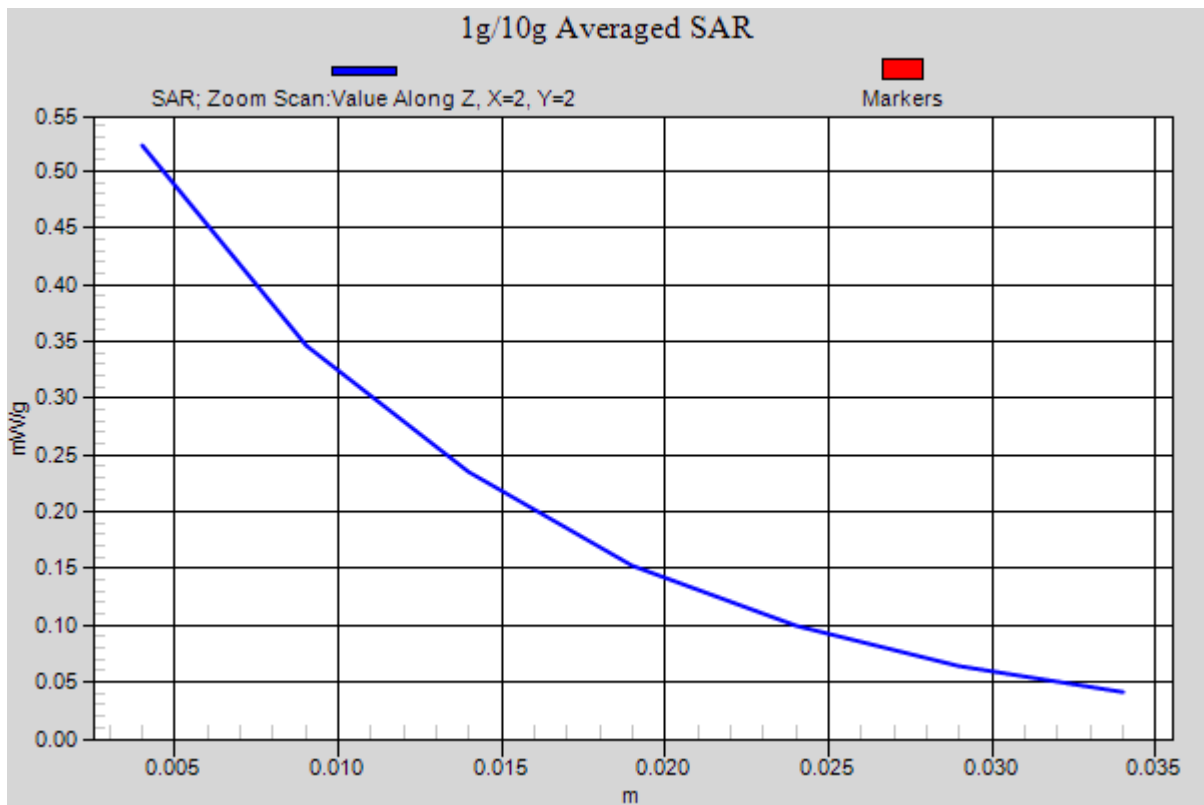
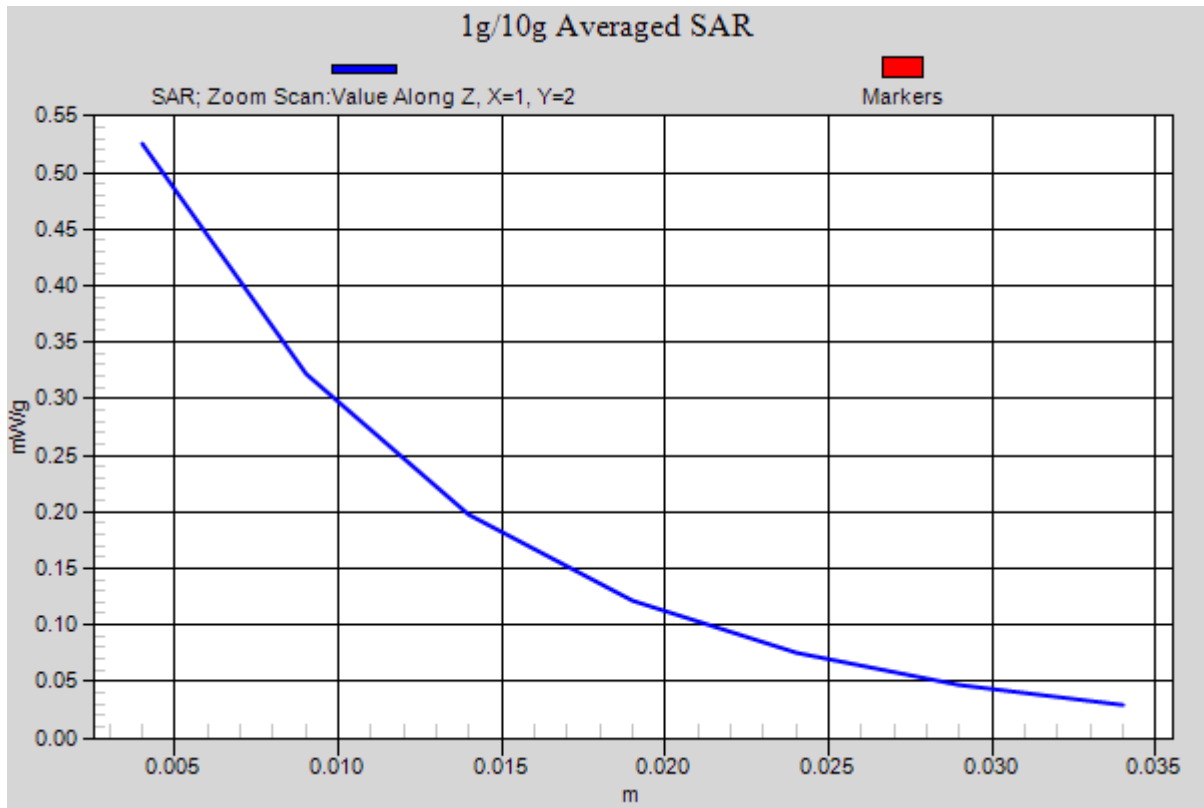


Figure 55 Body, Towards Ground, GSM 1900 EGPRS (2Txslots) Channel 810

GSM 1900 with Stereo Headset 1 Towards Ground High (Battery 1)

Date/Time: 8/18/2012 8:46:32 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.402 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 9.82 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.596 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.401 mW/g

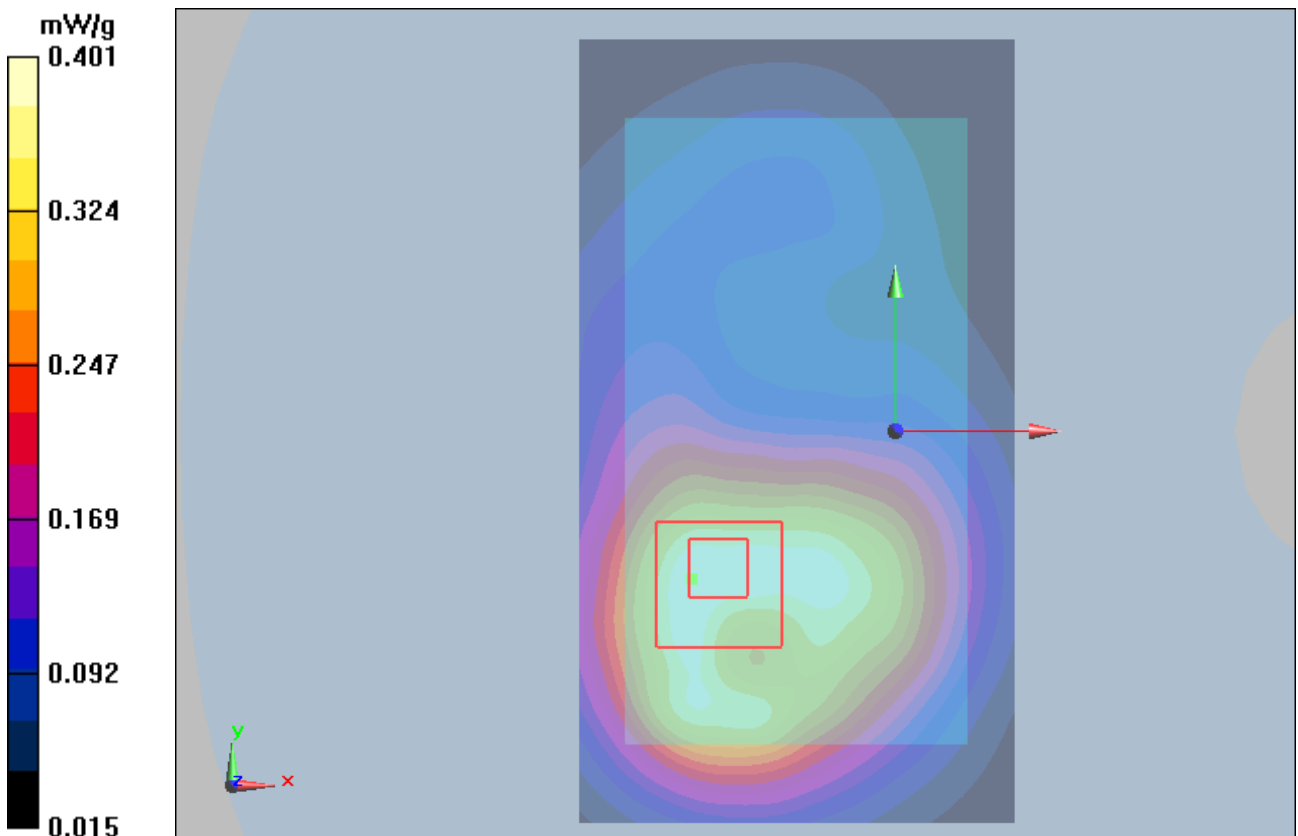


Figure 56 Body with Stereo Headset 1, Towards Ground, GSM 1900 Channel 810

GSM 1900 with Stereo Headset 2 Towards Ground High (Battery 1)

Date/Time: 8/18/2012 9:00:52 PM

Communication System: GSM; Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.365 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 9.72 V/m; Power Drift = 0.085 dB

Peak SAR (extrapolated) = 0.523 W/kg

SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.366 mW/g

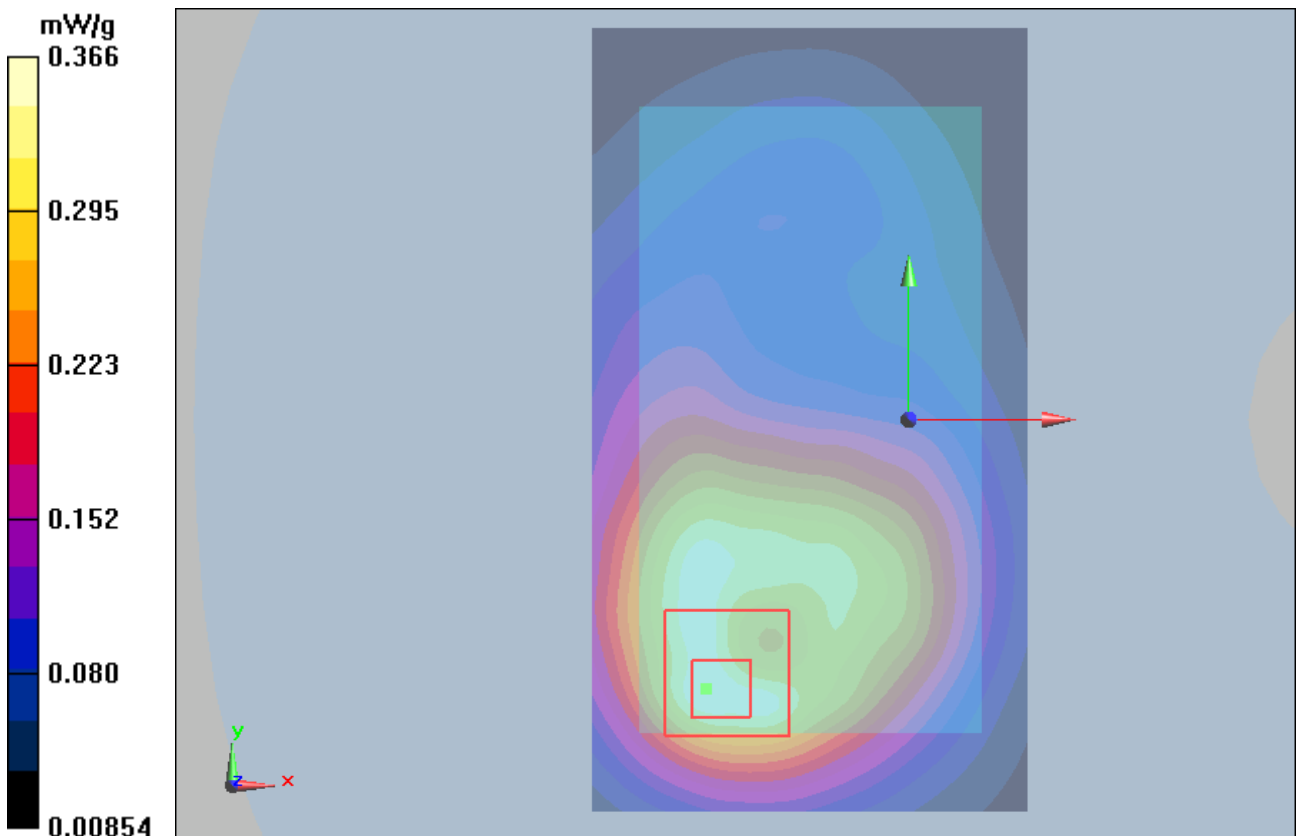


Figure 57 Body with Stereo Headset 2, Towards Ground, GSM 1900 Channel 810

UMTS Band II Left Cheek High (Battery 1)

Date/Time: 8/18/2012 10:38:17 AM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.29 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.56 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.760 mW/g

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

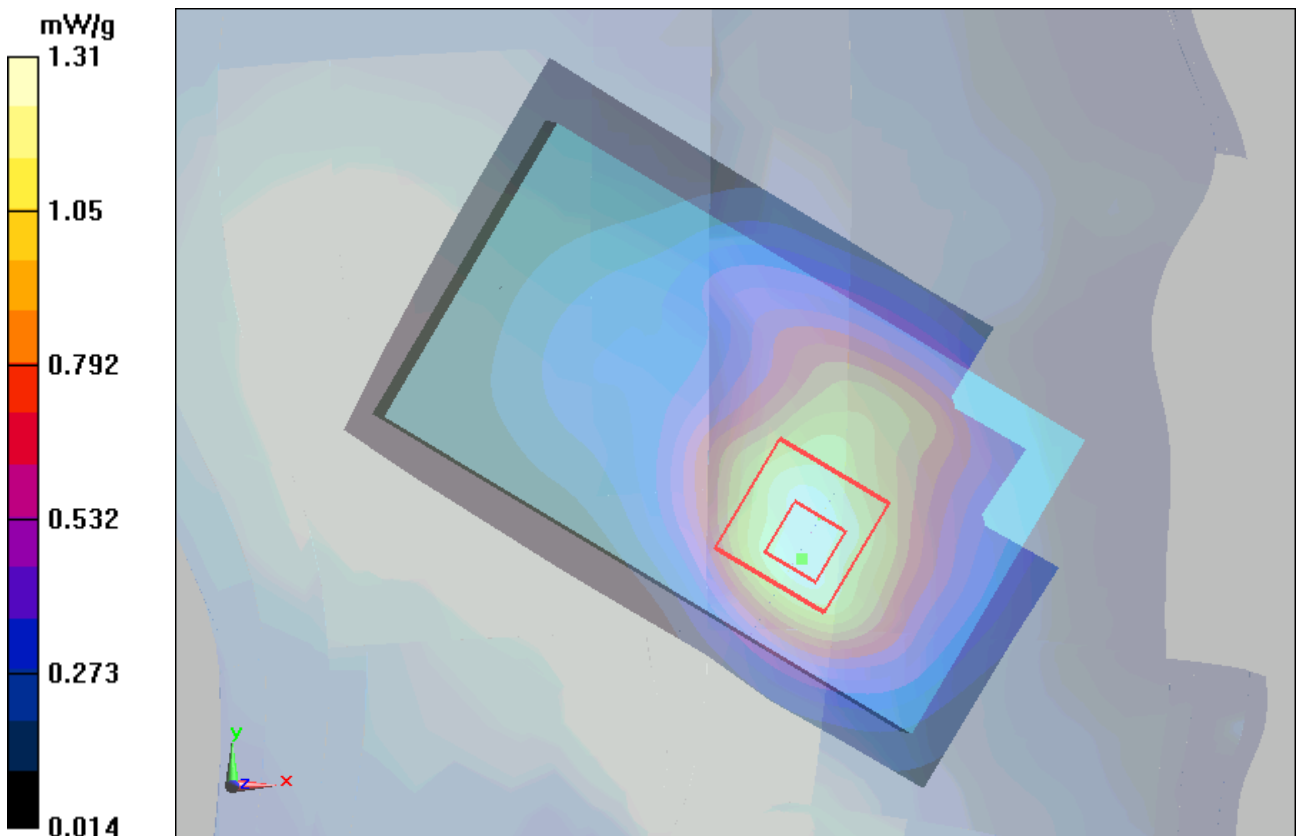


Figure 58 Left Hand Touch Cheek UMTS Band II Channel 9538

UMTS Band II Left Cheek Middle (Battery 1)

Date/Time: 8/18/2012 10:51:27 AM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.46 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 1.94 W/kg

SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.778 mW/g

Maximum value of SAR (measured) = 1.32 mW/g

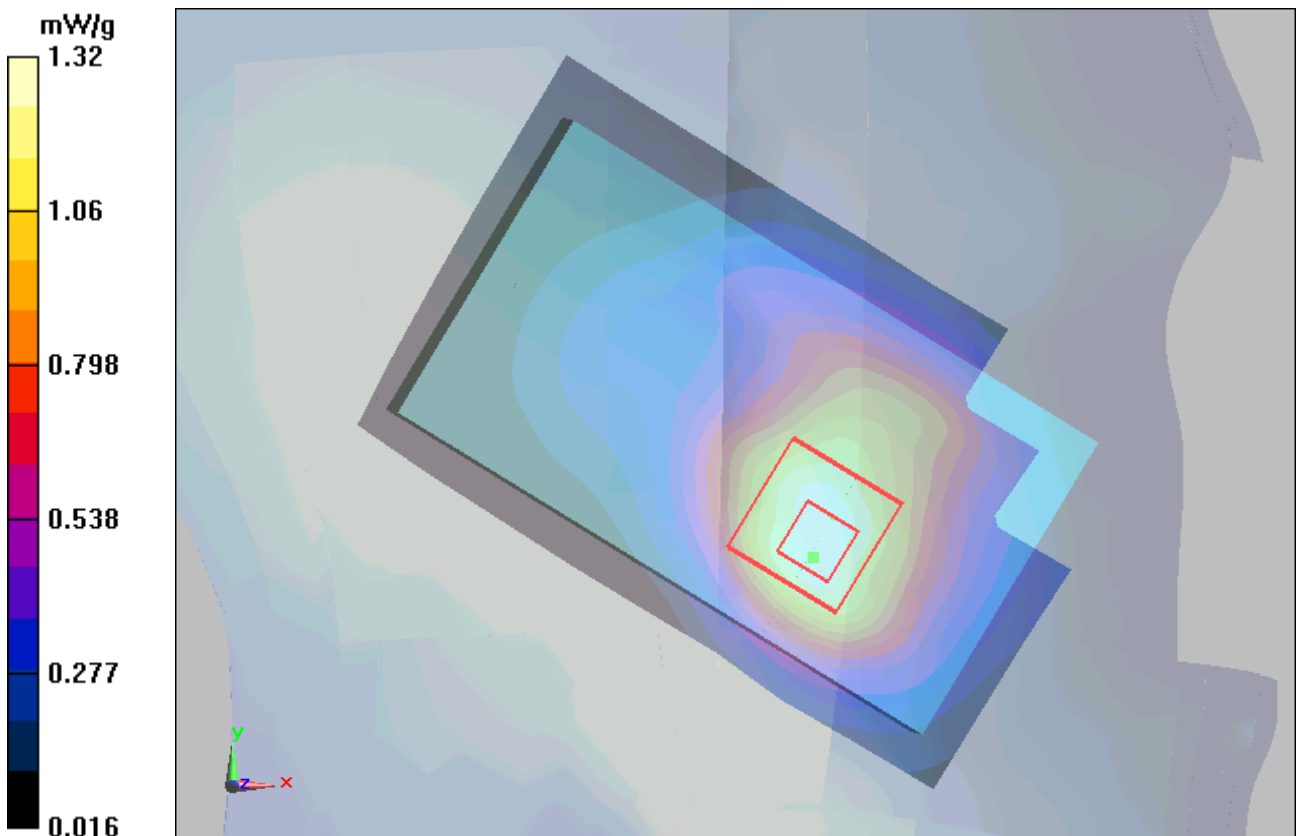


Figure 59 Left Hand Touch Cheek UMTS Band II Channel 9400

UMTS Band II Left Cheek Low (Battery 1)

Date/Time: 8/18/2012 11:04:32 AM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.89 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.92 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.744 mW/g

Maximum value of SAR (measured) = 1.3 mW/g

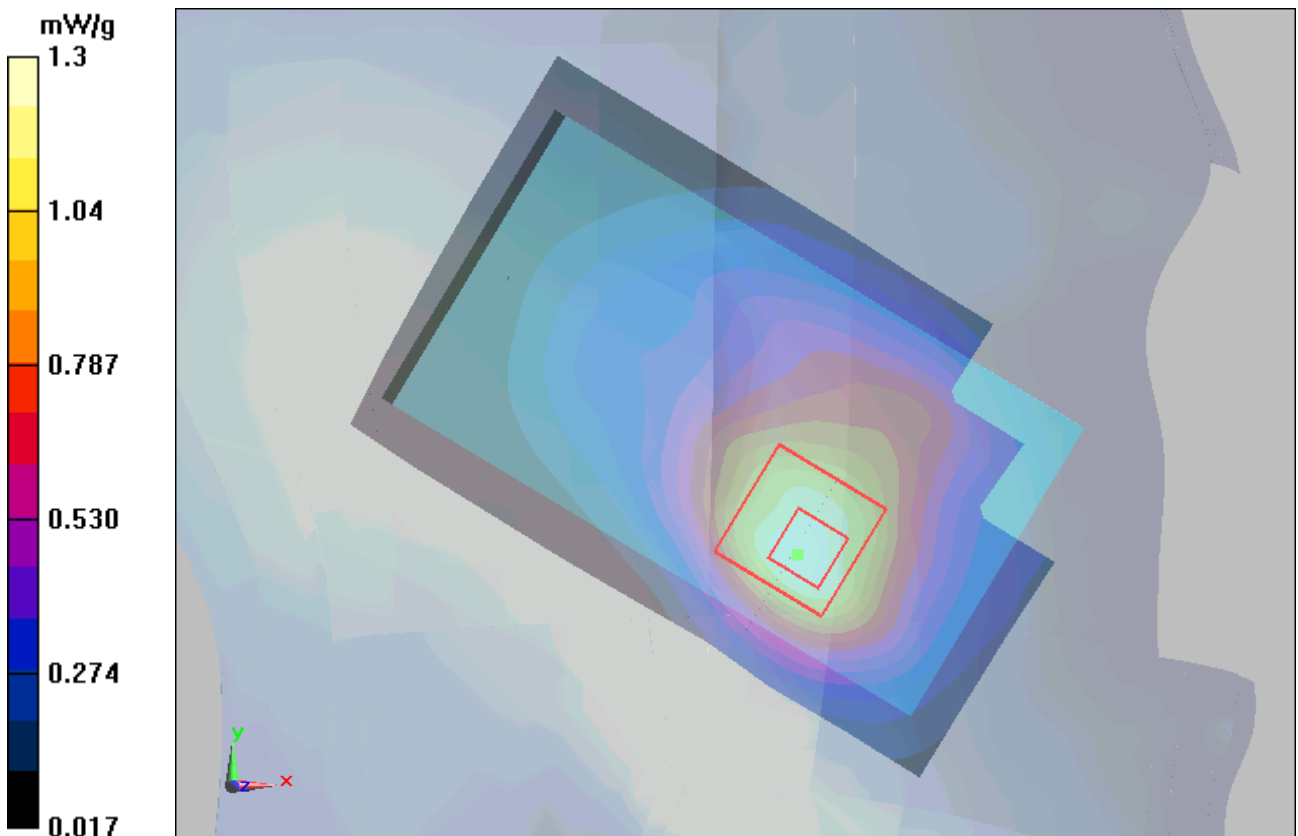


Figure 60 Left Hand Touch Cheek UMTS Band II Channel 9262

UMTS Band II Left Tilt High (Battery 1)

Date/Time: 8/18/2012 11:47:19 AM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.270 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.1 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.283 mW/g

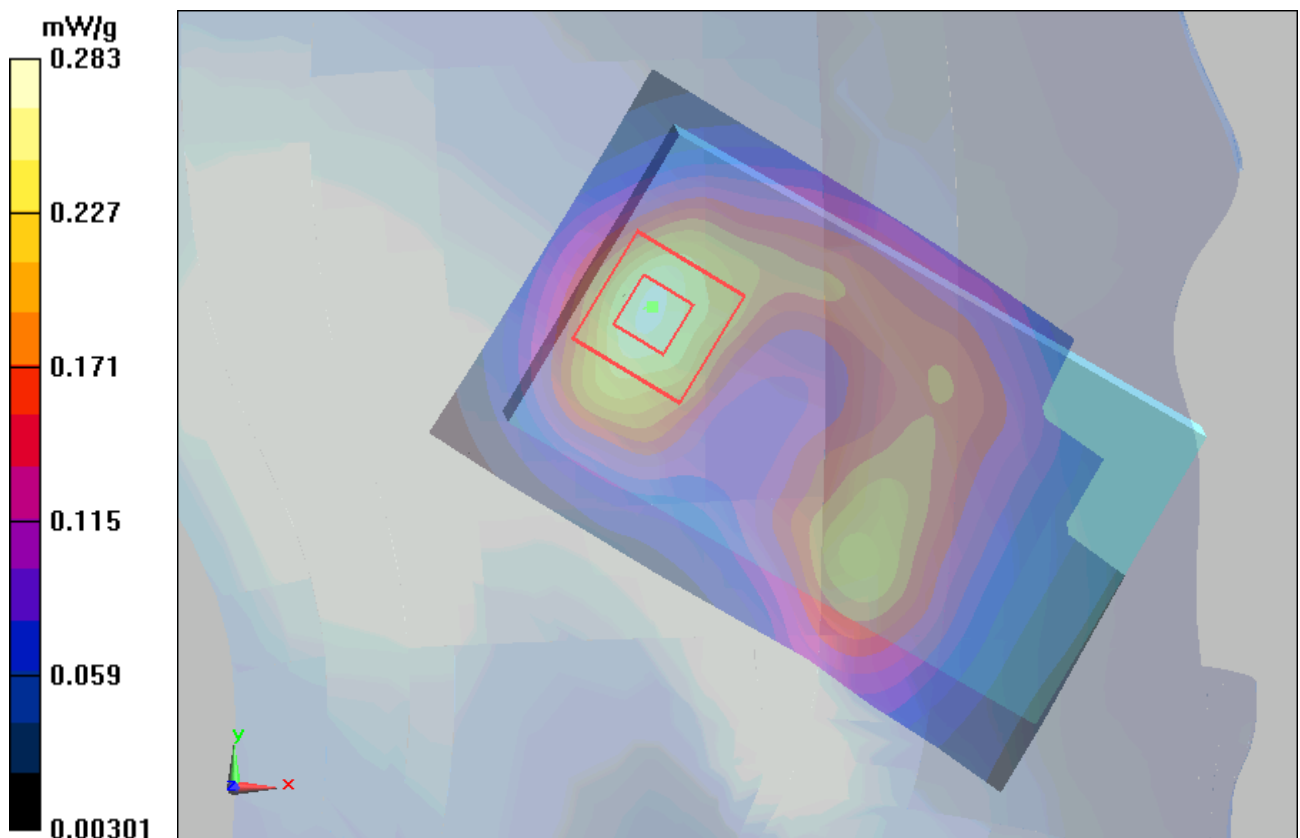


Figure 61 Left Hand Tilt 15° UMTS Band II Channel 9538

UMTS Band II Left Tilt Middle (Battery 1)

Date/Time: 8/18/2012 12:14:34 PM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.267 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.404 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.153 mW/g

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

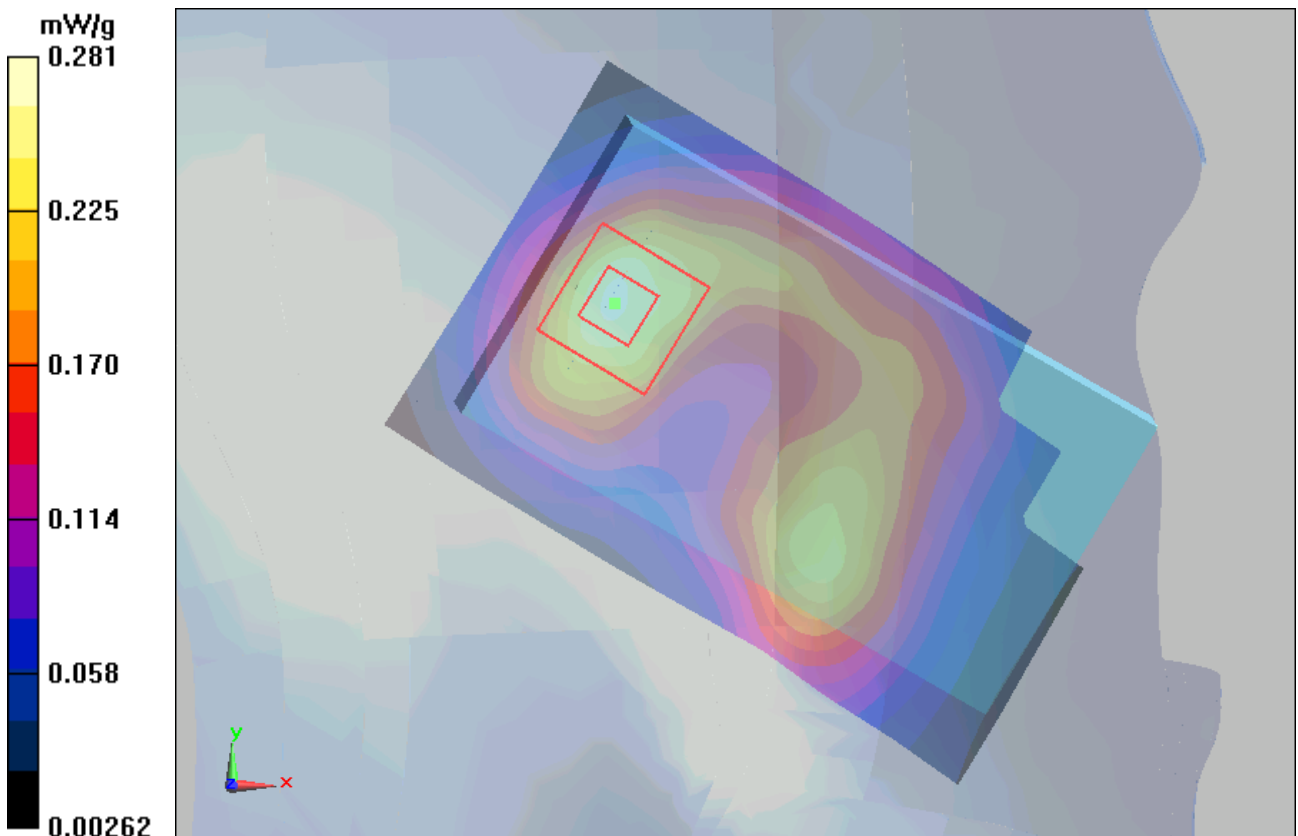


Figure 62 Left Hand Tilt 15° UMTS Band II Channel 9400

UMTS Band II Left Tilt Low (Battery 1)

Date/Time: 8/18/2012 12:28:18 PM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

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

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.481 W/kg

SAR(1 g) = 0.311 mW/g; SAR(10 g) = 0.189 mW/g

Maximum value of SAR (measured) = 0.341 mW/g

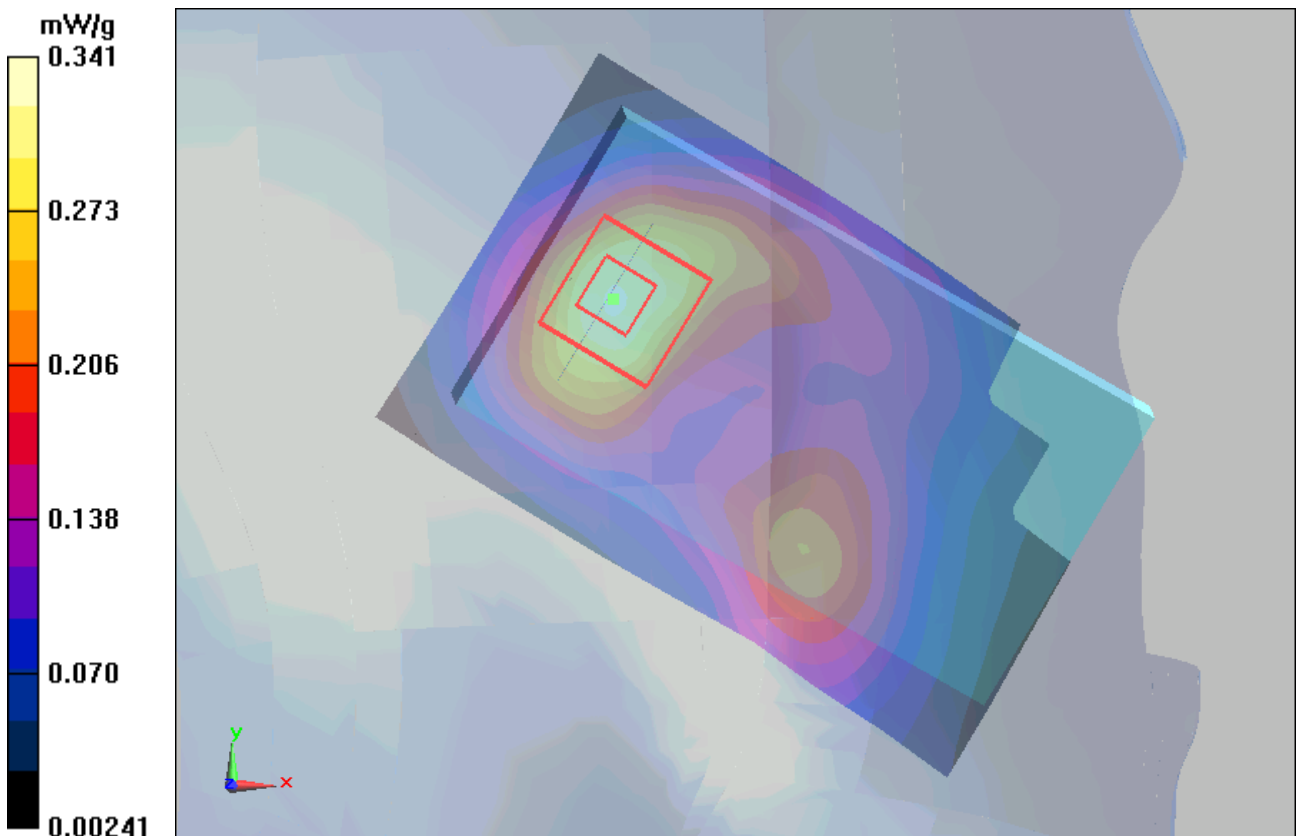


Figure 63 Left Hand Tilt 15° UMTS Band II Channel 9262

UMTS Band II Right Cheek High (Battery 1)

Date/Time: 8/18/2012 9:53:54 AM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.24 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.711 mW/g

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

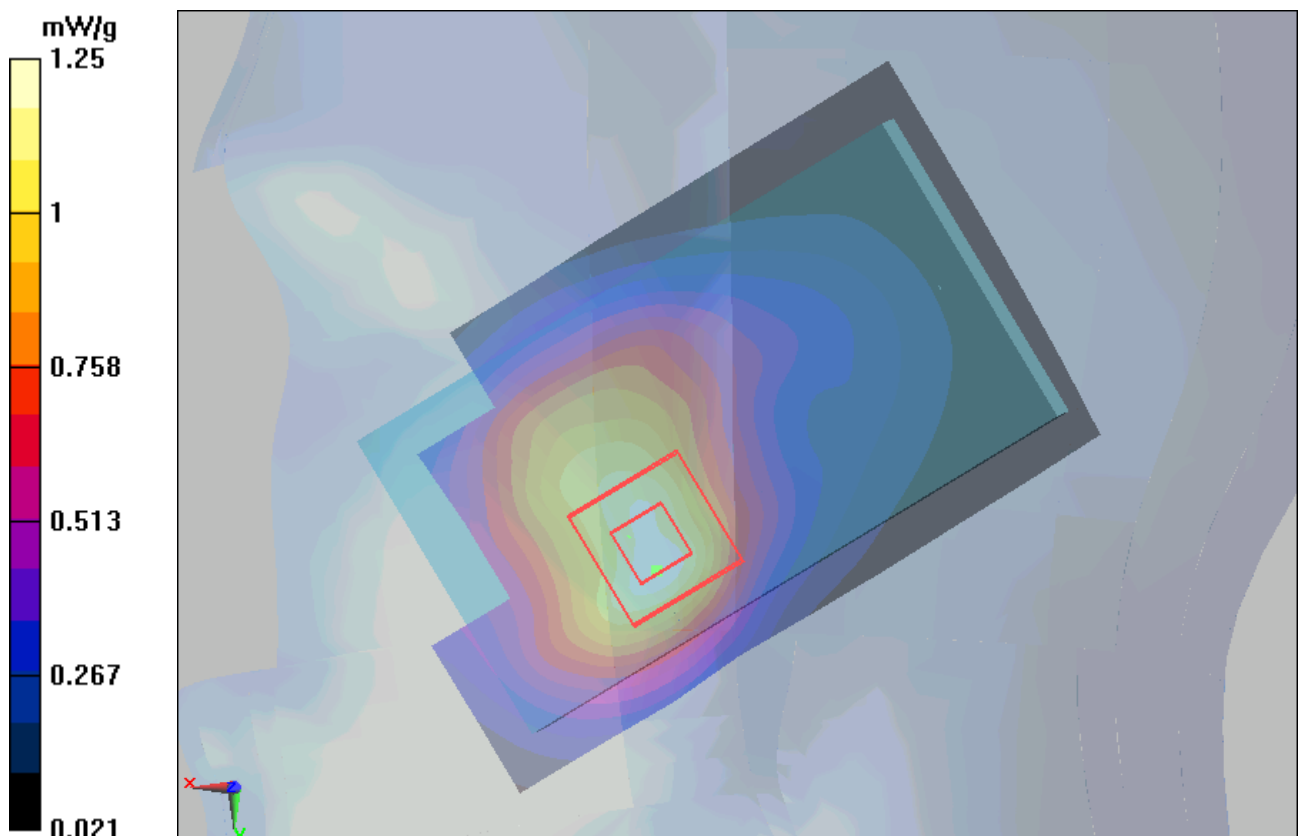


Figure 64 Right Hand Touch Cheek UMTS Band II Channel 9538

UMTS Band II Right Cheek Middle (Battery 1)

Date/Time: 8/18/2012 10:20:28 AM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.27 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.81 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.742 mW/g

Maximum value of SAR (measured) = 1.32 mW/g

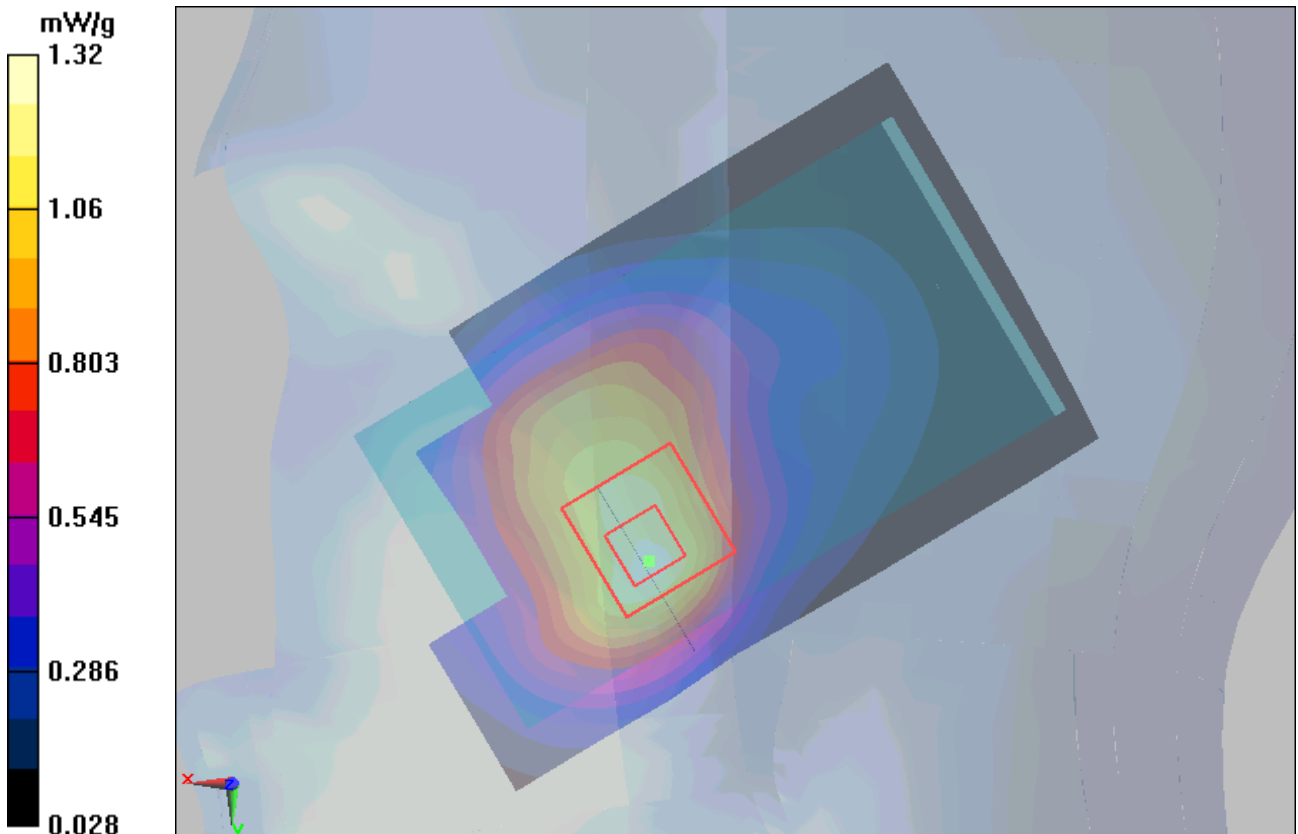


Figure 65 Right Hand Touch Cheek UMTS Band II Channel 9400

UMTS Band II Right Cheek Low (Battery 1)

Date/Time: 8/18/2012 10:06:54 AM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.21 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.735 mW/g

Maximum value of SAR (measured) = 1.29 mW/g

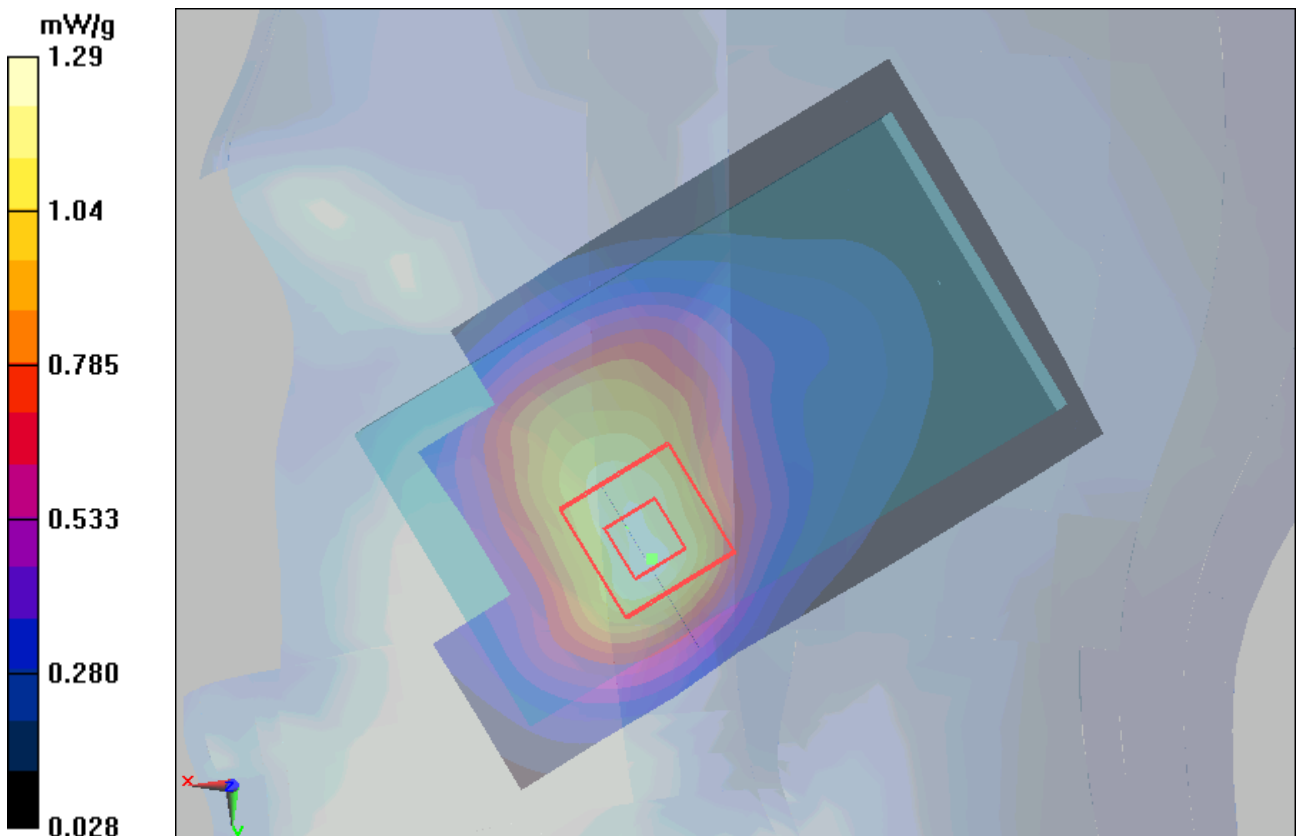


Figure 66 Right Hand Touch Cheek UMTS Band II Channel 9262

UMTS Band II Right Tilt High (Battery 1)

Date/Time: 8/18/2012 1:20:11 PM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt High/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.342 mW/g

Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.504 W/kg

SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.182 mW/g

Maximum value of SAR (measured) = 0.345 mW/g

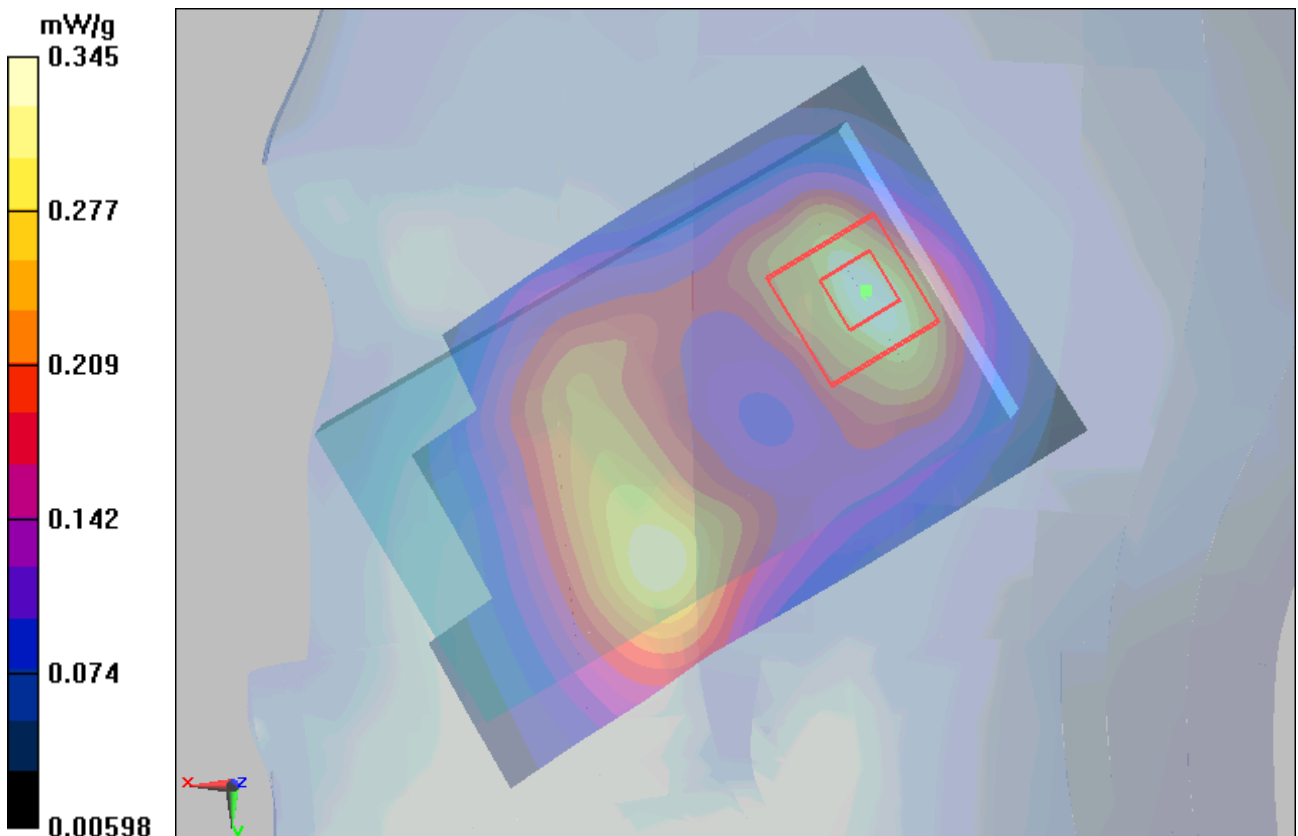


Figure 67 Right Hand Tilt 15° UMTS Band II Channel 9538

UMTS Band II Right Tilt Middle (Battery 1)

Date/Time: 8/18/2012 12:53:34 PM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.332 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.6 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.482 W/kg

SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.180 mW/g

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

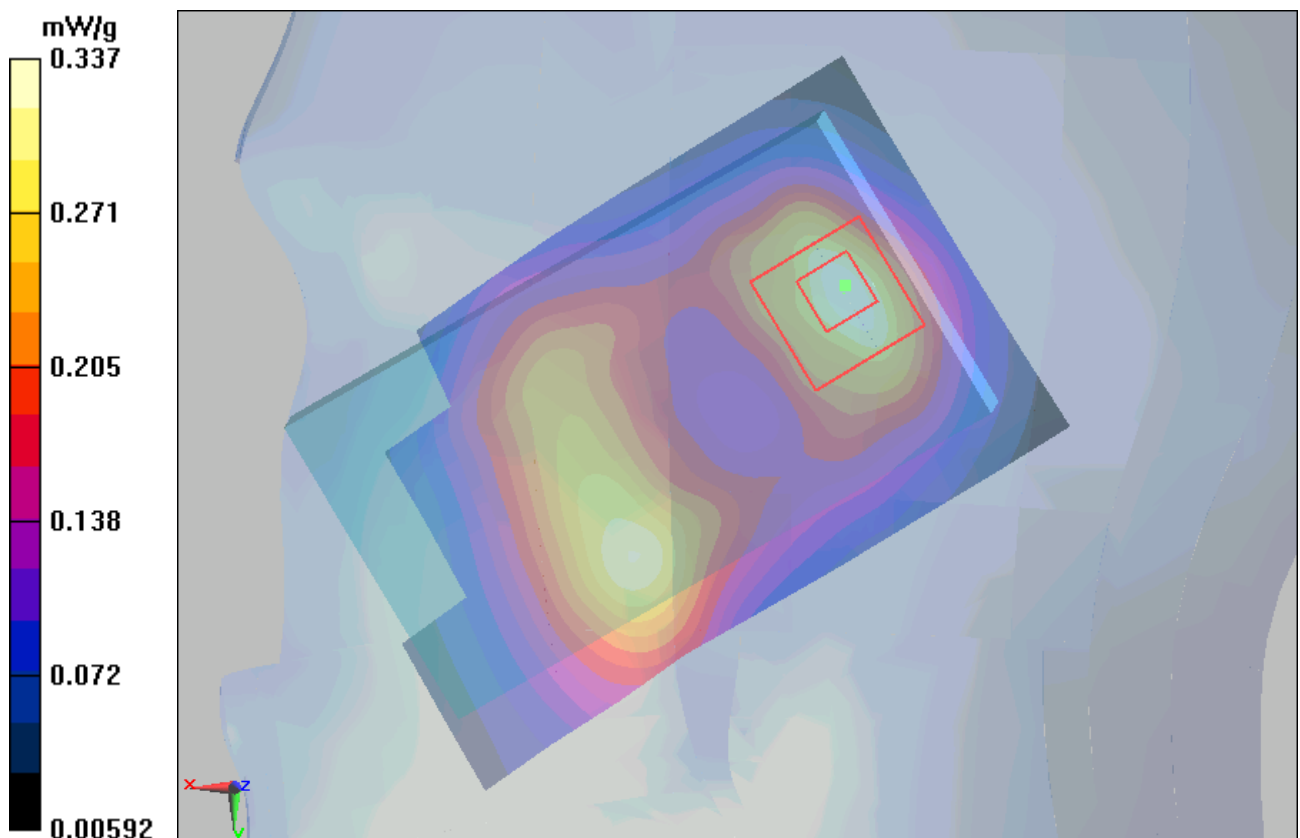


Figure 68 Right Hand Tilt 15° UMTS Band II Channel 9400

UMTS Band II Right Tilt Low (Battery 1)

Date/Time: 8/18/2012 1:07:04 PM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.317 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.4 V/m; Power Drift = -0.00554 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.172 mW/g

Maximum value of SAR (measured) = 0.320 mW/g

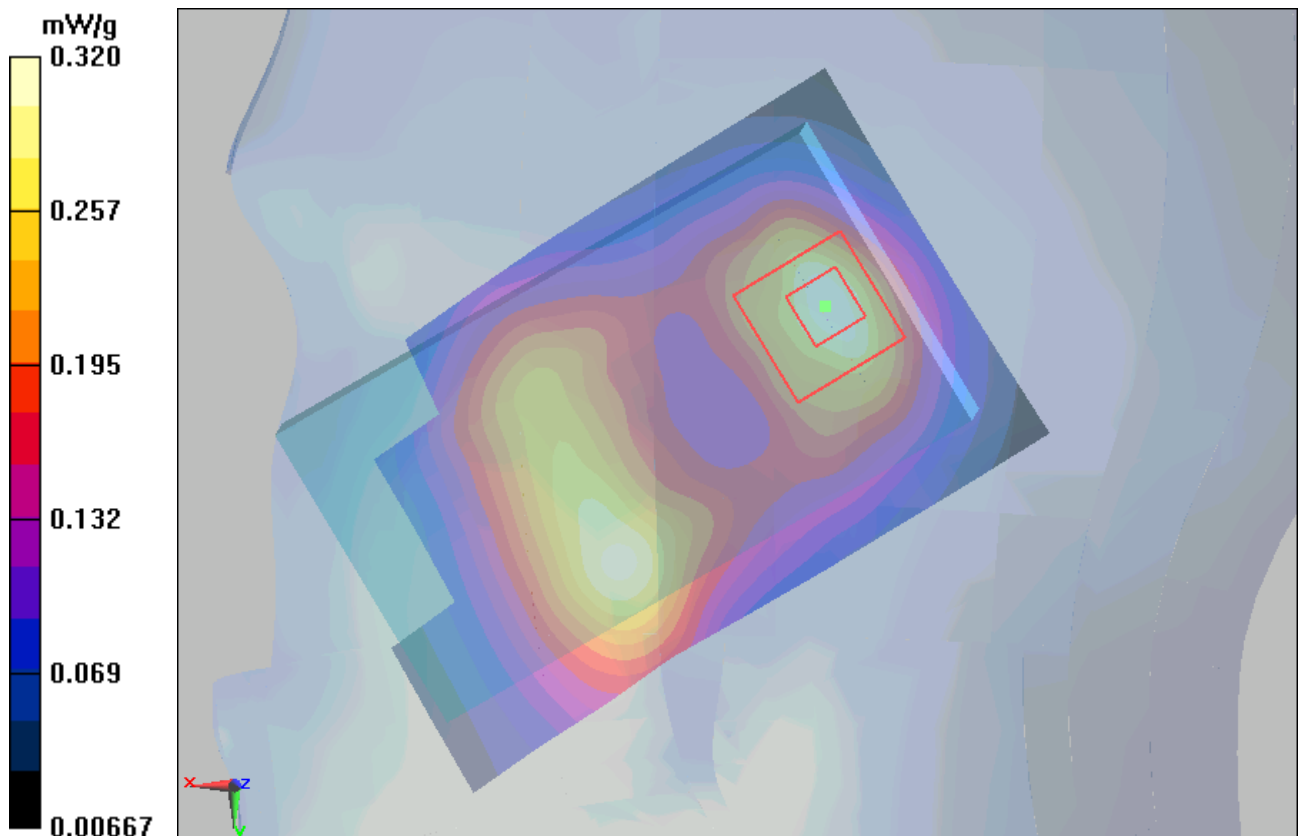


Figure 69 Right Hand Tilt 15° UMTS Band II Channel 9262

UMTS Band II Left Cheek Middle (Battery 2)

Date/Time: 8/18/2012 1:39:44 PM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.4 mW/g

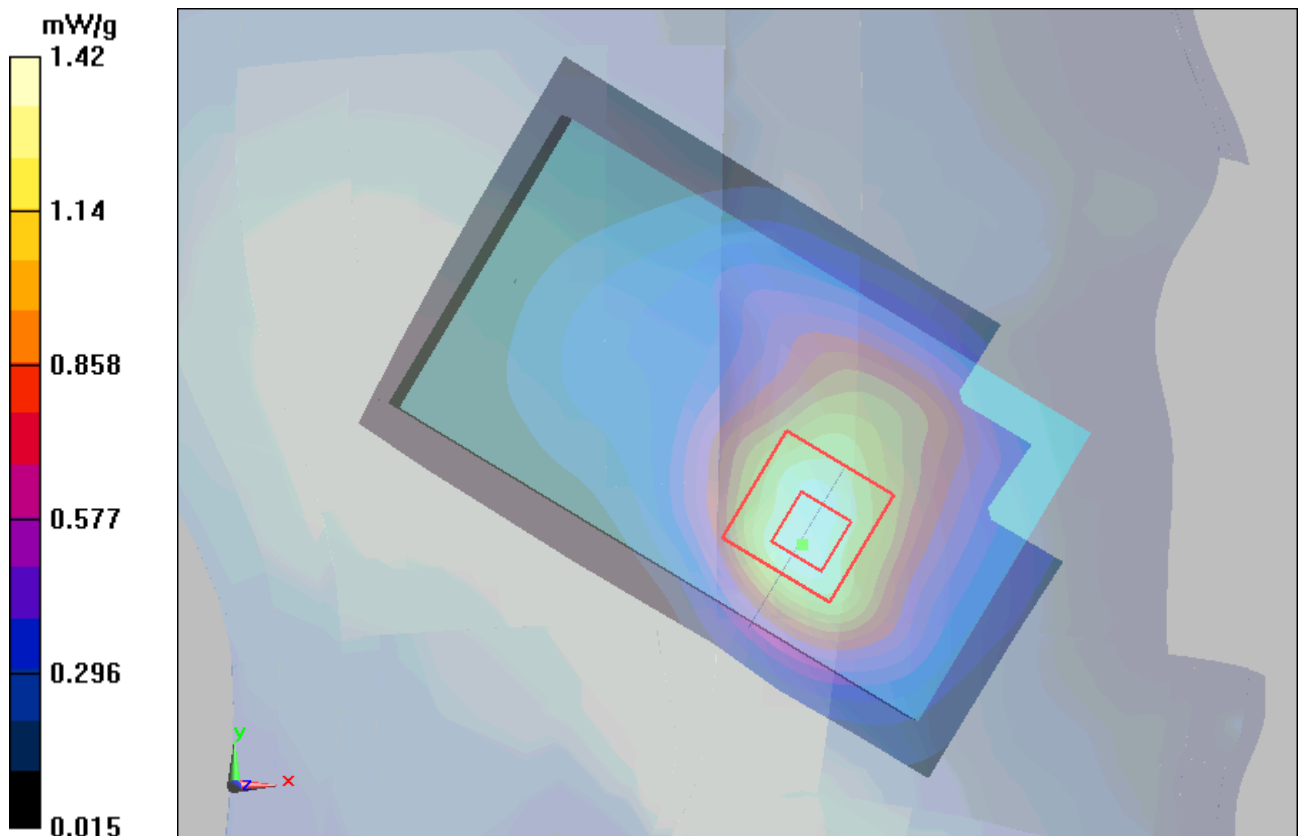
Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.13 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 2.04 W/kg

SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.825 mW/g

Maximum value of SAR (measured) = 1.42 mW/g



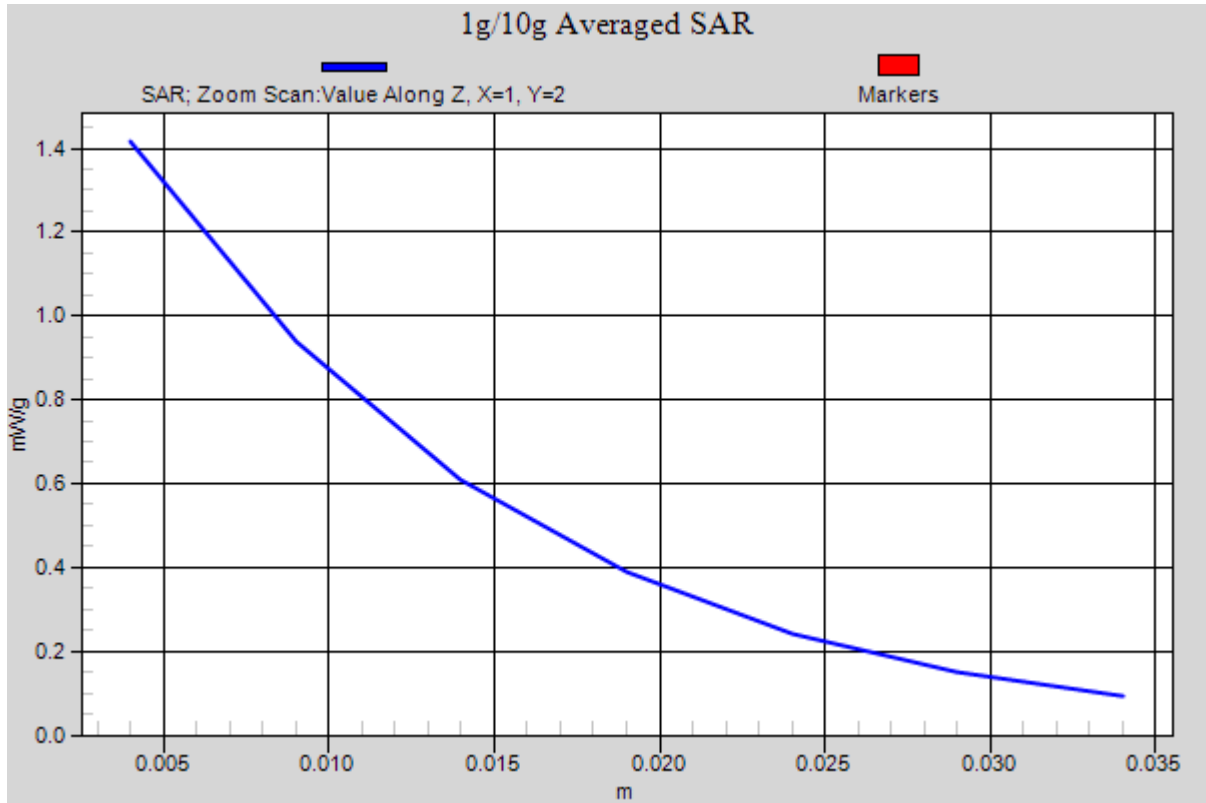


Figure 70 Left Hand Touch Cheek UMTS Band II Channel 9400

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

Report No.: RXA1208-0616SAR

Page 113 of 198

UMTS Band II Towards Ground High (Battery 1)

Date/Time: 8/18/2012 4:20:06 PM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.5 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.915 W/kg

SAR(1 g) = 0.570 mW/g; SAR(10 g) = 0.354 mW/g

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

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

Reference Value = 13.5 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.871 W/kg

SAR(1 g) = 0.539 mW/g; SAR(10 g) = 0.345 mW/g

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

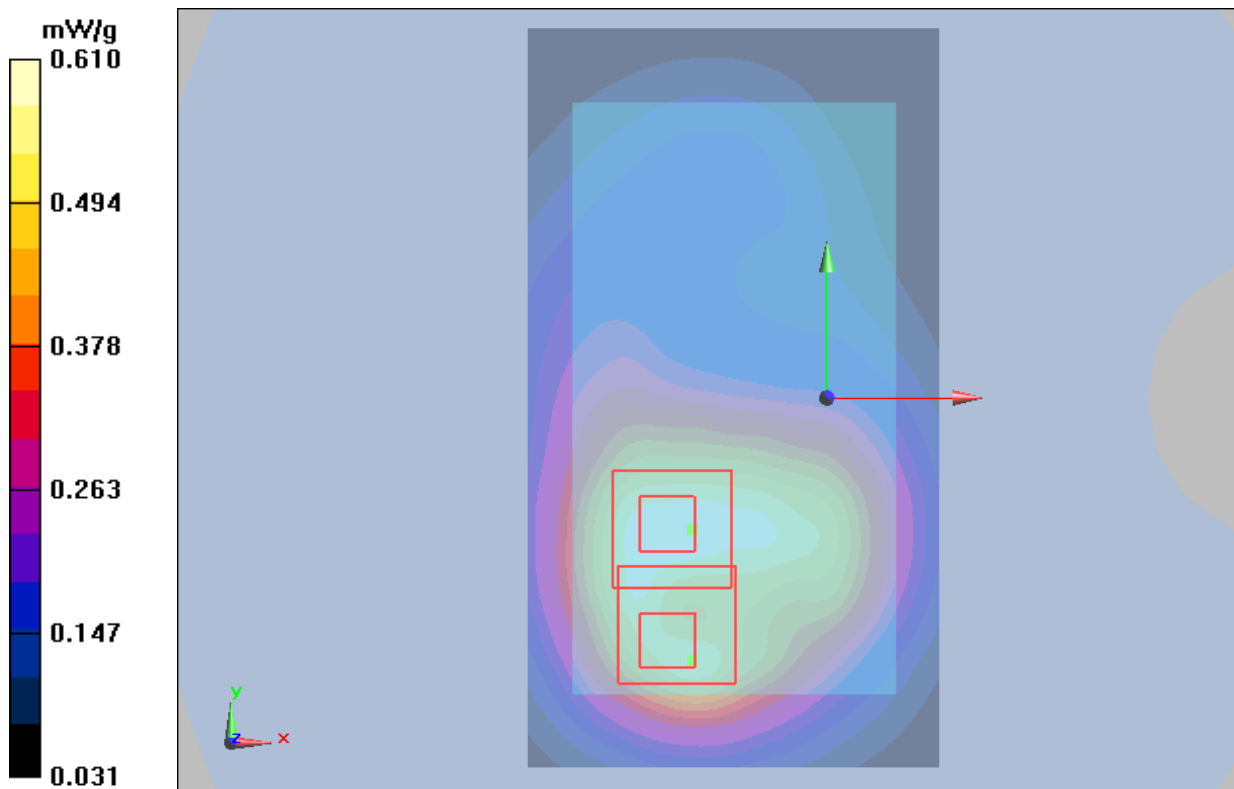


Figure 71 Body, Towards Ground, UMTS Band II Channel 9538

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

Report No.: RXA1208-0616SAR

Page 114 of 198

UMTS Band II Towards Ground Middle (Battery 1)

Date/Time: 8/18/2012 4:40:56 PM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

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

Towards Ground Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.00822 dB

Peak SAR (extrapolated) = 0.896 W/kg

SAR(1 g) = 0.557 mW/g; SAR(10 g) = 0.346 mW/g

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

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

Reference Value = 13.3 V/m; Power Drift = -0.00822 dB

Peak SAR (extrapolated) = 0.851 W/kg

SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.566 mW/g

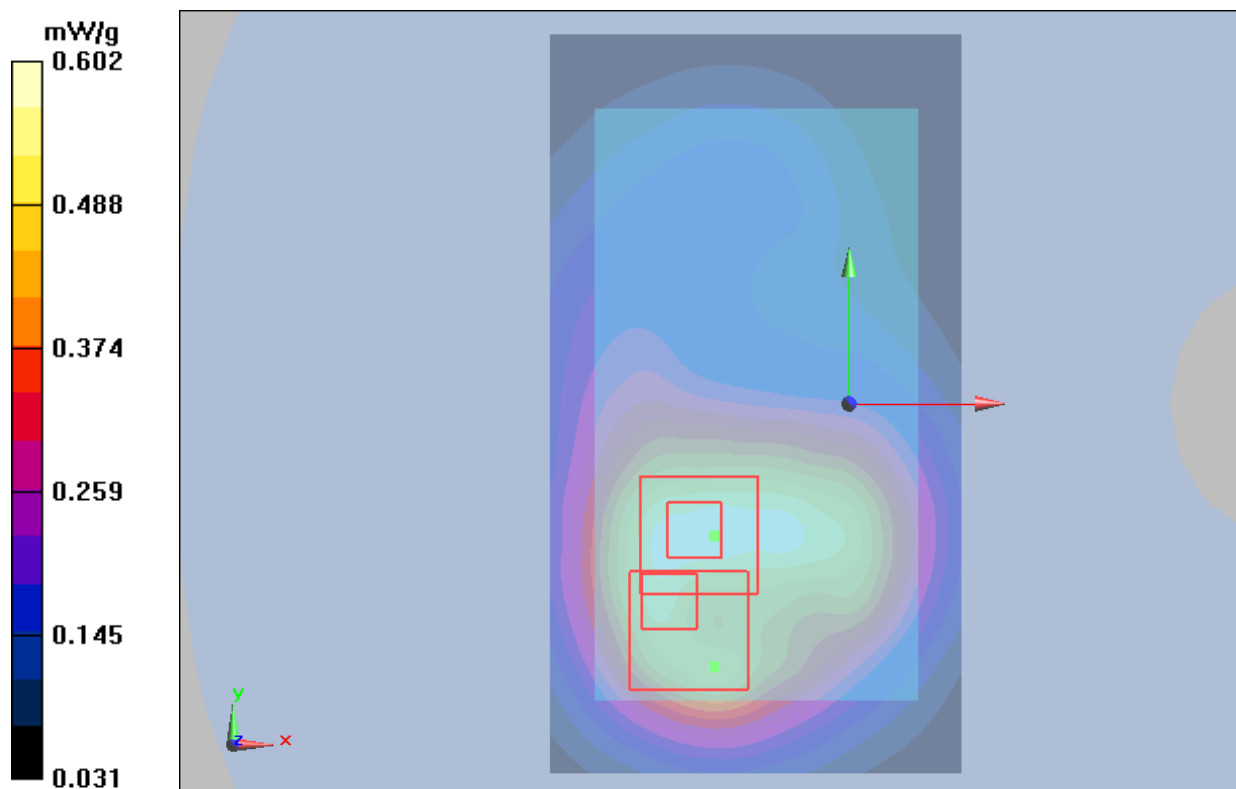


Figure 72 Body, Towards Ground, UMTS Band II Channel 9400

UMTS Band II Towards Ground Low (Battery 1)

Date/Time: 8/18/2012 4:00:20 PM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.572 mW/g

Towards Ground Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = 0.000558 dB

Peak SAR (extrapolated) = 0.833 W/kg

SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.324 mW/g

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

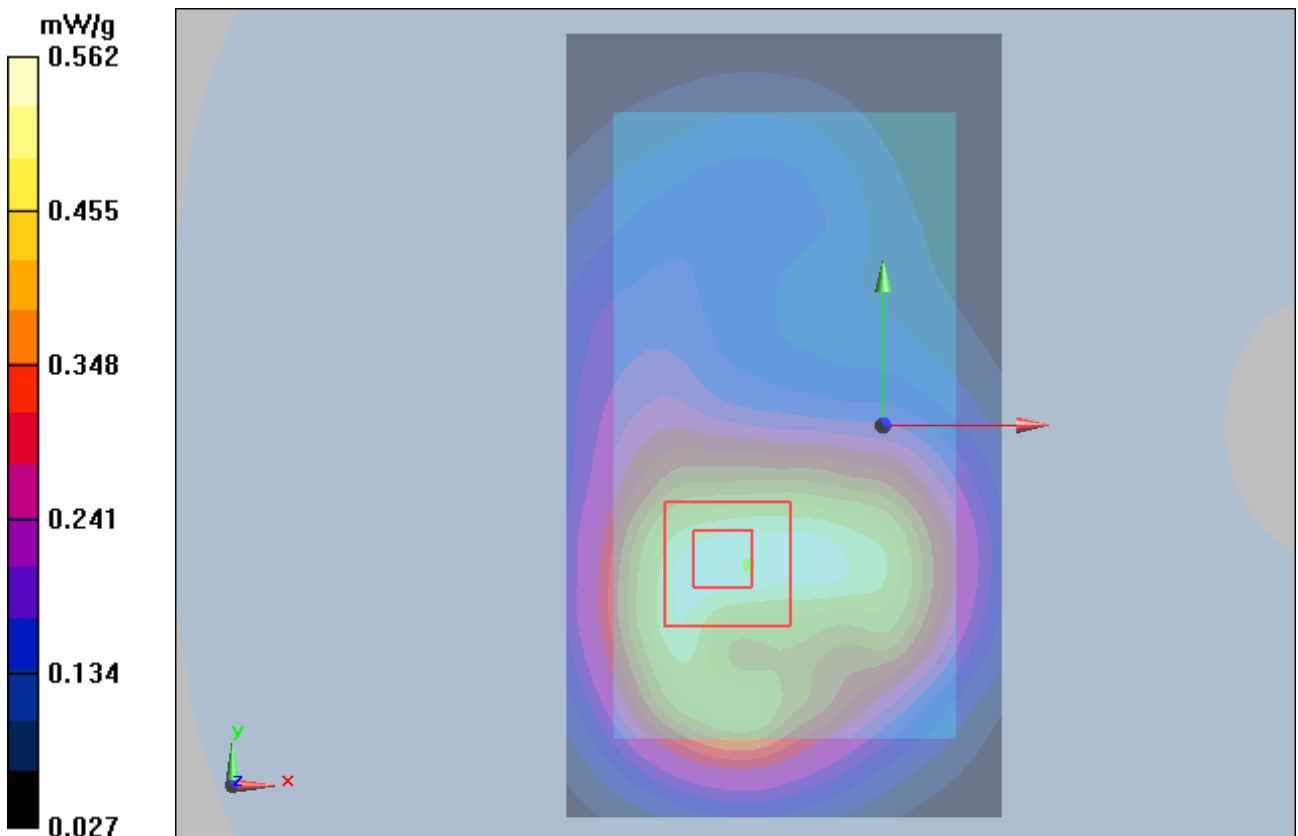


Figure 73 Body, Towards Ground, UMTS Band II Channel 9262

UMTS Band II Towards Phantom High (Battery 1)

Date/Time: 8/18/2012 3:24:37 PM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.534 mW/g

Towards Phantom High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 11.8 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 0.782 W/kg

SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.311 mW/g

Maximum value of SAR (measured) = 0.530 mW/g

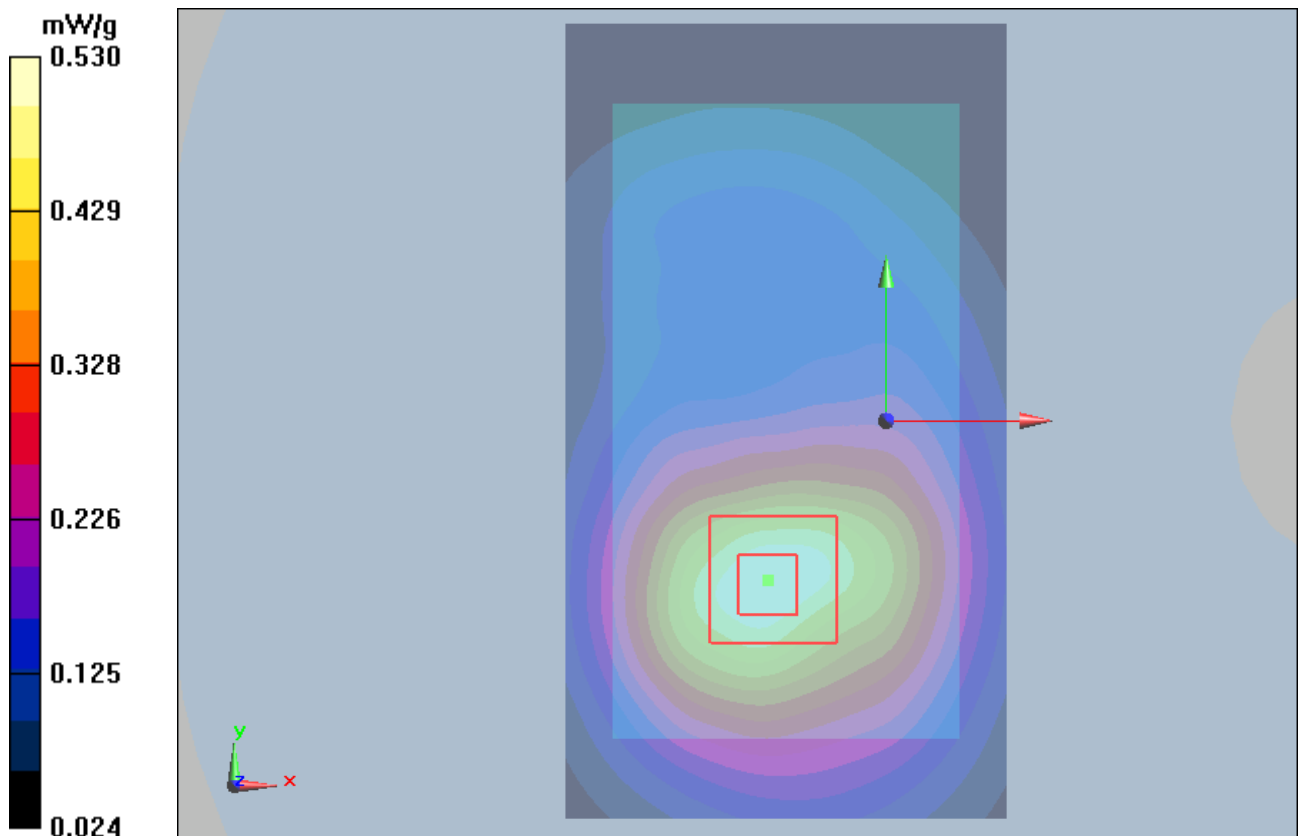


Figure 74 Body, Towards Phantom, UMTS Band II Channel 9538

UMTS Band II Towards Phantom Middle (Battery 1)

Date/Time: 8/18/2012 3:10:48 PM

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.543 mW/g

Towards Phantom Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 11.8 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 0.790 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.317 mW/g

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

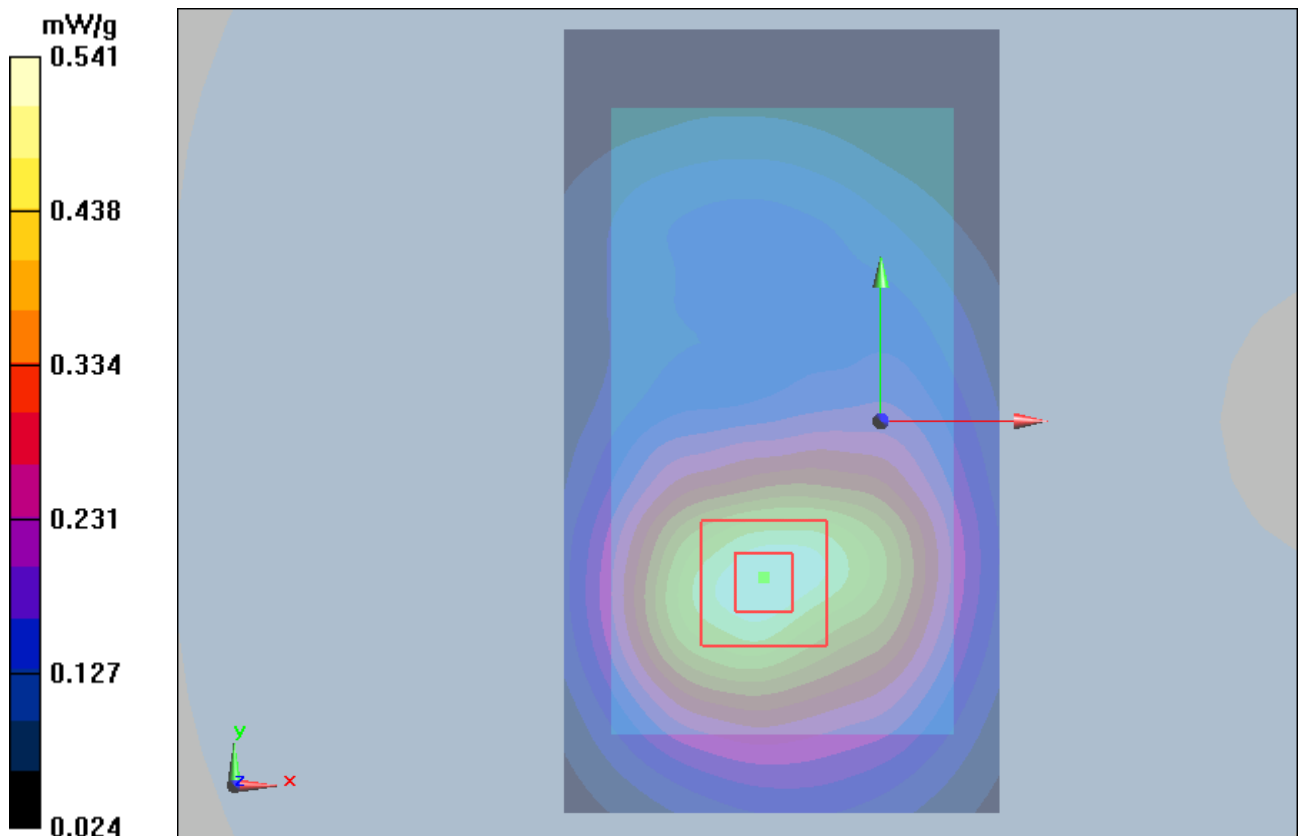


Figure 75 Body, Towards Phantom, UMTS Band II Channel 9400

UMTS Band II Towards Phantom Low (Battery 1)

Date/Time: 8/18/2012 3:38:26 PM

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

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.526 mW/g

Towards Phantom Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,
dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.764 W/kg

SAR(1 g) = 0.488 mW/g; SAR(10 g) = 0.307 mW/g

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

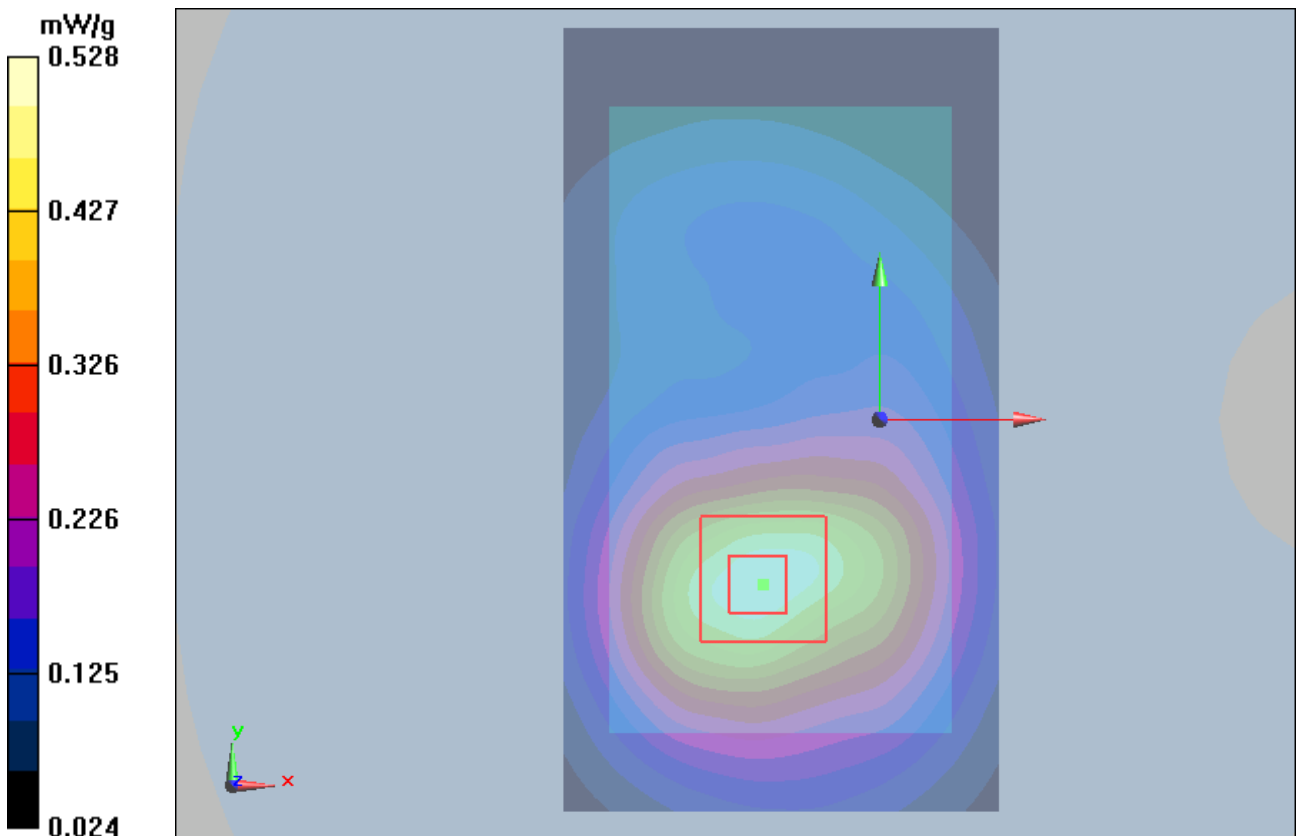


Figure 76 Body, Towards Phantom, UMTS Band II Channel 9262

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

Report No.: RXA1208-0616SAR

Page 119 of 198

UMTS Band II with Stereo Headset 1 Towards Ground High (Battery 1)

Date/Time: 8/18/2012 5:17:20 PM

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

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/23/2012

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

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

Maximum value of SAR (interpolated) = 0.622 mW/g

Towards Ground High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.354 mW/g

Maximum value of SAR (measured) = 0.597 mW/g

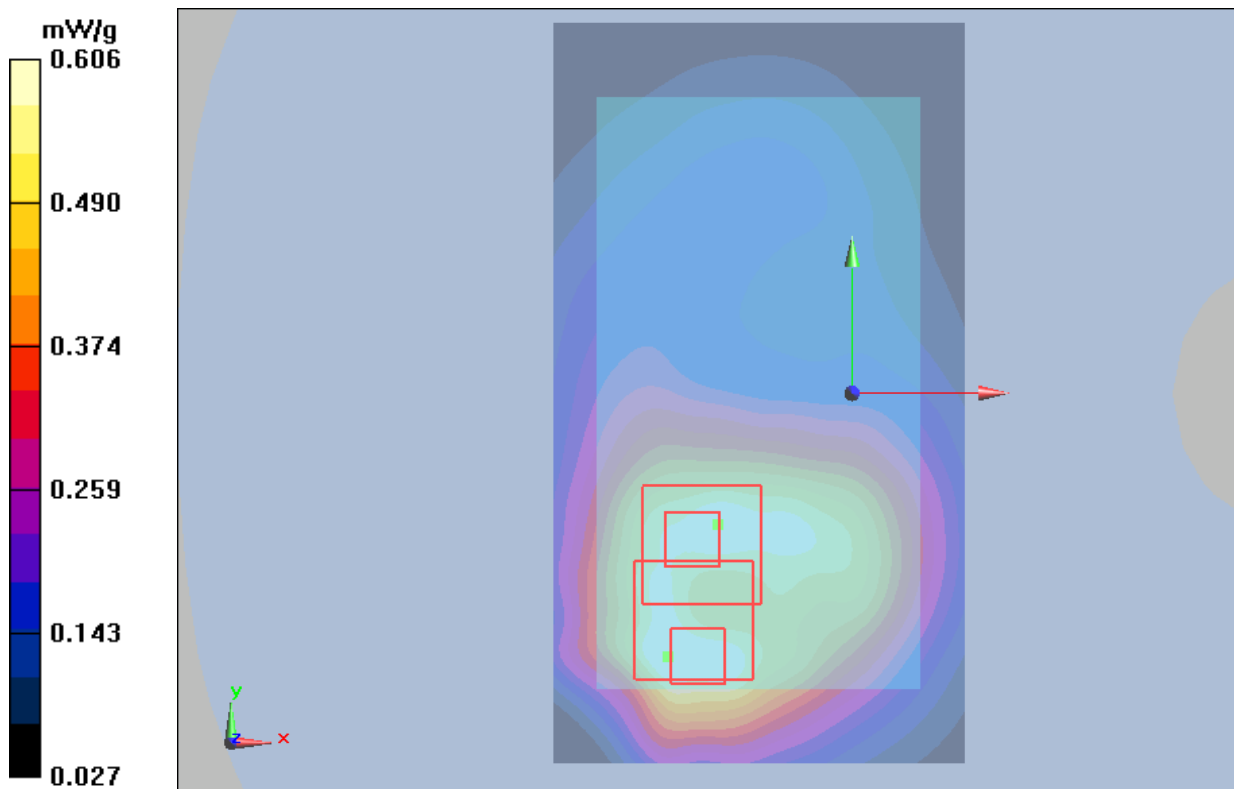
Towards Ground High/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.920 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.357 mW/g

Maximum value of SAR (measured) = 0.606 mW/g



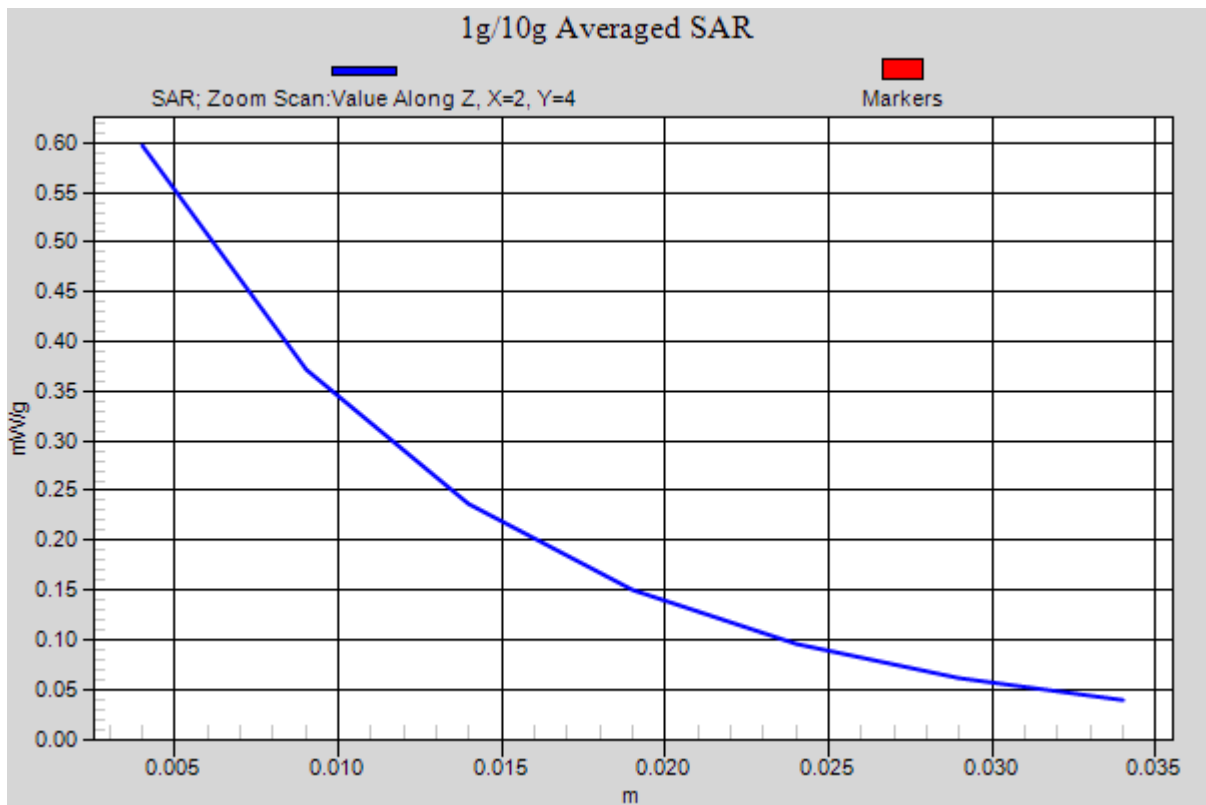
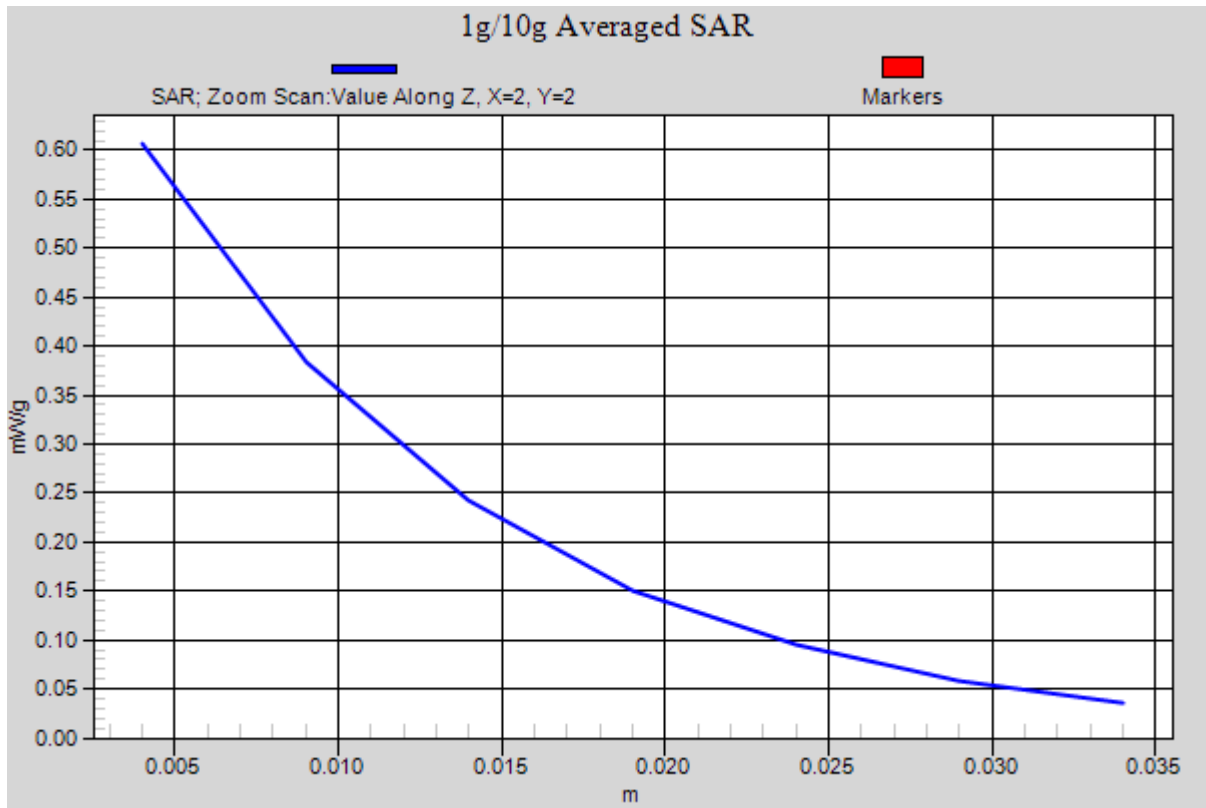


Figure 77 Body with Earphone 1, Towards Ground, UMTS Band II Channel 9538