TEST REPORT

REPORT NUMBER：B16X50179-SAR_Rev5

ON

Type of Equipment: Mobile Phone

Type of Designation: U200

Manufacturer: Corporativo Lanix S.A.de C.V.

ACCORDING TO

ANSI C95.1–2006
IEEE 1528–2013

China Telecommunication Technology Labs.

Month date, year
Jun 30, 2016

Signature

Zhang Yan
Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of China Telecommunication Technology Labs.

FCC ID:	ZC4U200
Report Date:	2016-06-30
Test Firm Name:	China Telecommunication Technology Labs
FCC Registration Number:	840587

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. The sample tested was found to comply with the requirements defined in the applied rules.

CONTENTS

1. Test Laboratory

1.1. Testing Location

Company Name:	China Telecommunication Technology Labs.
Address:	No. 11, Yue Tan Nan Jie, Xi Cheng District, Beijing, P. R. China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:3	0086-23-88608777
Email:	liguoqing@chinattl.com

1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%
Ambient noise & Reflection:	< 0.012 W/kg

1.3. Project Data

Testing Start Date:	2016-05-24
Testing End Date:	2016-06-0111111

1.4. Signature

2016-06-30

Li Guoqing
(Prepared this test report)

Date

2016-06-30

Zou Dongyi
(Reviewed this test report)

Date

2016-06-30

He Guili
Director of the laboratory
(Approved this test report)

Date

2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for U200 are as follows (with expanded uncertainty 22.4%)

Table 2.1: Max. SAR Measured(1g)

Band	Position	SAR 1g (W/Kg)
GSM850	Head	0.852
	Body	0.631
GSM1900	Head	1.483
	Body	1.320
Bluetooth	Head	0.00258
	Body	0.00189

Table 2.2: The maximum of SAR values

	Maximum SAR value for Head	**Maximum SAR value for Body**
GSM	1.483	1.320
Bluetooth	0.00258	0.00189

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-2006.

The measurement together with the test system set-up is described in chapter 7 of this test report. A detailed description of the equipment under test can be found in chapter 3 of this test report.
The maximum SAR value is obtained at the case of **(Table 2.2),** and the values are**:1.483(1g)**.

The sample has two antennas. One is main antenna for GSM, and the other is for BT. So simultaneous transmission is GSM and BT.

Table 2.3: Simultaneous SAR (1g)

Test Position			GSM 850	GSM 1900	BT note	SUM
Head	Left	Cheek	0.721	**1.483**	**0.00220**	**1.48520**
		Tilt 15°	0.404	**1.280**	**0.00207**	1.28207
	Right	Cheek	0.852	**1.170**	**0.00258**	1.17258
		Tilt 15°	0.431	**0.968**	**0.00224**	0.97024
Body	Ground Side		0.631	**1.320**	**0.00164**	1.32164
	Phantom Side		0.443	**0.514**	**0.00189**	0.51589

According to the above table, The maximum GSM value is 1.483 W/Kg(1g), The maximum BT value is 0.00220 W/Kg(1g), 1.483 W/Kg+0.00220 W/Kg=1.4852W/Kg(1g) are less than 1.6W/Kg(1g). So no simultaneous multi-band transmission test is required.

Table 2.4: SAR Values(GSM 835 MHz Band - Head)

Frequency		Side	Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.								
824.2	128	Left	Touch	32.8	32.6	1.047	0.689	0.721	-0.06
824.2	128	Left	Tilt	32.8	32.6	1.047	0.386	0.404	0.15
824.2	128	Right	Touch	32.8	32.6	1.047	0.717	0.751	-0.07
824.2	128	Right	Tilt	32.8	32.6	1.047	0.412	0.431	-0.02
836.6	190	Right	Touch	32.8	32.5	1.072	0.740	0.793	0.00
848.8	251	Right	Touch	32.8	32.4	1.096	0.777	0.852	-0.06
848.8	251	Right (SIM2)	Touch	32.8	32.4	1.096	0.767	0.841	-0.10

Table 2.5: SAR Values(GSM 835 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.								
824.2	128	Speech	Ground	32.8	32.6	1.047	0.515	0.539	0.04
824.2	128	Speech	Phantom	32.8	32.6	1.047	0.315	0.443	-0.08
836.6	190	Speech	Ground	32.8	32.5	1.072	0.542	0.581	-0.03
848.8	251	Speech	Ground	32.8	32.4	1.096	0.576	0.631	-0.01
848.8	251	Headset	Ground	32.8	32.4	1.096	0.407	0.446	-0.11
848.8	251	Speech SIM2	Ground	32.8	32.4	1.096	0.523	0.573	-0.08

Note: The distance between the EUT and the phantom bottom is 10mm.

Table2.6: SAR Values(GSM 1900 MHz Band - Head)

Frequency		Side	Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.								
1850.2	512	Left	Touch	29.8	29.8	1	1.430	1.430	-0.02
1850.2	512	Left	Tilt	29.8	29.8	1	1.280	1.280	0.10
1850.2	512	Right	Touch	29.8	29.8	1	1.170	1.170	0.09
1850.2	512	Right	Tilt	29.8	29.8	1	0.968	0.968	0.03
1909.8	810	Left	Touch	29.8	29.6	1.047	1.410	1.476	0.11
1880	661	Left	Touch	29.8	29.7	1.023	1.450	1.483	0.05
1880	661	Left (SIM2)	Touch	29.8	29.7	1.023	1.360	1.391	0.08

Table 2.7: SAR Values(GSM 1900 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.								
1850.2	512	Speech	Ground	29.8	29.8	1	1.320	1.320	-0.01
1850.2	512	Speech	Phantom	29.8	29.8	1	0.514	0.514	0.15
1909.8	810	Speech	Ground	29.8	29.6	1.047	1.190	1.246	-0.07
1880	661	Speech	Ground	29.8	29.7	1.023	1.280	1.310	0.12
1850.2	512	Headset	Ground	29.8	29.8	1	1.120	1.120	0.08
1850.2	512	SIM2(2)	Ground	29.8	29.8	1	1.200	1.200	0.17

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 2.8: SAR Values(Bluetooth GFSK - Head)

Frequency		Side	Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.								
2441	39	Left	Touch	8.5	8.1	1.092	0.00202	0.00220	0.14
2441	39	Left	Tilt	8.5	8.1	1.092	0.00190	0.00207	0.15
2441	39	Right	Touch	8.5	8.1	1.092	0.00236	0.00258	-0.18
2441	39	Right	Tilt	8.5	8.1	1.092	0.00205	0.00224	0.09

Table 2.9: SAR Values(Bluetooth GFSK - Body)

Frequency		Test Position	Maximum allowed Power (dBm)	Measured average power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.							
2441	39	Ground	8.5	8.1	1.092	0.00150	0.00164	0.11
2441	39	Phantom	8.5	8.1	1.092	0.00173	0.00189	0.12

Note: The distance between the EUT and the phantom bottom is 10mm；

3. Client Information

3.1. Applicant Information

Company Name:	Corporativo Lanix S.A.de C.V.
Address /Post:	Carretera Internacional Hermosillo – Nogals Km 8.5 Hermosillo, Sonora, Mexico
City:	Sonora
Country:	Mexico
Telephone:	005216621090811
Fax:	N/A
Email:	Oguzman@lanix.com
Contact Person:	Oscar Guzman

3.2. Manufacturer Information

Company Name:	Corporativo Lanix S.A.de C.V.
Address /Post:	Carretera Internacional Hermosillo – Nogals Km 8.5 Hermosillo, Sonora, Mexico
City:	Sonora
Country:	Mexico
Telephone:	005216621090811
Fax:	N/A
Email:	Oguzman@lanix.com
Contact Person:	Oscar Guzman

4. Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1. About EUT

Description:	Mobile Phone
Model name:	U200
Operation Model(s):	GSM 850/1900, Bluetooth GFSK
Tx Frequency:	824.2~848.6MHz,1850.2~1909.8MHz,(GSM) 2441MHz(Bluetooth)
GPRS Multislot Class:	N/A
Operation mode:	N/A
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Inner antenna
Accessories/Body-worn configurations:	Headset
Hotspot mode:	N/A
Dimensions:	11.2cm×4.6cm

Picture 4-1: Constituents of the sample

4.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	**Date of receipt**
S1/3	IMEI: 356307070001861	M883C-MB-V 1.0	U200_TELCEL_SW_01	2016-5-24

*EUT ID: is used to identify the test sample in the lab internally.

4.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
B01	Battery	U200-BAT	N/A	N/A
A01	Headset	N/A	N/A	N/A

*AE ID: is used to identify the test sample in the lab internally.

5. TEST METHODOLOGY

5.1. Applicable Limit Regulations

ANSI C95.1–2006: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

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

5.2. Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices:
Experimental Techniques.

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

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

KDB941225 D03: Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE

6. Specific Absorption Rate (SAR)

6.1. Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2. SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ) . The equation description is as below:

$$SAR = \frac{d}{dt}(\frac{dW}{dm}) = \frac{d}{dt}(\frac{dW}{\rho dv})$$

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c(\frac{\delta T}{\delta t})$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

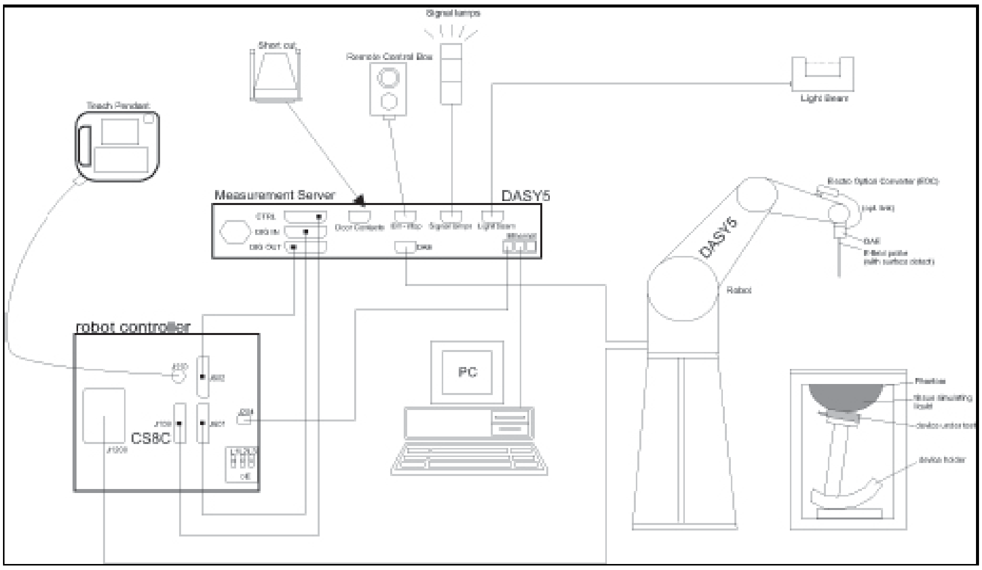
Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7. SAR MEASUREMENT SETUP

7.1. Measurement Set-up

The DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture 7-1 SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (Stäubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (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.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as
- warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

7.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3

Frequency Range: 10MHz — 2.6GHz(ES3DV3)

Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz

Linearity: ± 0.2 dB(30 MHz to 2.6 GHz) for ES3DV3

Picture 7-2 Near-field Probe

Dynamic Range: 10 mW/kg — 100W/kg

Probe Length: 330 mm

Probe Tip Length: 20 mm

Body Diameter: 12 mm

Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)

Tip-Center: 1 mm (2.0mm for ES3DV3)

Application: SAR Dosimetry Testing
Compliance tests of mobile phones
Dosimetry in strong gradient fields

Picture 7-3 E-field Probe

7.3. E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if thefrequency is below 1 GHz and inn a waveguide or other methodologies 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 until the three channels show the maximum reading. The power density readings equates to 1 mW/ cm^2.

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

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

Where:

Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

7.4. Other Test Equipment

7.4.1. Data Acquisition Electronics(DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Picture7-4: DAE

7.4.2. Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX90) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

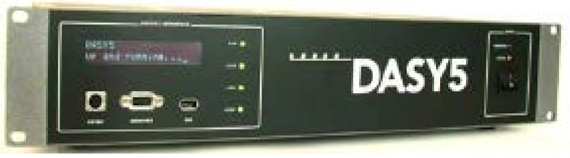
- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Picture7-5: DASY 5

7.4.3. Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128MB), RAM (DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.



Picture 7-6: Server for DASY 5

7.4.4. Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

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.

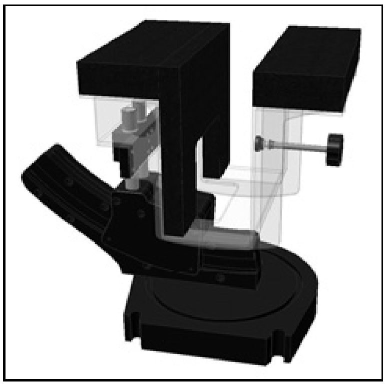
The DASY device holder is constructed of low-loss POM material having the following dielectric parameters:

relative permittivity ε =3 and loss tangent δ =0.02. 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.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture7-7: Device Holder



Picture 7-8: Laptop Extension Kit

7.4.5. Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to
Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. 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. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

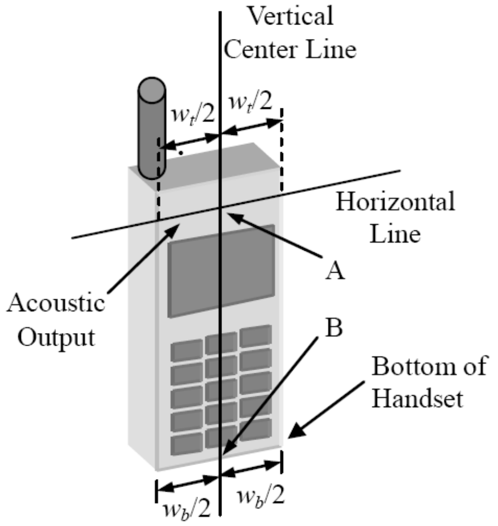
Shell Thickness: 2 ± 0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)
Available: Special

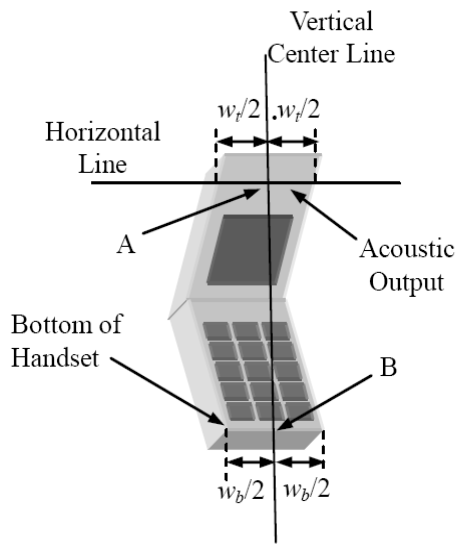
Picture 7-9: SAM Twin Phantom

8. Position of the wireless device in relation to the phantom

8.1. General considerations

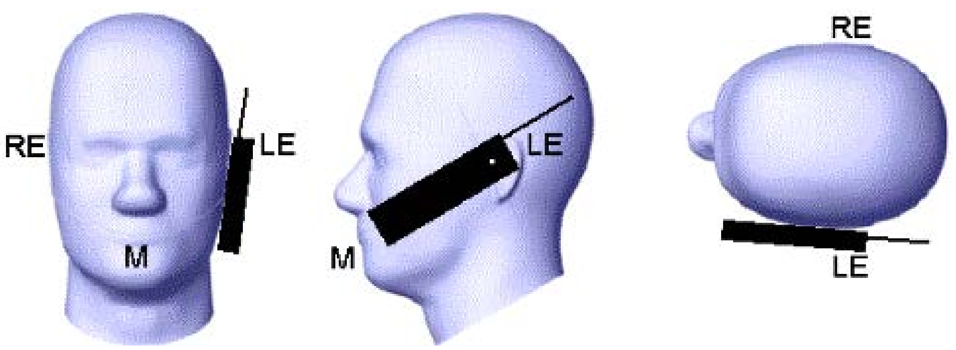
This standard specifies two handset test positions against the head phantom – the "cheek" position and the "tilt" position.



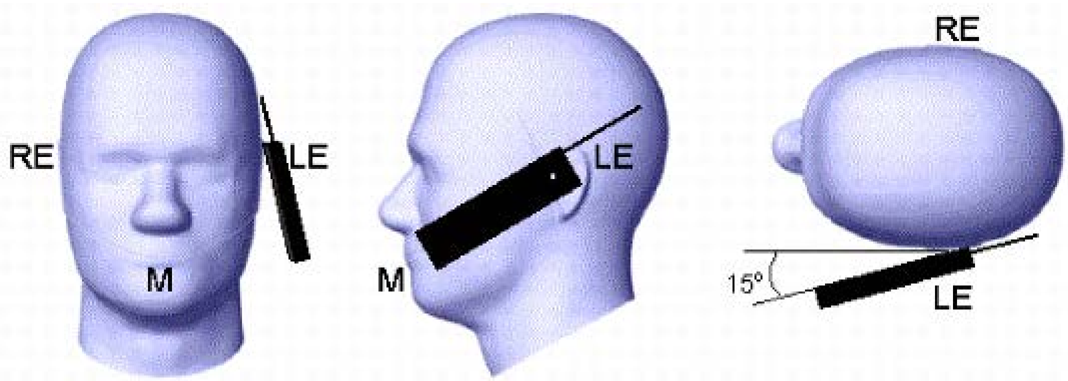


w_t	Width of the handset at the level of the acoustic
w_b	Width of the bottom of the handset
A	Midpoint of the width w_t of the handset at the level of the acoustic output
B	Midpoint of the width w_b of the bottom of the handset

Picture 8-1 Typical "fixed" case handset   Picture 8-2 Typical "clam-shell" case handset



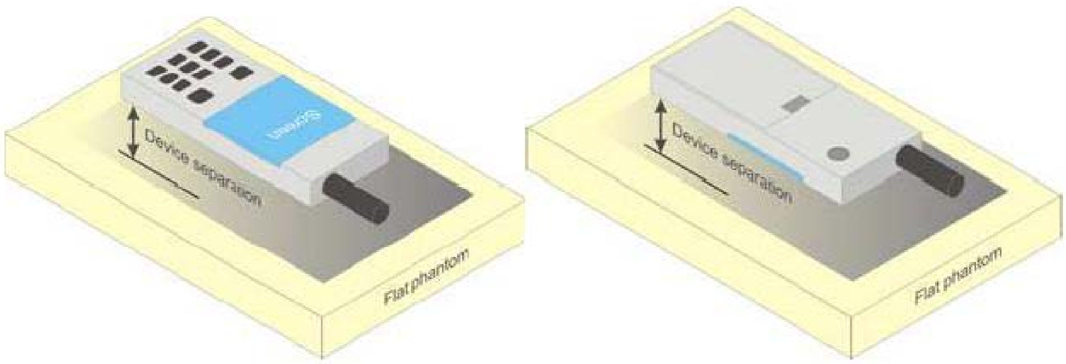
Picture 8-3 Cheek position of the wireless device on the left side of SAM



Picture 8-4 Tilt position of the wireless device on the left side of SAM

8.2. Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.

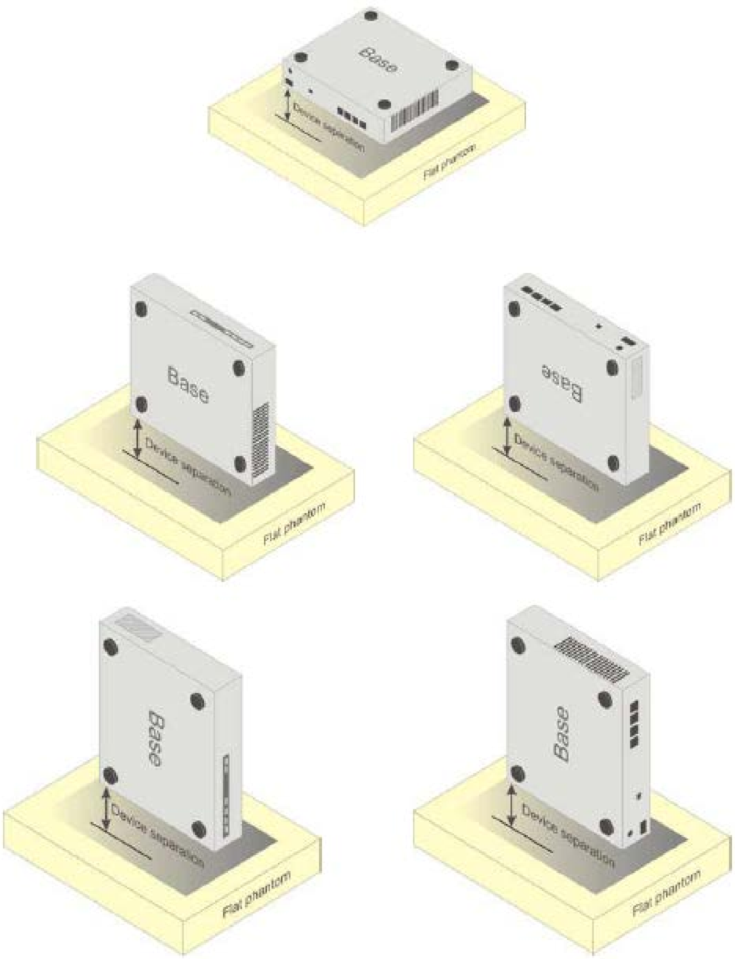


Picture 8-5 Test positions for body-worn devices

8.3. Desktop device

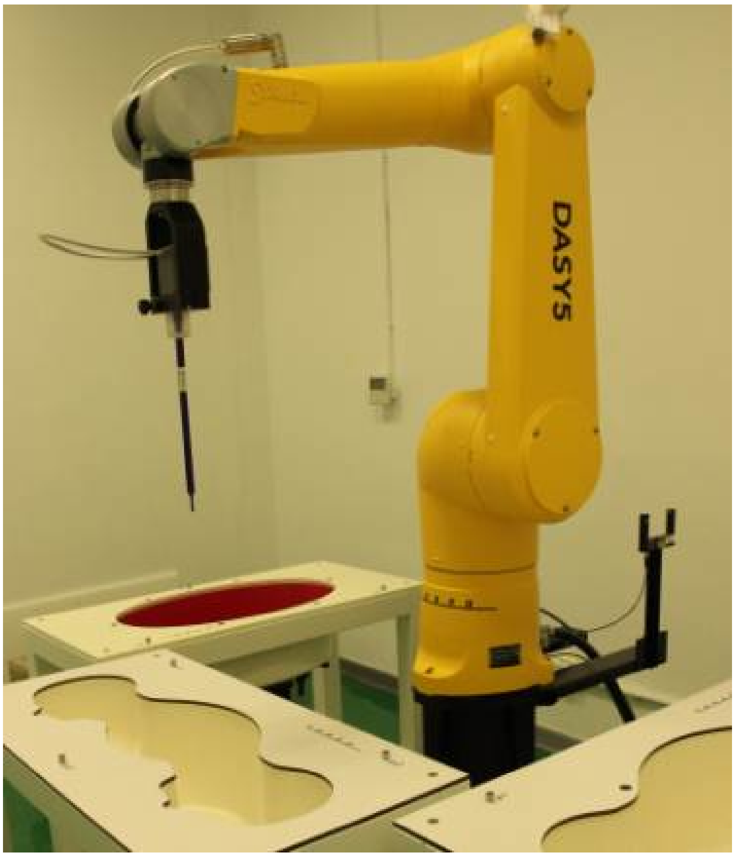
A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture 8-6 shows positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture 8-6 Test positions for desktop devices

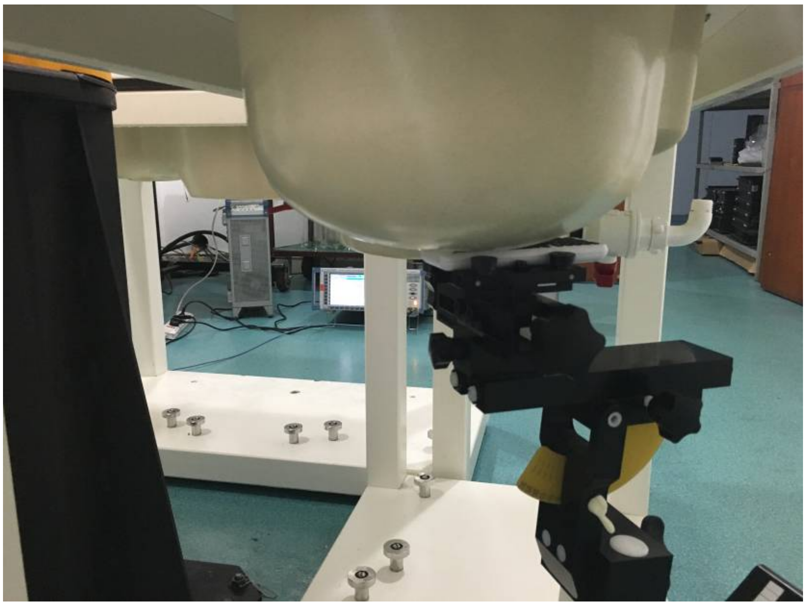
8.4. DUT Setup Photos



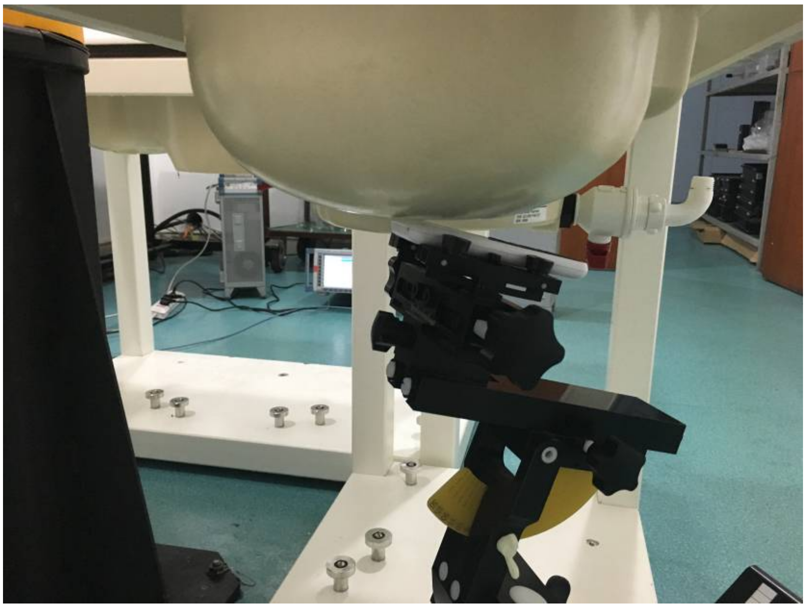
Picture 8-7: Specific Absorption Rate Test Layout

Picture 8-8: Left Head Touch Cheek Position

Picture 8-9: Left Head Tilt 15° Position



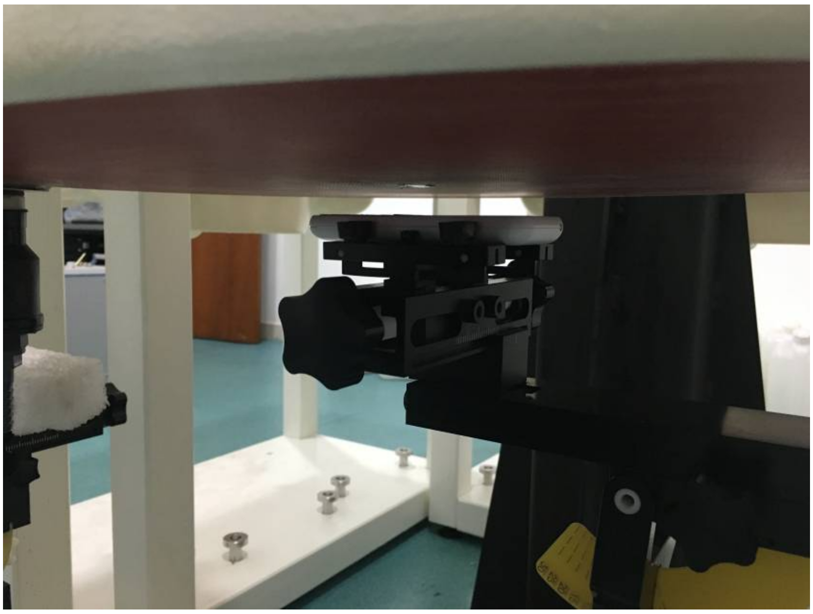
Picture 8-10: Right Head Touch Cheek Position



Picture 8-11: Right Head Tilt 15° Position

Test positions for body:

According to the antenna position, the Body SAR is tested at the following 6 test positions all with the distance =10mm between the EUT and the phantom bottom :



Picture 8-12: Toward Phantom (10mm)

Picture 8-13: Toward Ground (10mm)

9. Tissue Simulating Liquids

9.1. Equivalent Tissues

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table 3 and 4 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528 and IEC 62209.

Table 9.1. Composition of the Head Tissue Equivalent Matter

Frequency (MHz)	850 Head	1900 Head
Ingredients (% by weight)		
Water	40.92	54.90
Sugar	57.1	/
Salt	1.48	0.18
Preventol	0.1	/
Cellulose	0.4	/
Clycol Monobutyl	/	44.92
Dielectric Parameters Target Value	f=850MHz ε=41.5 σ=0.916	f=1900MHz ε=40.0 σ=1.40

Table 9.2. Composition of the Body Tissue Equivalent Matter

Frequency (MHz)	850 Body	1900 Body
Ingredients (% by weight)		
Water	56.0	40.5
Sugar	41.76	58.0
Salt	0.76	0.5
Preventol	0.27	0.5
Cellulose	1.21	0.5
Clycol Monobutyl	/	/
Dielectric Parameters Target Value	f=850MHz ε=55.0 σ=0.99	f=1900MHz ε=53.3 σ=1.52

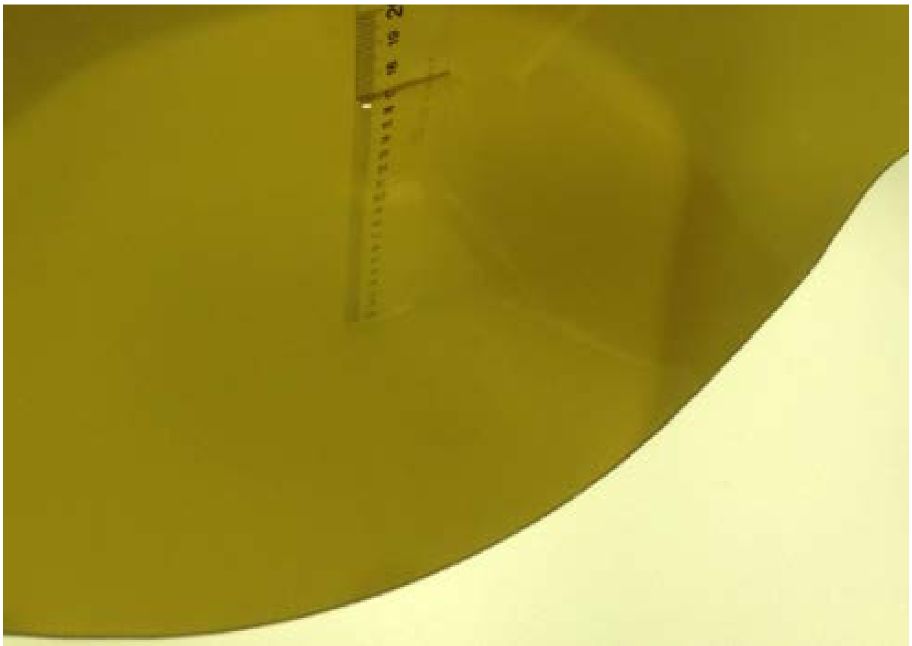
Table 9.3. Targets for tissue simulating liquid

Frequency (MHz)	Liquid Type	Conductivity (σ)	± 5% Range	Permittivity (ε)	± 5% Range
835	Head	0.90	0.855～0.945	41.50	39.43～43.58
1900	Head	1.40	1.330～1.470	40.00	38.00～42.00
2450	Head	1.80	1.71～1.89	39.2	37.2～41.2
835	Body	0.98	0.935～1.033	55.23	52.47～57.99
1900	Body	1.52	1.444～1.596	53.30	50.64～55.97
2450	Body	1.95	1.85～2.05	52.7	50.06～55.34

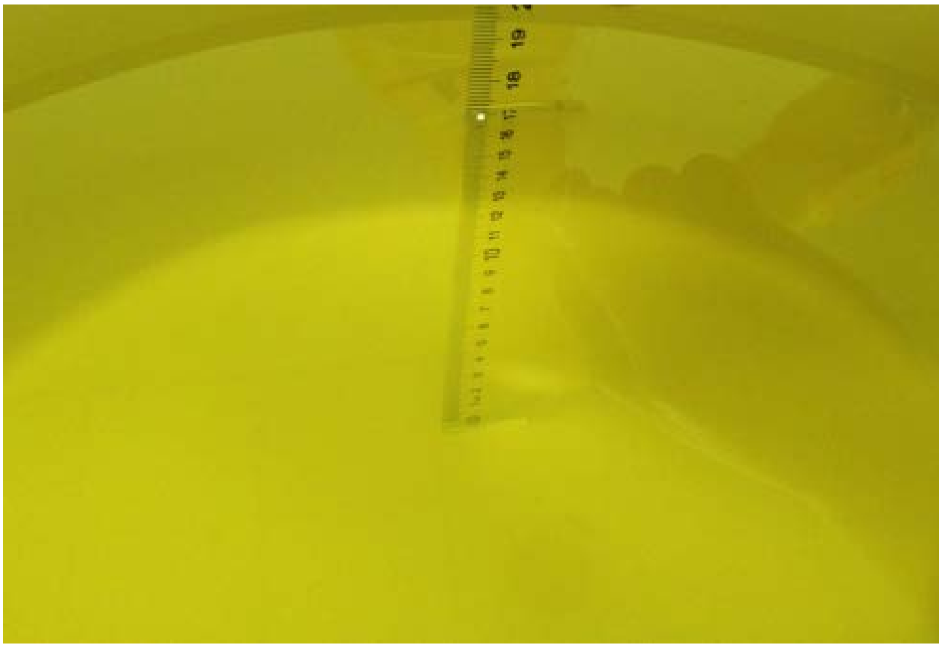
9.2. Dielectric Performance

Table 9.4: Dielectric Performance of Tissue Simulating Liquid

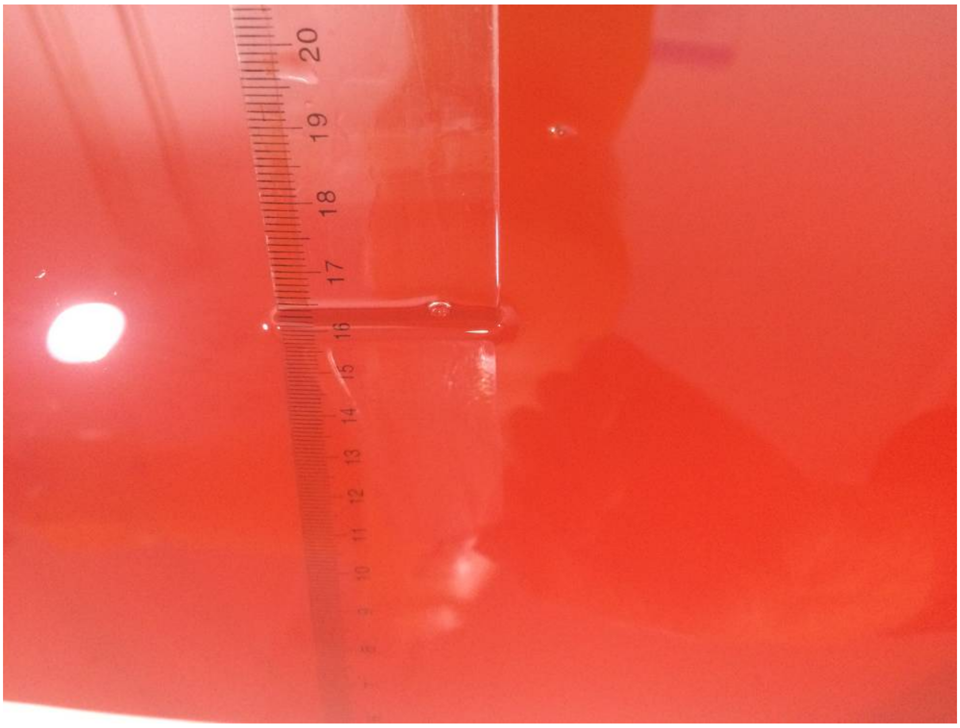
Measurement Value						
Liquid Temperature: 22.5°C						
Type	**Frequency**	**Permittivity ε**	**Drift (%)**	**Conductivity σ**	**Drift (%)**	**Test Date**
Head	835	42.67	+2.82%	0.901	+0.11%	**2016-5-30**
Head	1900	40.62	+1.55%	1.388	-0.86%	**2016-5-31**
Head	2450	39.49	+0.74%	1.809	+0.50%	**2016-6-22**
Body	835	56.48	+2.26%	0.970	-1.02%	**2016-5-30**
Body	1900	53.83	+0.99%	1.509	-0.72%	**2016-5-31**
Body	2450	53.59	+1.69	1.929	-1.08%	**2016-6-22**



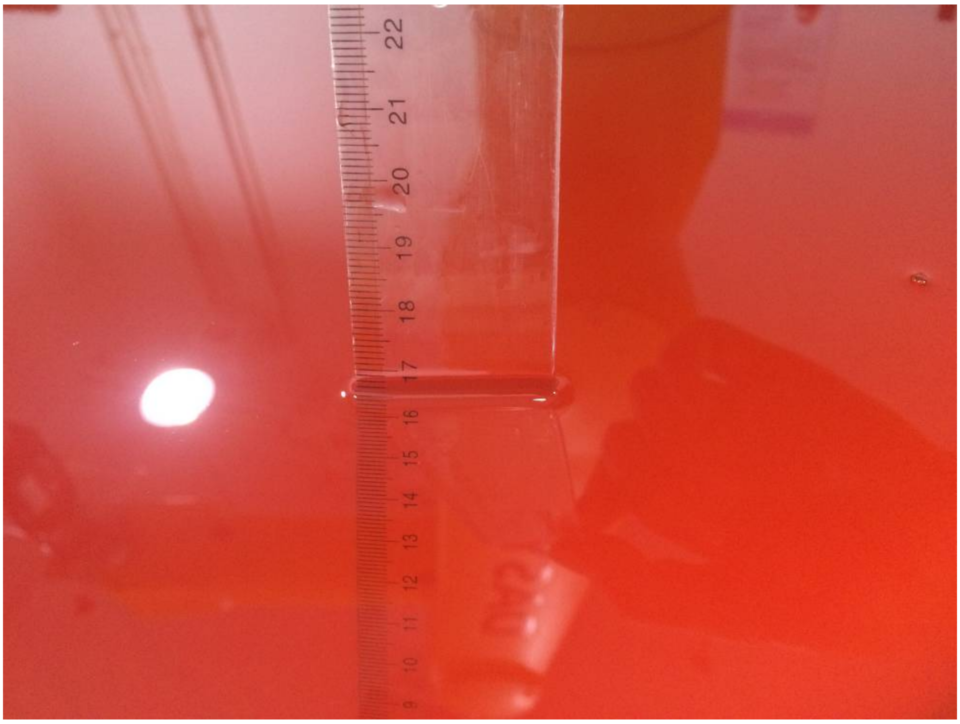
Picture 9-1: Liquid depth in the Flat Phantom (850/900 MHz Head)



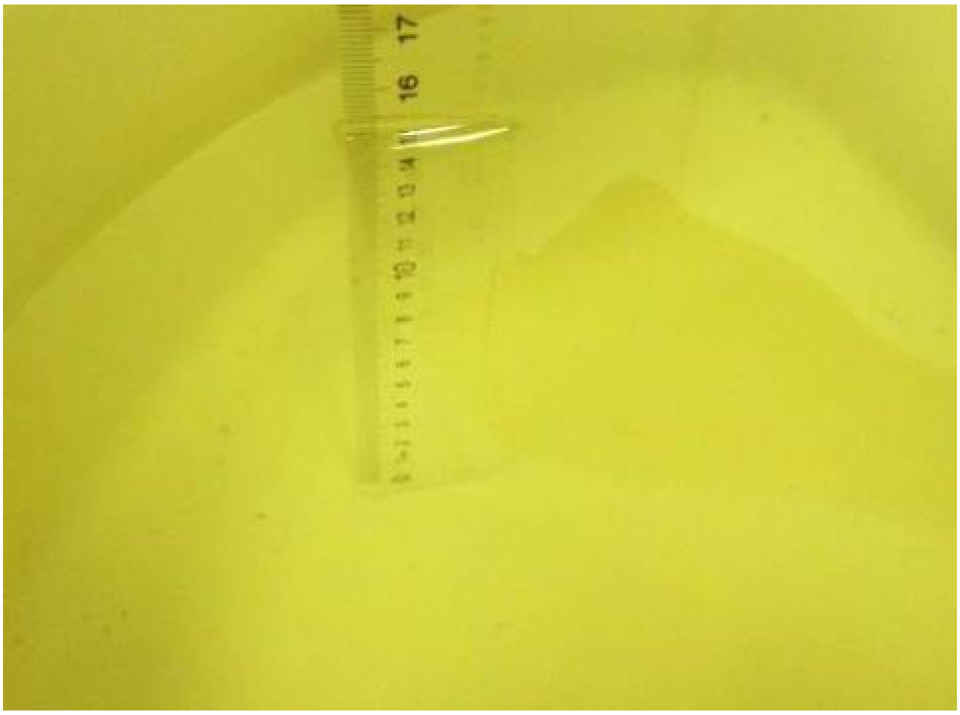
Picture 9-2: Liquid depth in the Flat Phantom (1900 MHz Head)



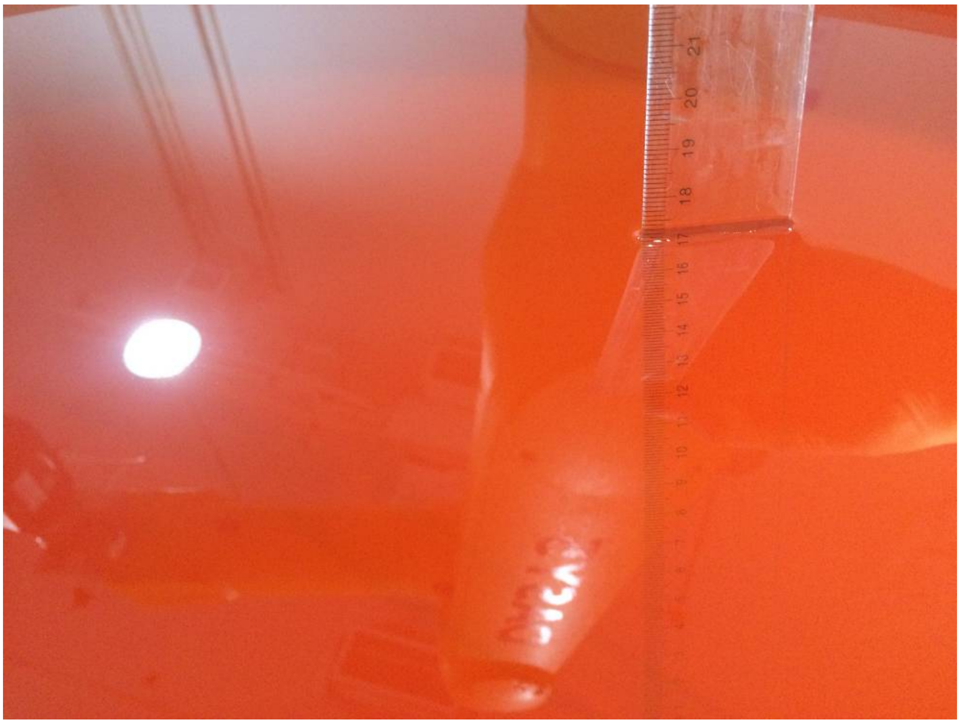
Picture 9-3: Liquid depth in the Flat Phantom (850/900 MHz Body)



Picture 9-4: Liquid depth in the Flat Phantom (1900 MHz Body)



Picture 9-5: Liquid depth in the Flat Phantom (2450 MHz Head)



Picture 9-6: Liquid depth in the Flat Phantom (2450 MHz Body)

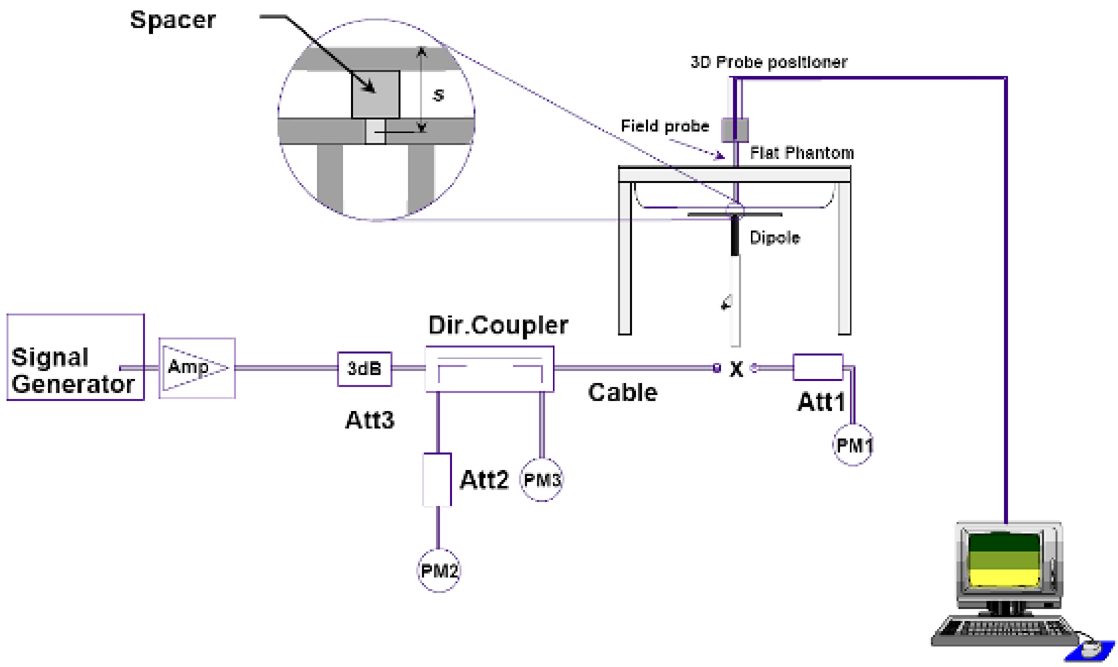
10. System Validation

10.1. System Validation

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performace check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

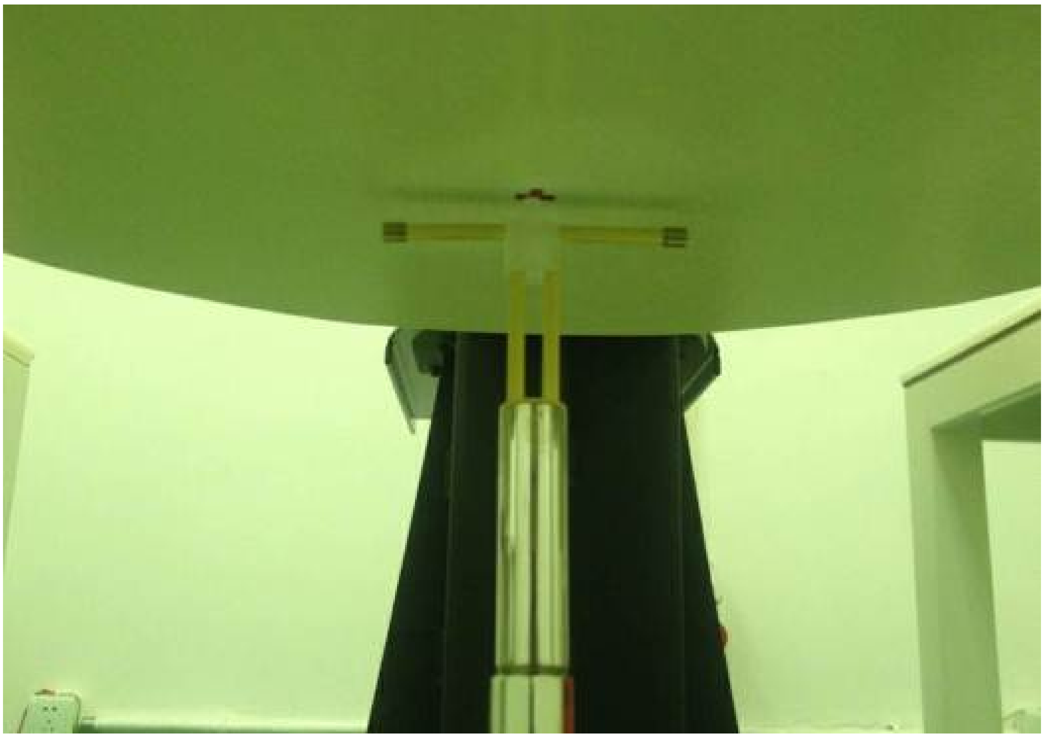
10.2. System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 10-1 System Setup for System Evaluation

The output power on dipole port must be calibrated to 24 dBm (250mW) before dipole is connected.



Picture 10-2 Photo of Dipole Setup

Table 10.1: System Validation of Head

Verification Results							
Input power level: 250mW							
Frequency	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**		**Test date**
	10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**	
835	1.55	2.33	1.61	2.46	+3.87%	+5.58%	**2016-5-30**
1900	5.19	9.97	5.04	9.73	-2.89%	-2.41%	**2016-5-31**
2450	6.14	13.10	5.98	13.00	-2.61%	-0.76%	**2016-6-22**

Table 10.2: System Validation of Body

Verification Results							
Input power level: 250mW							
Frequency	**Target value (W/kg)**		**Measured value (W/kg)**		**Deviation**		**Test date**
	10 g Average	**1 g Average**	**10 g Average**	**1 g Average**	**10 g Average**	**1 g Average**	
835	1.61	2.41	1.65	2.50	+2.48%	+3.73%	**2016-5-30**
1900	5.34	10.20	4.98	9.36	-6.74%	-8.24%	**2016-5-31**
2450	6.14	13.20	6.33	13.40	+3.09%	+1.52%	**2016-6-22**

11. Measurement Procedures

11.1. Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in Picture 19

Step 1: The tests described in 11.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in Chapter 8),

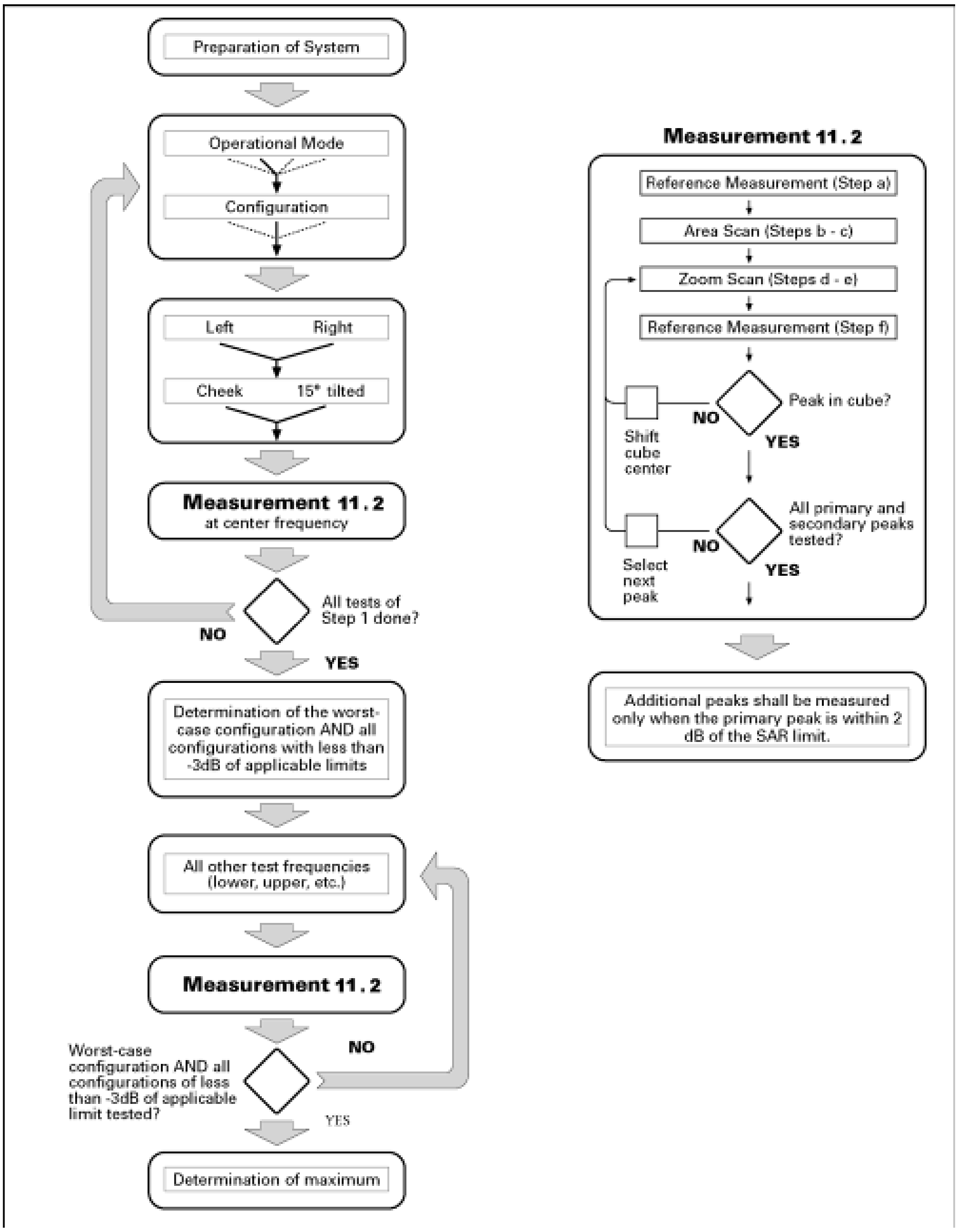
b) all configurations for each device position in a), e.g., antenna extended and retracted, and

c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., N_c > 3), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 11.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 11-1 Block diagram of the tests to be performed

11.2. Measurement procedure

The following procedure shall be performed for each of the test conditions (see Picture 19) described in 11.1:

a) Measure the local SAR at a test point within 8 mm or less in the normal direction from the inner surface of the phantom.

b) Measure the two-dimensional SAR distribution within the phantom (area scan procedure). The boundary of the measurement area shall not be closer than 20 mm from the phantom side walls. The distance between the measurement points should enable the detection of the location of local maximum with an accuracy of better than half the linear dimension of the tissue cube after interpolation. A maximum grip spacing of 20 mm for frequencies below 3 GHz and (60/f [GHz]) mm for frequencies of 3GHz and greater is recommended. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz andδIn(2)/2 mm for frequencies of 3 GHz and greater, whereδis the plane wave skin depth and In(x) is the natural logarithm. The maximum variation of the sensor-phantom surface shall be ±1 mm for frequencies below 3 GHz and ±0.5 mm for frequencies of 3 GHz and greater. At all measurement points the angle of the probe with respect to the line normal to the surface should be less than 5°. If this cannot be achieved for a measurement distance to the phantom inner surface shorter than the probe diameter, additional uncertainty evaluation is needed.

c) From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that are not within the zoom-scan volume; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR limit. This is consistent with the 2 dB threshold already stated;

d) Measure the three-dimensional SAR distribution at the local maxima locations identified in step c). The horizontal grid step shall be (24 / f[GHz]) mm or less but not more than 8 mm. The minimum zoom size of 30 mm by 30 mm and 30 mm for frequencies below 3 GHz. For higher frequencies, the minimum zoom size of 22 mm by 22 mm and 22 mm. The grip step in the vertical direction shall be (8-f[GHz]) mm or less but not more than 5 mm, if uniform spacing is used. If variable spacing is used in the vertical direction, the maximum spacing between the two closest measured points to the phantom shell shall be (12 / f[GHz]) mm or less but not more than 4 mm, and the spacing between father points shall increase by an incremental factor not exceeding 1.5. When variable spacing is used, extrapolation routines shall be tested with the same spacing as used in measurements. The maximum distance between the geometrical centre of the probe detectors and the inner surface of the phantom shall be 5 mm for frequencies below 3 GHz andδIn(2)/2 mm for frequencies of 3 GHz and greater, where δis the plane wave skin depth and In(x) is the natural logarithm. Separate grids shall be centered on each of the local SAR maxima found in step c). Uncertainties due to field distortion between the media boundary and the dielectric enclosure of the probe should also be minimized, which is achieved is the distance between the phantom surface and physical tip of the probe is larger than probe tip diameter. Other methods may utilize correction procedures for these boundary effects that enable high precision measurements closer than half the probe diameter. For all measurement points, the angle of the probe with respect to the flat phantom surface shall be less than 5°. If this cannot be achieved an additional uncertainty evaluation is needed.

e) Use post processing(e.g. interpolation and extrapolation) procedures to determine the local SAR values at the spatial resolution needed for mass averaging.

11.3. Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 13.1 to Table 13.10 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

12. Conducted Output Power

12.1. Manufacturing tolerance

Table 12.1: GSM Speech

GSM 835			
Channel	**Channel 251**	**Channel 190**	**Channel 128**
Maximum Target Value (dBm)	**31.8±1**	**31.8±1**	**31.8±1**
PCS 1900			
Channel	**Channel 810**	**Channel 661**	**Channel 512**
Maximum Target Value (dBm)	**28.8±1**	**28.8±1**	**28.8±1**

Table 12.2: Bluetooth

Bluetooth			
Channel	**Channel 0**	**Channel 39**	**Channel 78**
Maximum Target Value (dBm)	**7.5±1**	**7.5±1**	**7.5±1**

12.2. GSM Measurement result

During the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMU200) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

Table 12.3: The conducted power measurement results for GSM850/1900

GSM 850MHZ	Conducted Power (dBm)		
	Channel 251(848.8MHz)	**Channel 190(836.6MHz)**	**Channel 128(824.2MHz)**
	32.4	32.5	**32.6**
GSM 1900MHZ	**Conducted Power (dBm)**		
	Channel 810(1909.8MHz)	**Channel 661(1880MHz)**	**Channel 512(1850.2MHz)**
	28.6	29.7	**29.8**

12.3. BT Measurement result

Table12.4: The output power of BT antenna

Channel	**Ch 0 2402 MHz**	**Ch 39 2441 MHz**	**Ch 78 2480 MHz**
Peak Conducted Output Power(dBm)	8.04	**8.10**	7.28

13. Measurement Uncertainty

Measurement uncertainty evaluation for SAR test

Error Description	Unc. value, ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std.Unc. ±%,1g	Std.Unc. ±%,10g	V_i v_{eff}
Measurement System								
Probe Calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	0.5	R	√3	0.7	0.7	0.2	0.2	∞
Hemispherical Isotropy	2.6	R	√3	0.7	0.7	1.1	1.1	∞
Boundary Effects	0.8	R	√3	1	1	0.5	0.5	∞
Linearity	0.6	R	√3	1	1	0.3	0.3	∞
System Detection Limits	1.0	R	√3	1	1	0.6	0.6	∞
Readout Electronics	0.7	N	1	1	1	0.7	0.7	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	2.6	R	√3	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	√3	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	√3	1	1	1.7	1.7	∞
Probe Positioner	1.5	R	√3	1	1	0.9	0.9	∞
Probe Positioning	2.9	R	√3	1	1	1.7	1.7	∞
Max. SAR Eval.	1.0	R	√3	1	1	0.6	0.6	∞
Test Sample Related								
Device Positioning	2.9	N	1	1	1	2.9	2.9	145
Device Holder	3.6	N	1	1	1	3.6	3.6	5
Phantom and Setup								
Phantom Uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid Conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid Permittivity (target)	5.0	R	√3	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2	∞

Measurement uncertainty evaluation for system validation

Error Description	Unc. value, ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std.Unc. ±%,1g	Std.Unc. ±%,10g	V_i v_{eff}
Measurement System								
Probe Calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	0.5	R	√3	0.7	0.7	0.2	0.2	∞
Hemispherical Isotropy	2.6	R	√3	0.7	0.7	1.1	1.1	∞
Boundary Effects	0.8	R	√3	1	1	0.5	0.5	∞
Linearity	0.6	R	√3	1	1	0.3	0.3	∞
System Detection Limits	1.0	R	√3	1	1	0.6	0.6	∞
Readout Electronics	0.7	N	1	1	1	0.7	0.7	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	2.6	R	√3	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	√3	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	√3	1	1	1.7	1.7	∞
Probe Positioner	1.5	R	√3	1	1	0.9	0.9	∞
Probe Positioning	2.9	R	√3	1	1	1.7	1.7	∞
Max. SAR Eval.	1.0	R	√3	1	1	0.6	0.6	∞
Diople								
Power Drift	5.0	R	√3	1	1	2.9	2.9	∞
Dipole Positioning	2.0	N	1	1	1	2.0	2.0	∞
Dipole Input Power	5.0	N	1	1	1	5.0	5.0	∞
Phantom and Setup								
Phantom Uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid Conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid Permittivity (target)	5.0	R	√3	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2	∞
Combined Std Uncertainty						±11.2%	±10.9%	387
Expanded Std Uncertainty						**±22.4%**	**±21.8%**	

14. MAIN TEST INSTRUMENTS

Table 15.1: List of Main Instruments

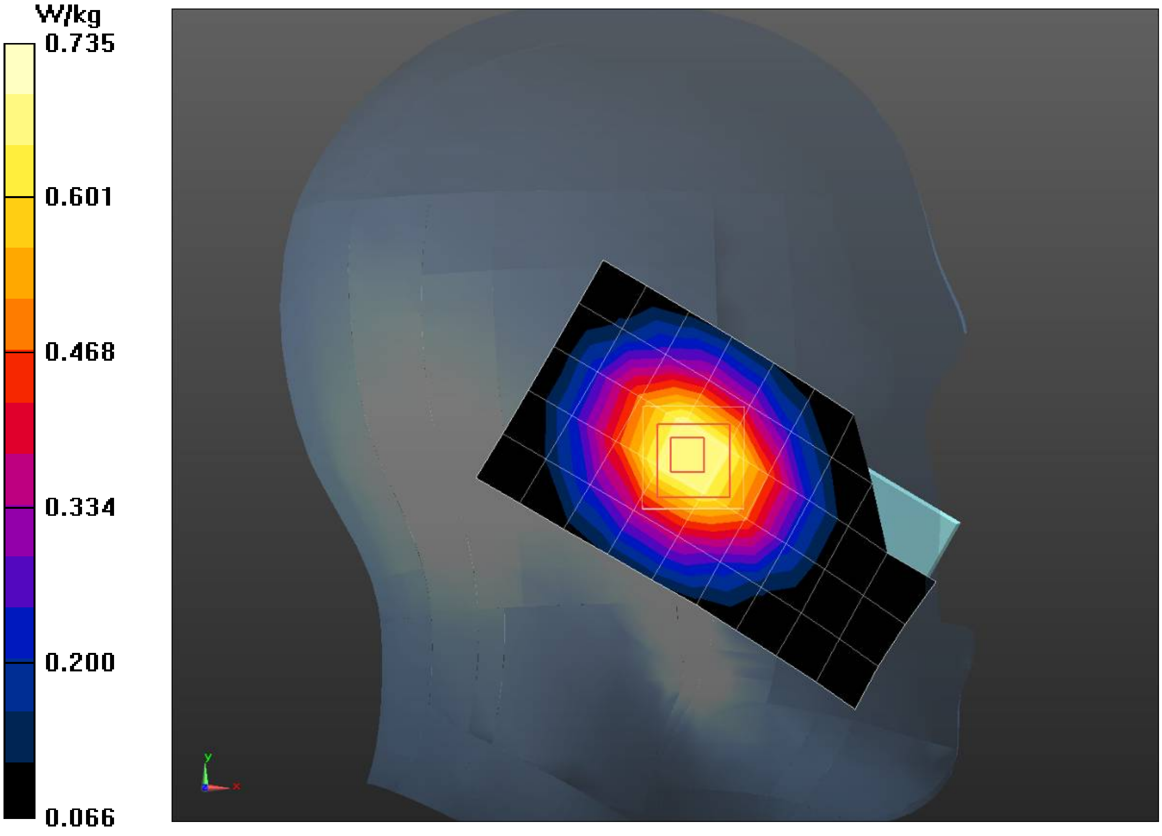
No.	Name	Type	Serial Number	Calibration Date	Valid Period
1	Radio Communication Analyzer	CMU200	122816	2016-03-05	2017-03-04
		CMW500	152395	2016-03-05	2017-03-04
2	Signal Generator	N5181A	MY50143363	2016-03-05	2017-03-04
3	Power Sensor	E8481H	MY51020011	2016-03-05	2017-03-04
4	Power Amplifier	ZHL	QA1202003	NA	NA
5	Attenuator	8491A	MY39267989	NA	NA
6	Probe kit	85070E	3G-S-00139	NA	NA
7	Network Analyzer	E5071C	US39175666	2016-03-05	2017-03-04
8	Power Meter	N1914A	MY50001660	2016-03-05	2017-03-04
9	probe	EX3DV4	3844	2016-04-15	2017-04-14
10	DAE	DAE4	1329	2015-11-11	2016-11-10
11	dipole	D835V2	4d135	2016-03-29	2017-03-28
		D1900V2	5d153	2016-03-30	2017-03-29
		D2450V2	886	2016-04-01	2017-03-31

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

ANNEX A. GRAPH RESULTS

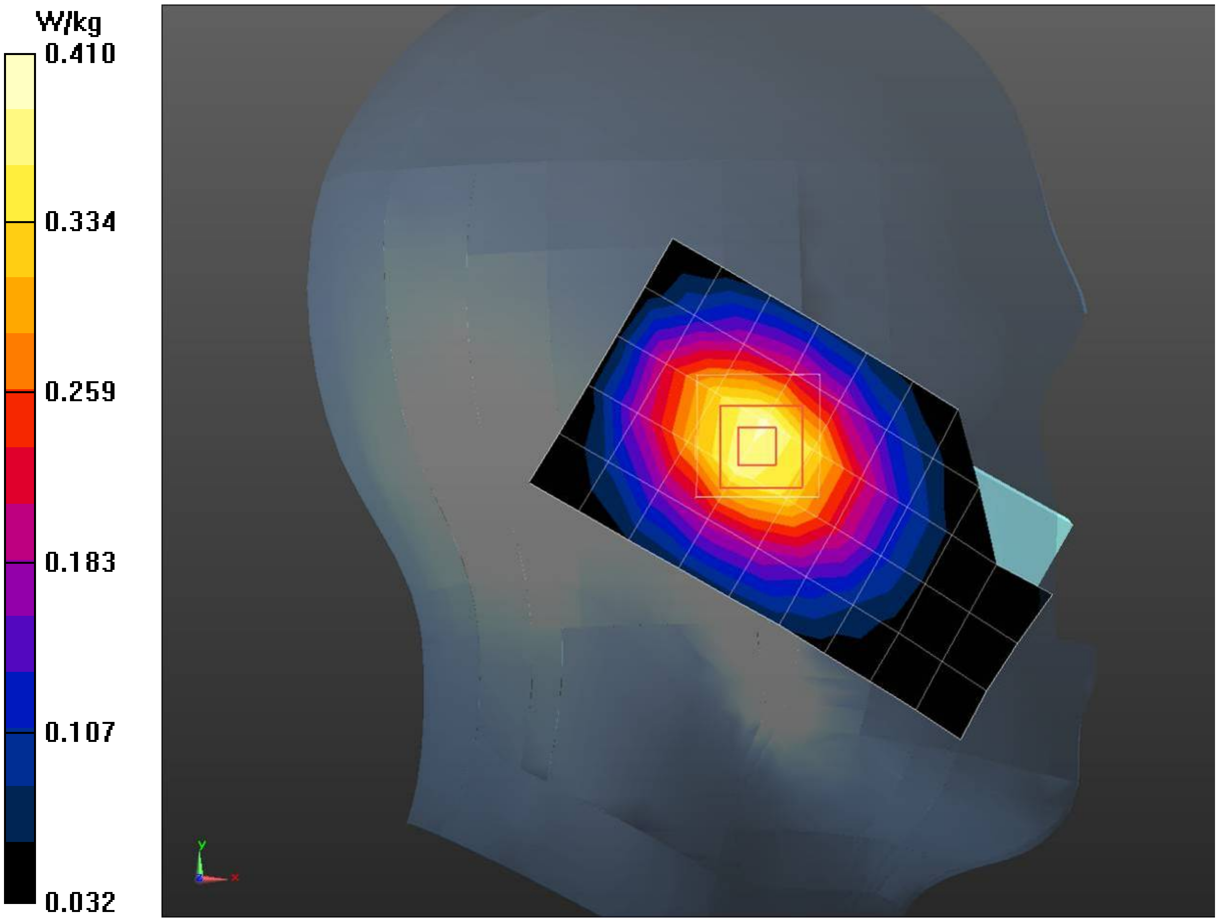
GSM850 Left Check Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.891 S/m; εr = 42.812; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Low Cheek Left GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.686 W/kg
Low Cheek Left GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.01 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.918 W/kg
SAR(1 g) = 0.689 W/kg; SAR(10 g) = 0.481 W/kg
Maximum value of SAR (measured) = 0.735 W/kg



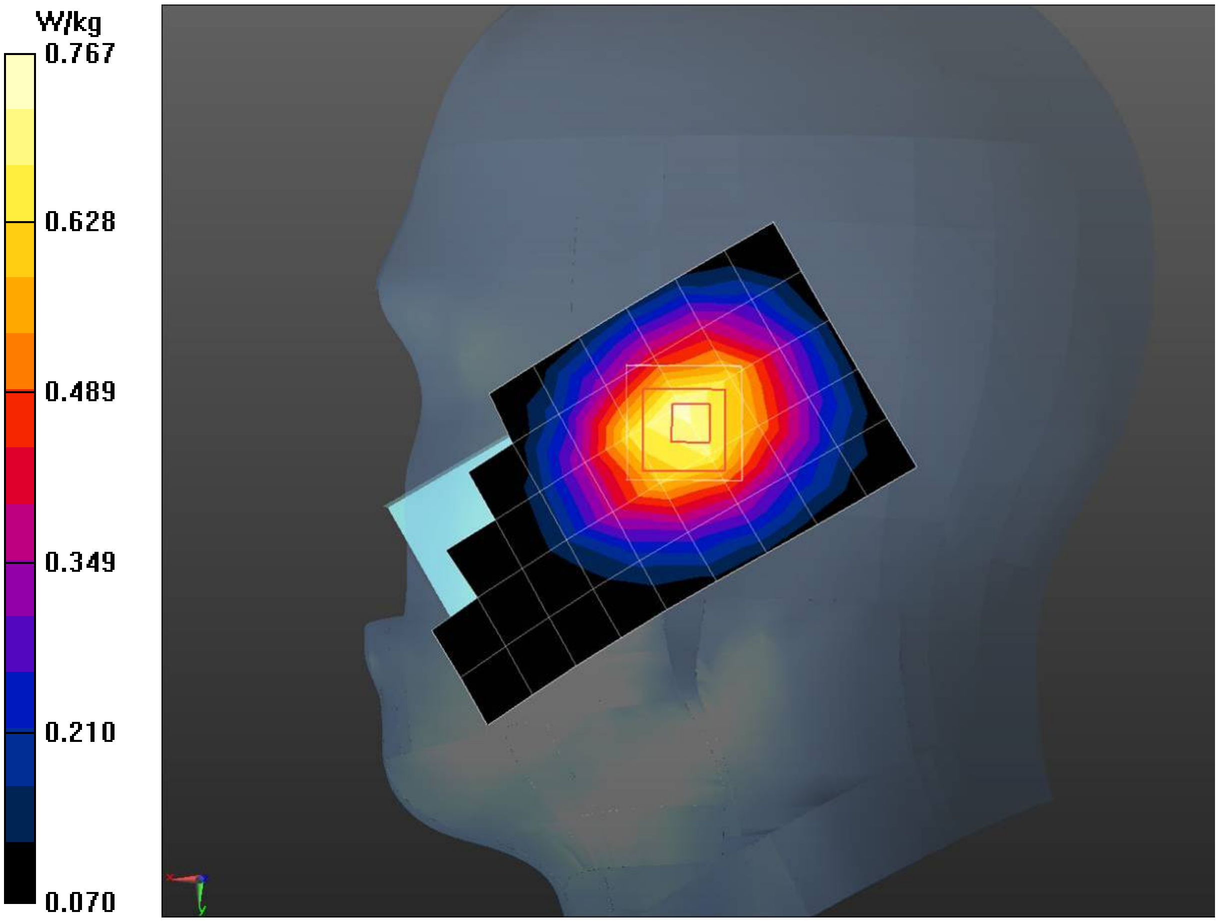
GSM850 Left Tilt Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.891 S/m; εr = 42.812; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Low Tilt Left GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.392 W/kg
Low Tilt Left GSM 850MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.59 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.522 W/kg
SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.268 W/kg
Maximum value of SAR (measured) = 0.410 W/kg



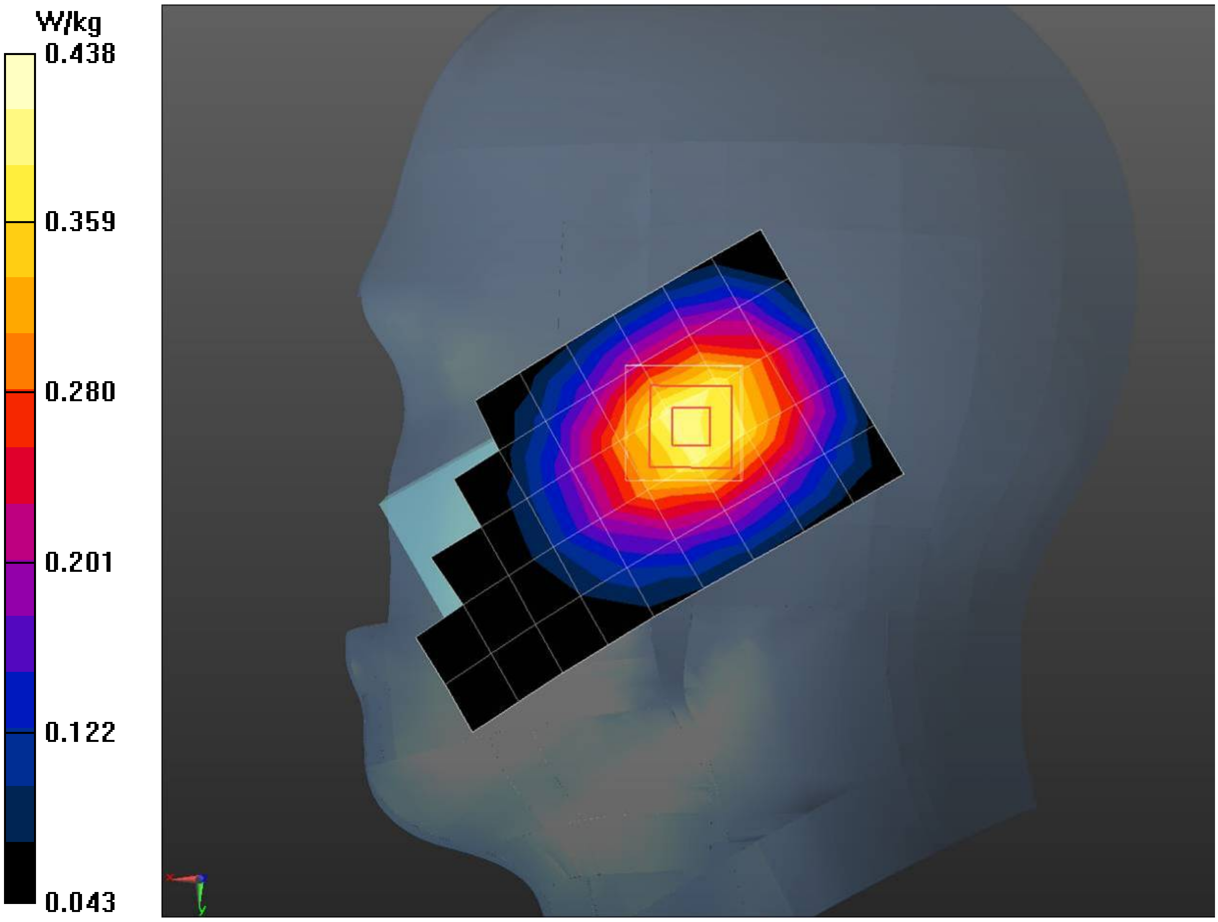
GSM850 Right Check Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.891 S/m; εr = 42.812; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Low Cheek Right GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.747 W/kg
Low Cheek Right GSM 850MHz/Zoom Scan (7x7x4)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.13 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.965 W/kg
SAR(1 g) = 0.717 W/kg; SAR(10 g) = 0.501 W/kg
Maximum value of SAR (measured) = 0.767 W/kg



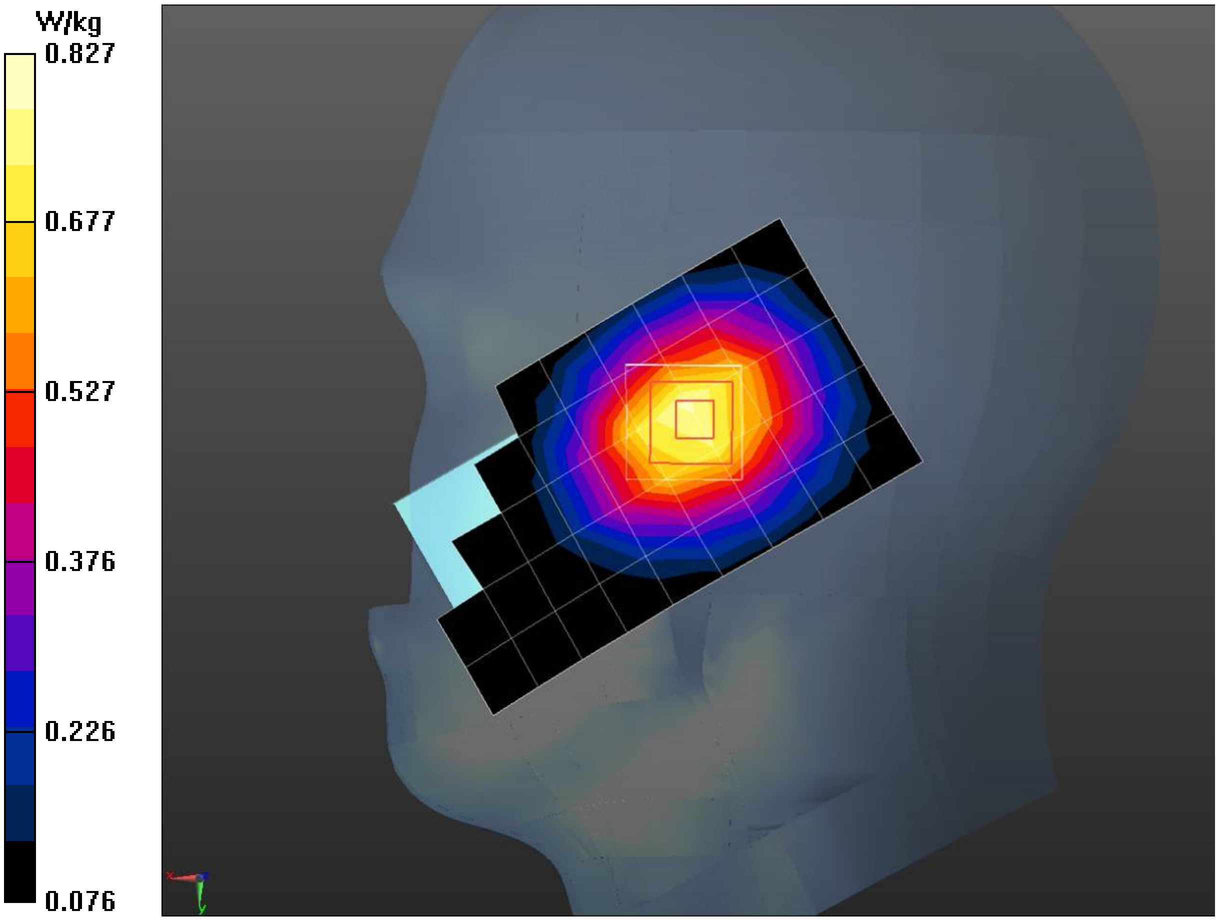
GSM850 Right Tilt Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.891 S/m; εr = 42.812; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Low Tilt Right GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.405 W/kg
Low Tilt Right GSM 850MHz/Zoom Scan (7x7x4)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.88 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.558 W/kg
SAR(1 g) = 0.412 W/kg; SAR(10 g) = 0.286 W/kg
Maximum value of SAR (measured) = 0.438 W/kg



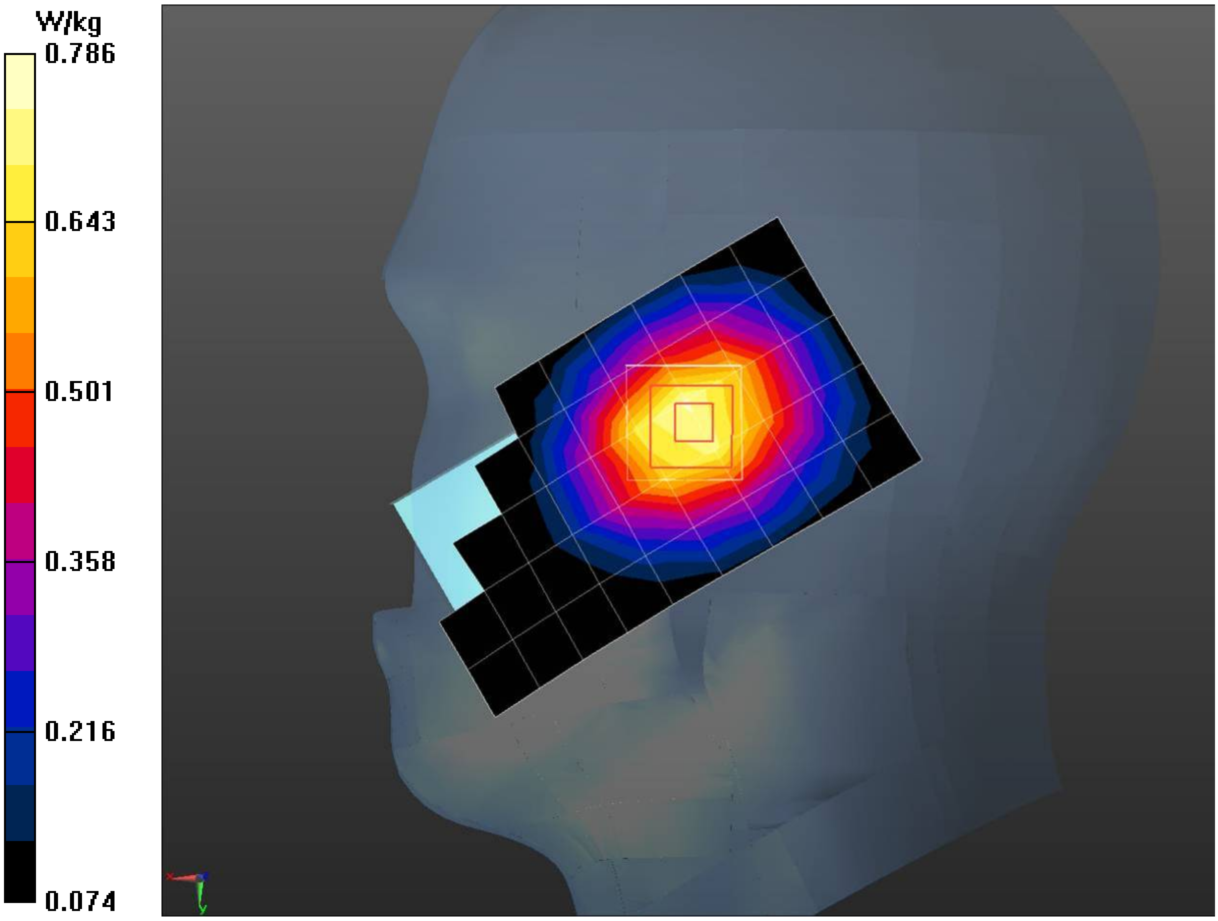
GSM850 Right Check High

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used: f = 849 MHz; σ = 0.914 S/m; εr = 42.487; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 848.6 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
High Cheek Right GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.794 W/kg
High Cheek Right GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.29 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.777 W/kg; SAR(10 g) = 0.541 W/kg
Maximum value of SAR (measured) = 0.827 W/kg



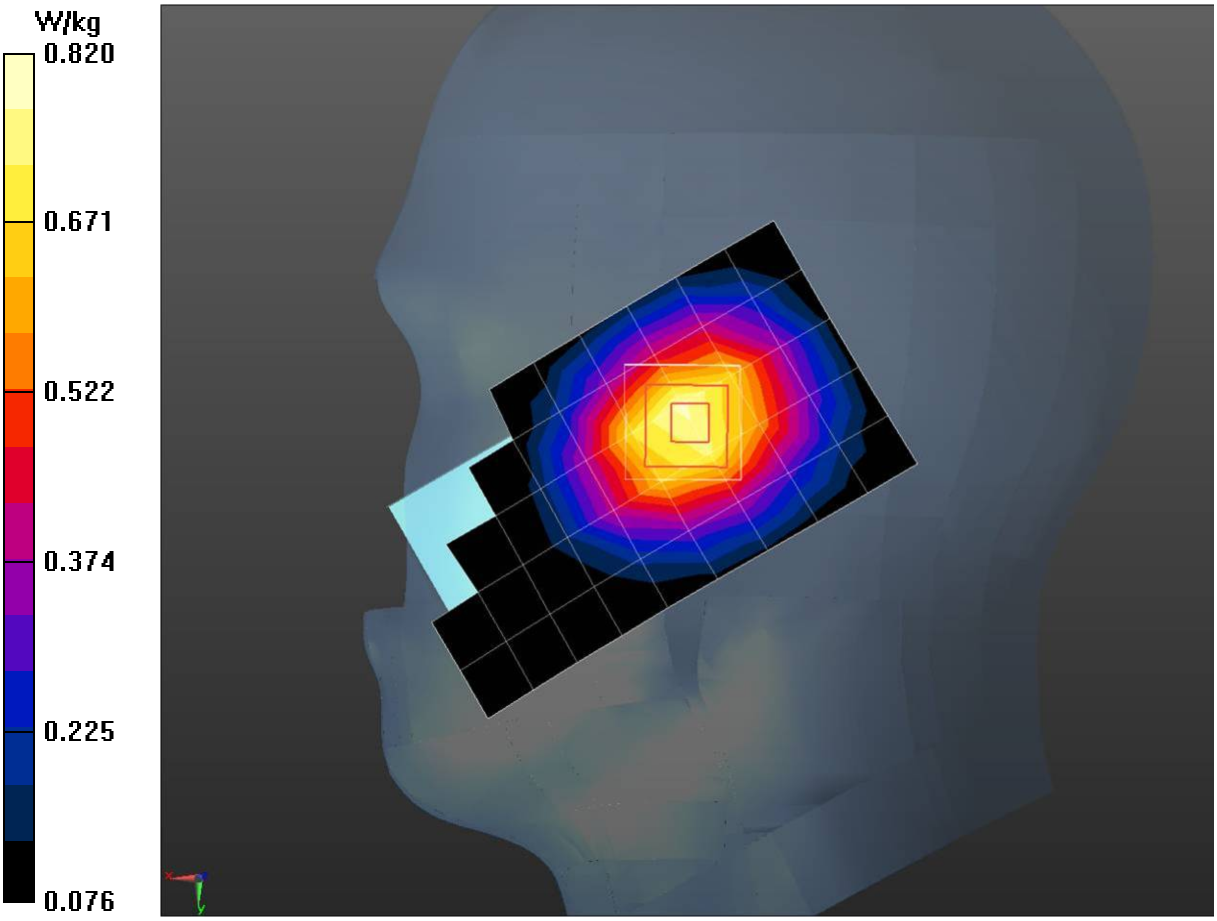
GSM850 Right Check Middle

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used: f = 837 MHz; σ = 0.903 S/m; εr = 42.642; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 836.8 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Middle Cheek Right GSM 850MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.749 W/kg
Middle Cheek Right GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.74 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.991 W/kg
SAR(1 g) = 0.740 W/kg; SAR(10 g) = 0.516 W/kg
Maximum value of SAR (measured) = 0.786 W/kg



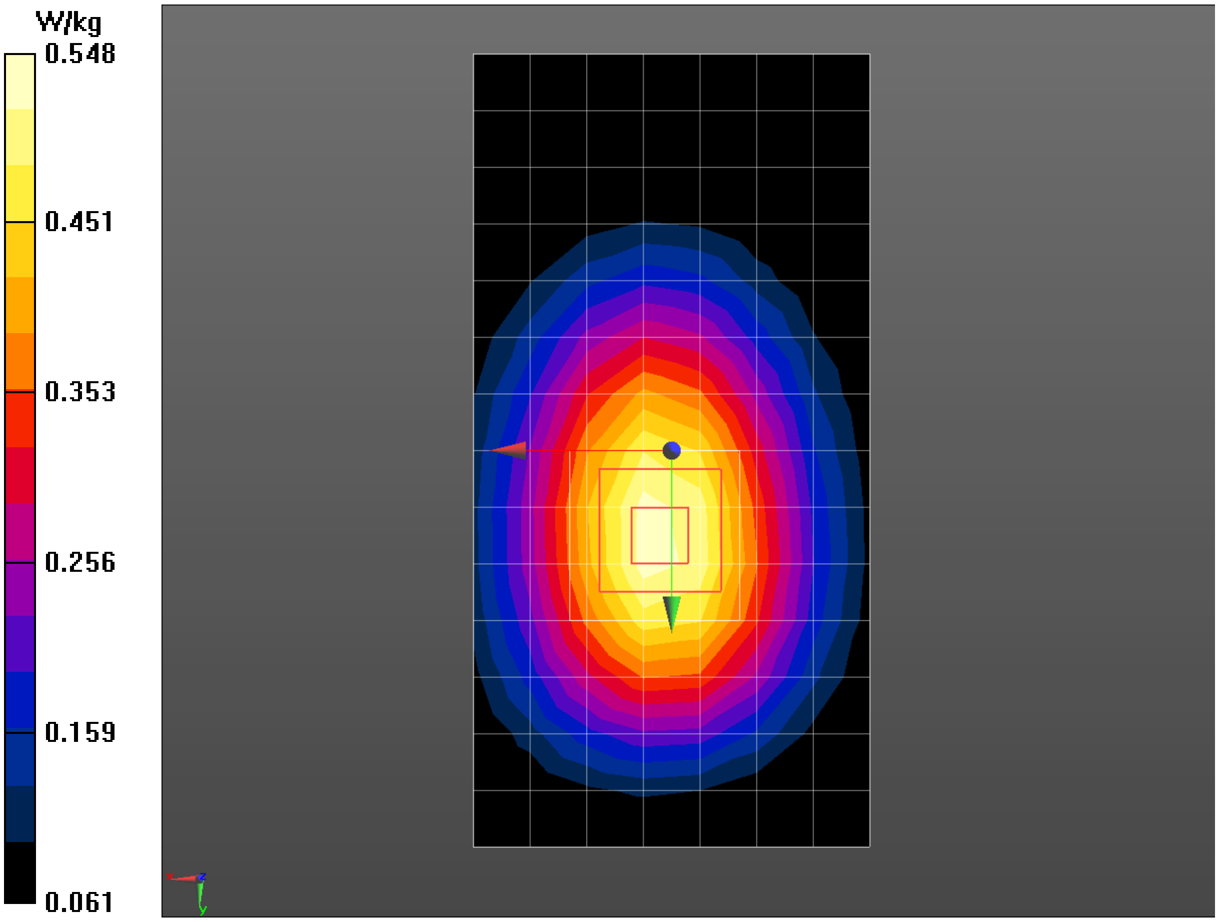
GSM850 Right Check High SIM2

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 850MHz
Medium parameters used: f = 849 MHz; σ = 0.914 S/m; εr = 42.487; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 848.6 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
High Cheek Right GSM 850MHz SIM2/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.790 W/kg
High Cheek Right GSM 850MHz SIM2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.41 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.767 W/kg; SAR(10 g) = 0.533 W/kg
Maximum value of SAR (measured) = 0.820 W/kg



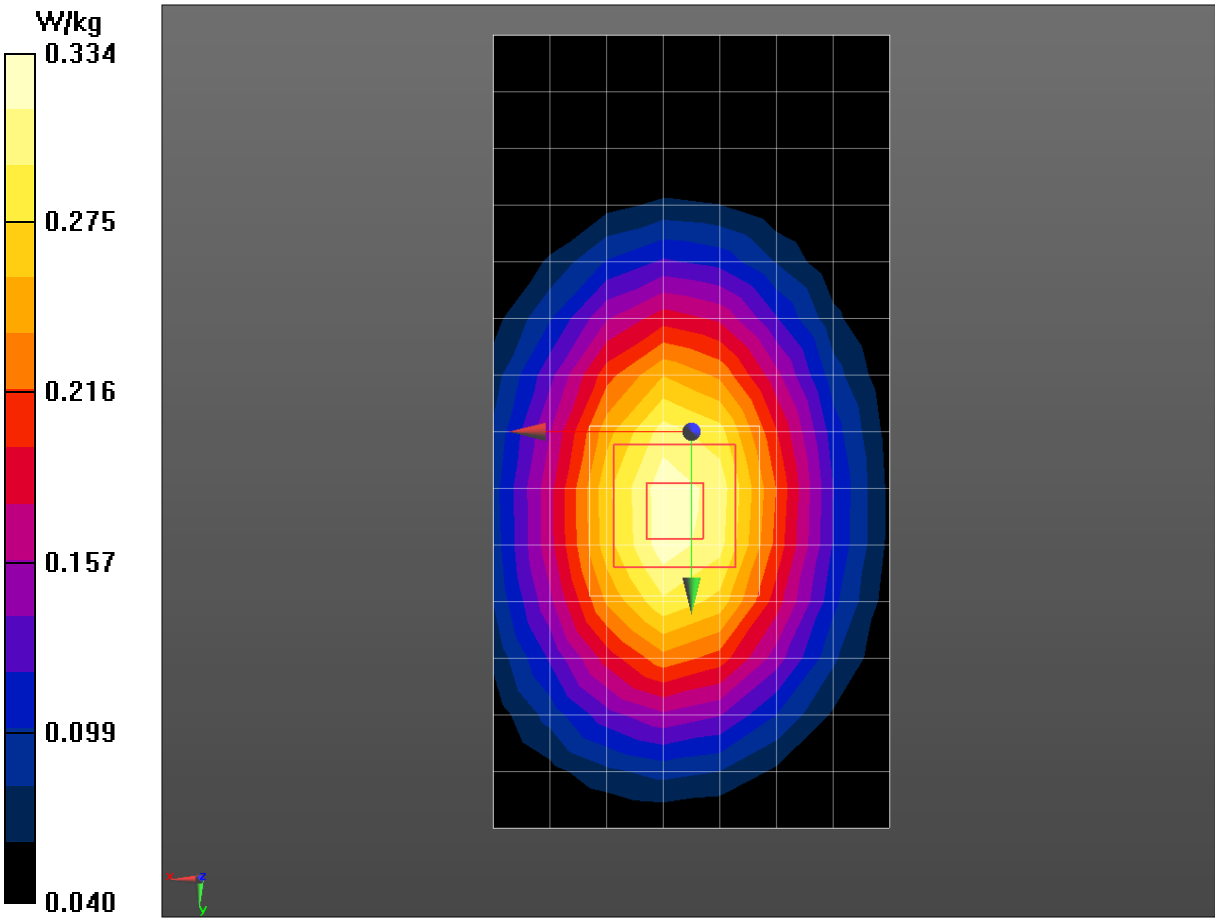
GSM850 Body Toward Ground Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.959 S/m; εr = 56.591; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
Low Toward Ground GSM 850MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.532 W/kg
Low Toward Ground GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.56 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.679 W/kg
SAR(1 g) = 0.515 W/kg; SAR(10 g) = 0.364 W/kg
Maximum value of SAR (measured) = 0.548 W/kg



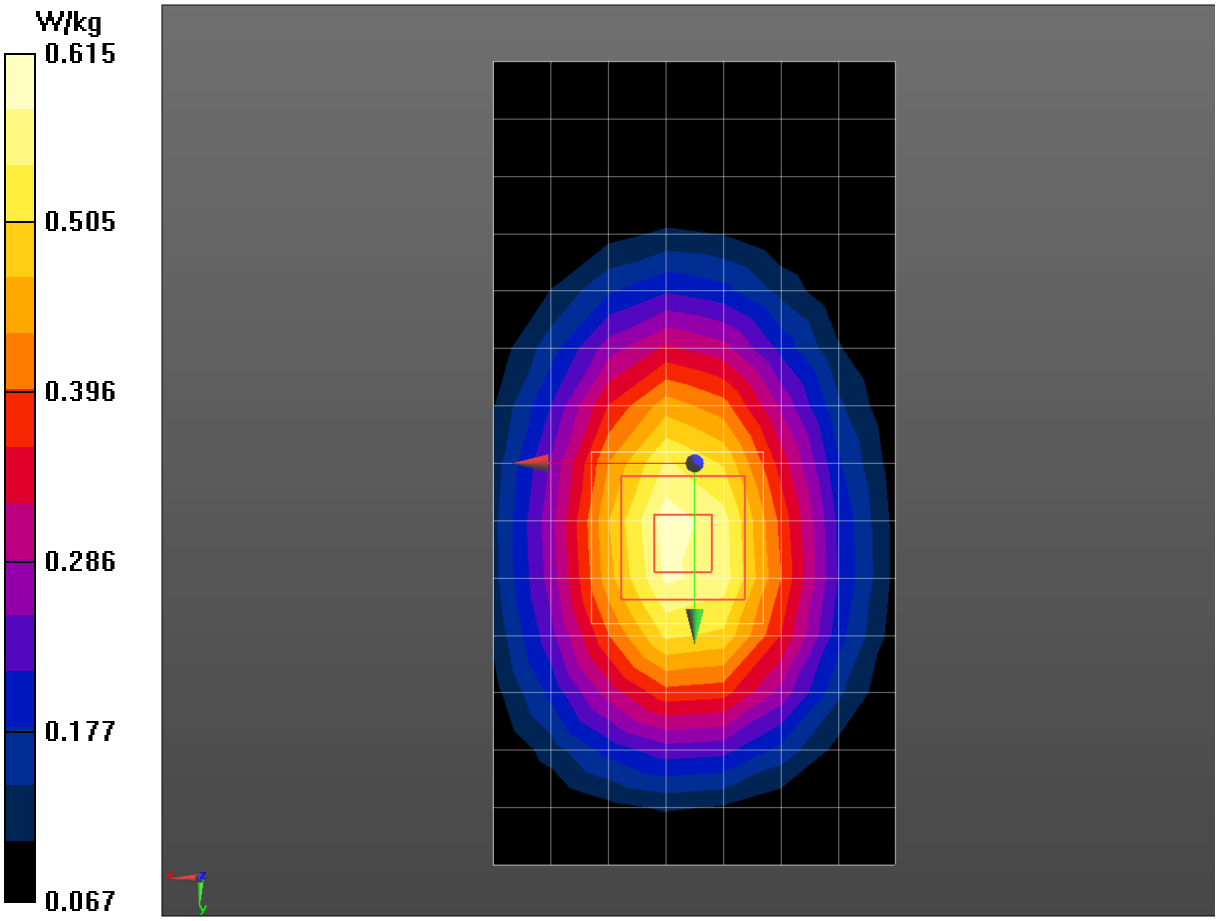
GSM850 Body Toward Phantom Low

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.959 S/m; εr = 56.591; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
Low Toward Phantom GSM 850MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.327 W/kg
Low Toward Phantom GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.42 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.412 W/kg
SAR(1 g) = 0.315 W/kg; SAR(10 g) = 0.225 W/kg
Maximum value of SAR (measured) = 0.334 W/kg



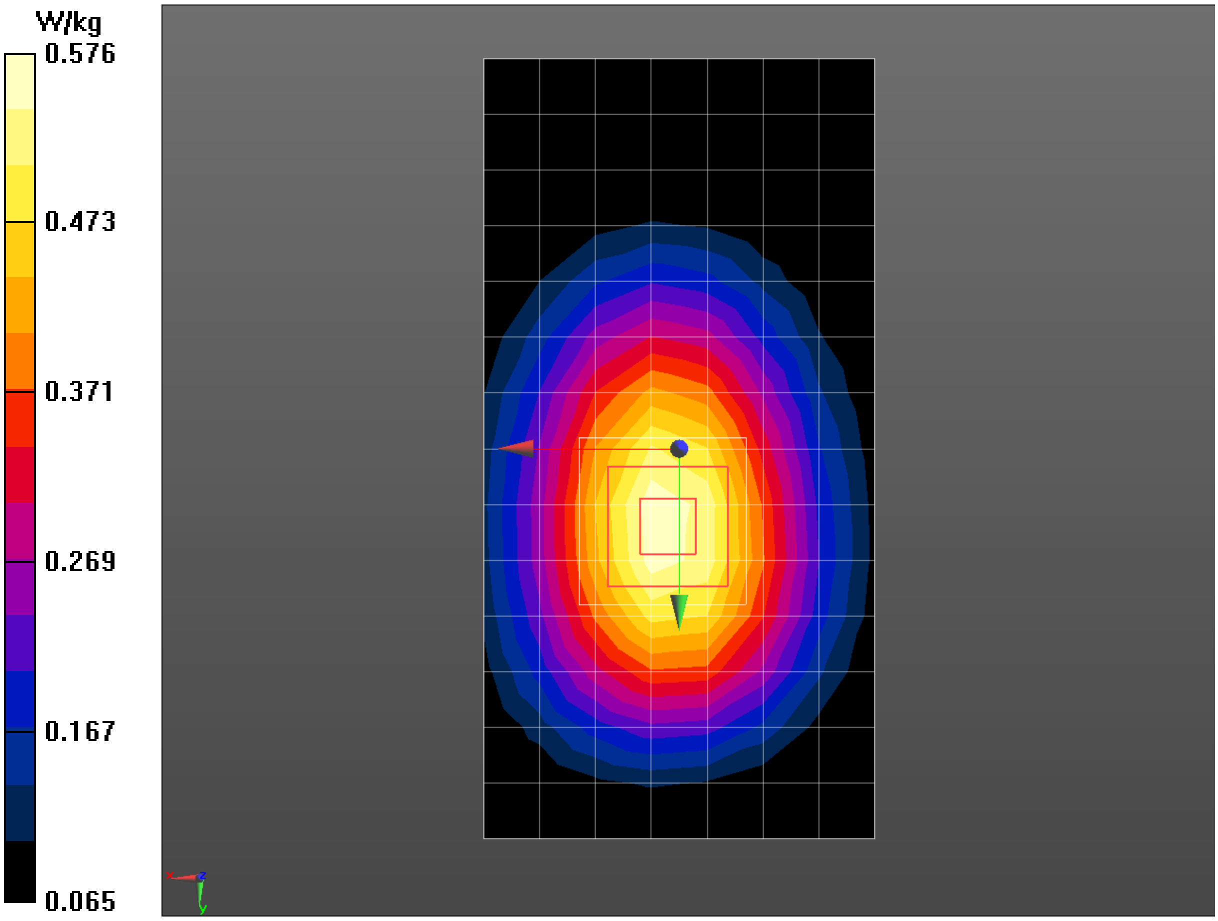
GSM850 Body Toward Ground High

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 850MHz
Medium parameters used: f = 849 MHz; σ = 0.983 S/m; εr = 56.343; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 848.6 MHz; Duty Cycle: 1:8.3
High Toward Ground GSM 850MHz /Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.600 W/kg
High Toward Ground GSM 850MHz /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.71 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.576 W/kg; SAR(10 g) = 0.406 W/kg
Maximum value of SAR (measured) = 0.615 W/kg



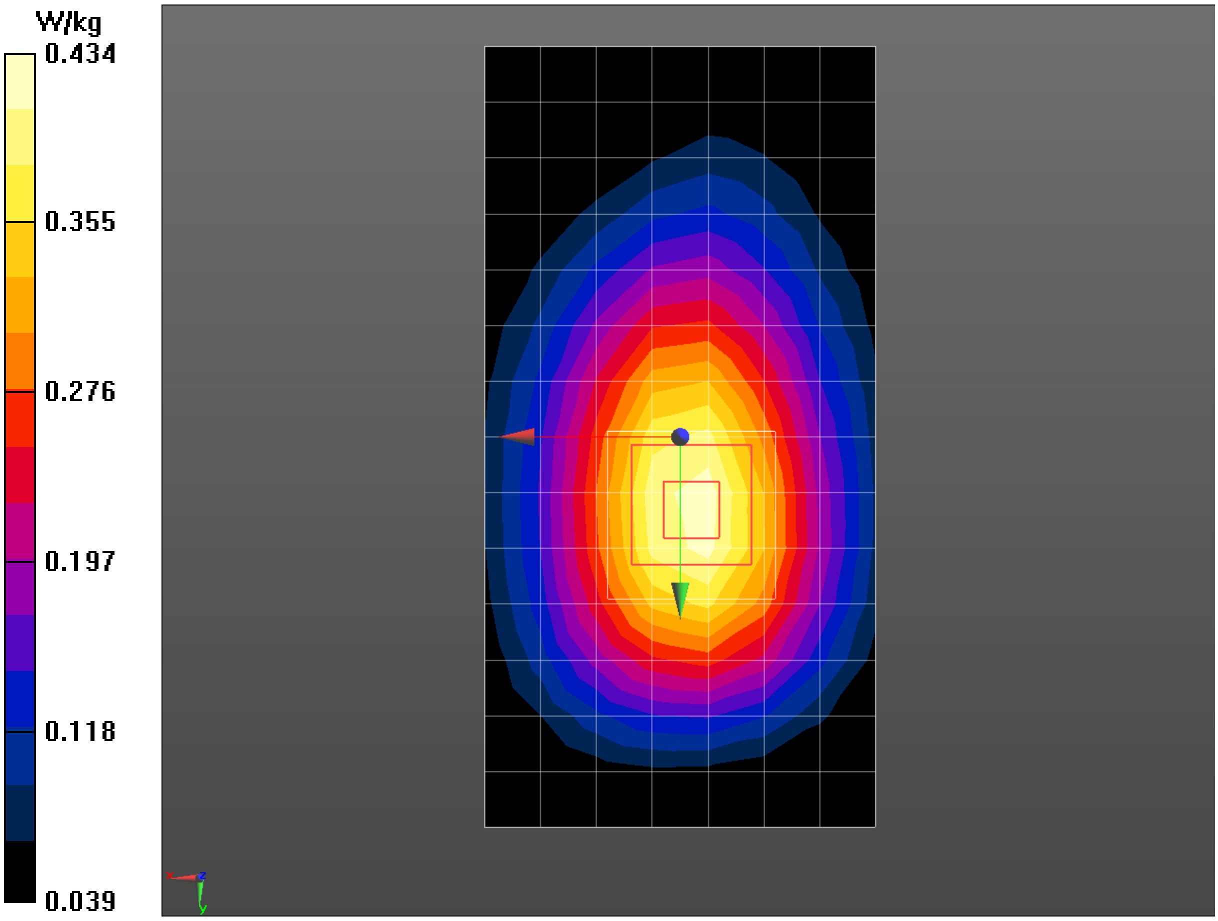
GSM850 Body Toward Ground Middle

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 850MHz
Medium parameters used: f = 837 MHz; σ = 0.972 S/m; εr = 56.463; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 836.8 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
Middle Toward Ground GSM 850MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.565 W/kg
Middle Toward Ground GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.10 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.542 W/kg; SAR(10 g) = 0.383 W/kg
Maximum value of SAR (measured) = 0.576 W/kg



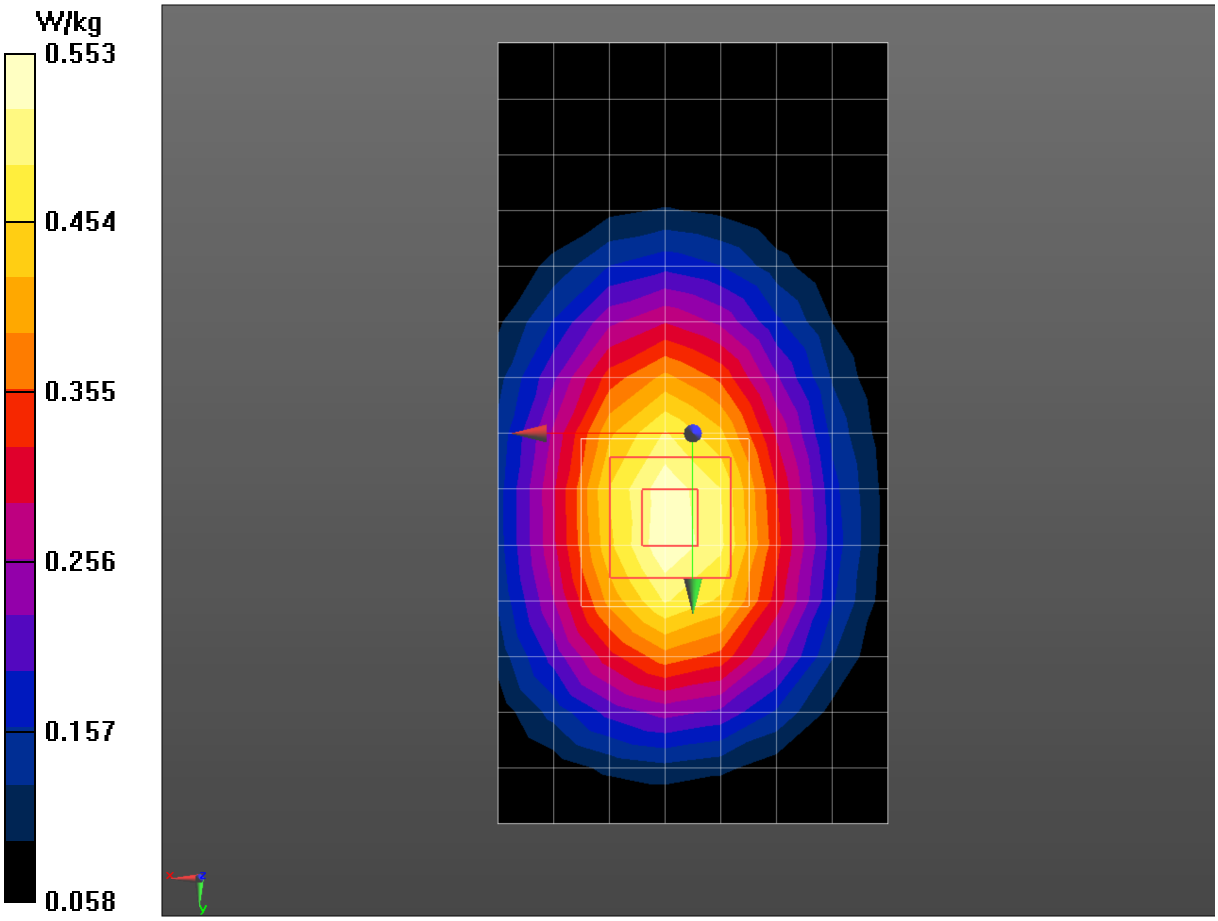
GSM850 Body Toward Ground High with Headset

Date/Time: 2016/5/25
Electronics: DAE4 Sn1329
Medium: Body 900MHz
Medium parameters used: f = 849 MHz; σ = 0.983 S/m; εr = 56.343; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 848.6 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
High Toward Ground GSM 850MHz With Headset/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.422 W/kg
High Toward Ground GSM 850MHz With Headset/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.40 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.544 W/kg
SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.284 W/kg
Maximum value of SAR (measured) = 0.434 W/kg



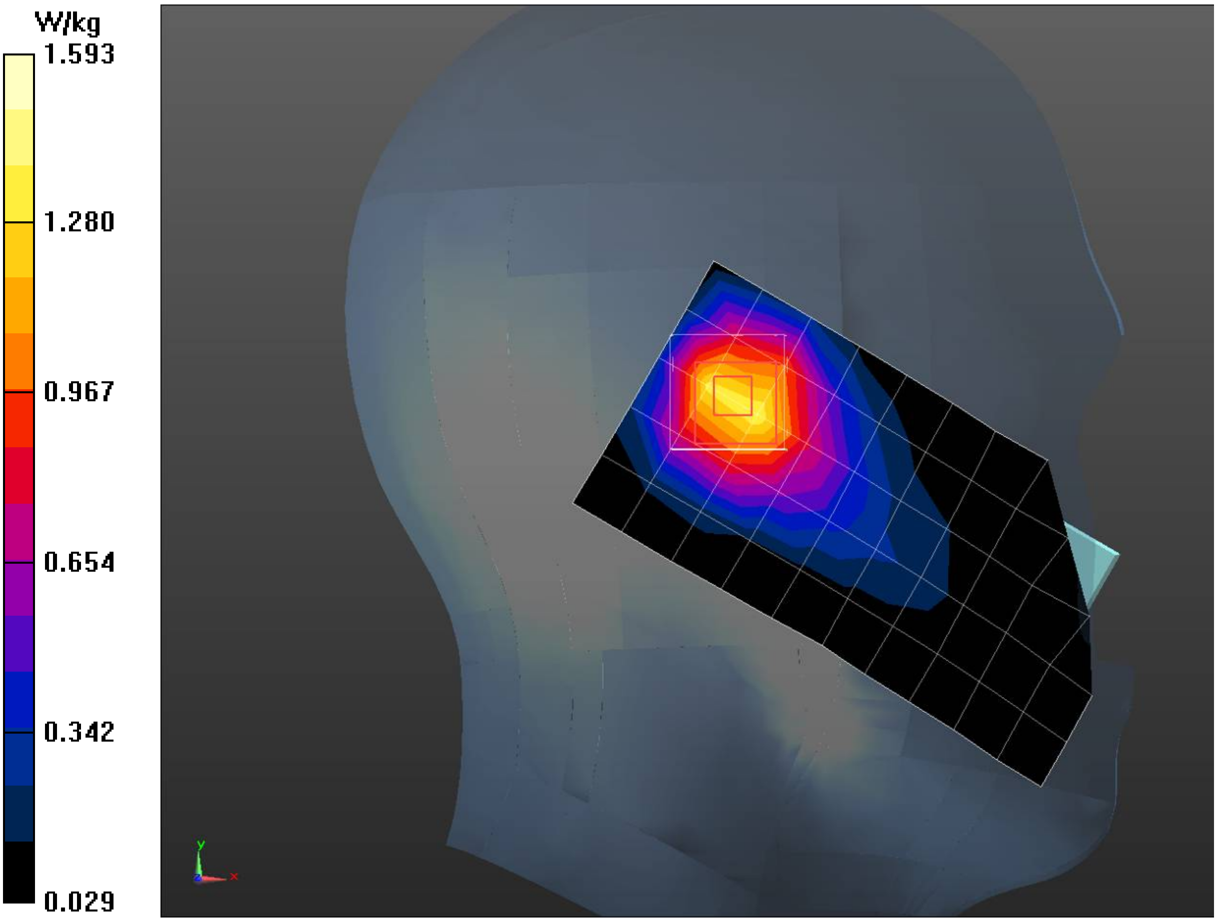
GSM850 Body Toward Ground High SIM2

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 850MHz
Medium parameters used: f = 849 MHz; σ = 0.983 S/m; εr = 56.343; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 848.6 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
High Toward Ground GSM 850MHz SIM2/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.550 W/kg
High Toward Ground GSM 850MHz SIM2/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.38 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.691 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.369 W/kg
Maximum value of SAR (measured) = 0.553 W/kg



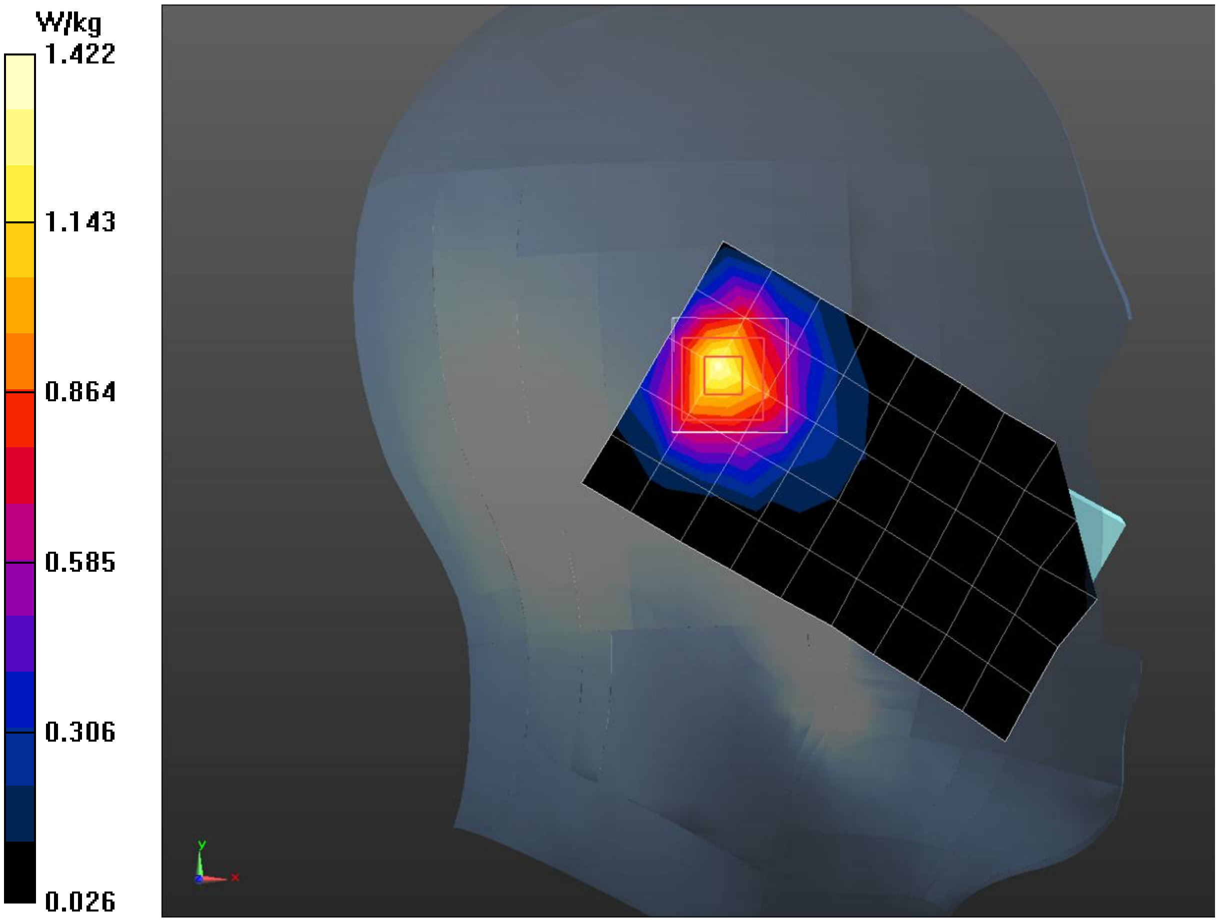
GSM1900 Left Check Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.358 S/m; εr = 40.817; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Low Cheek Left GSM 1900MHz/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.39 W/kg
Low Cheek Left GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.56 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.43 W/kg
SAR(1 g) = 1.43 W/kg; SAR(10 g) = 0.823 W/kg
Maximum value of SAR (measured) = 1.59 W/kg



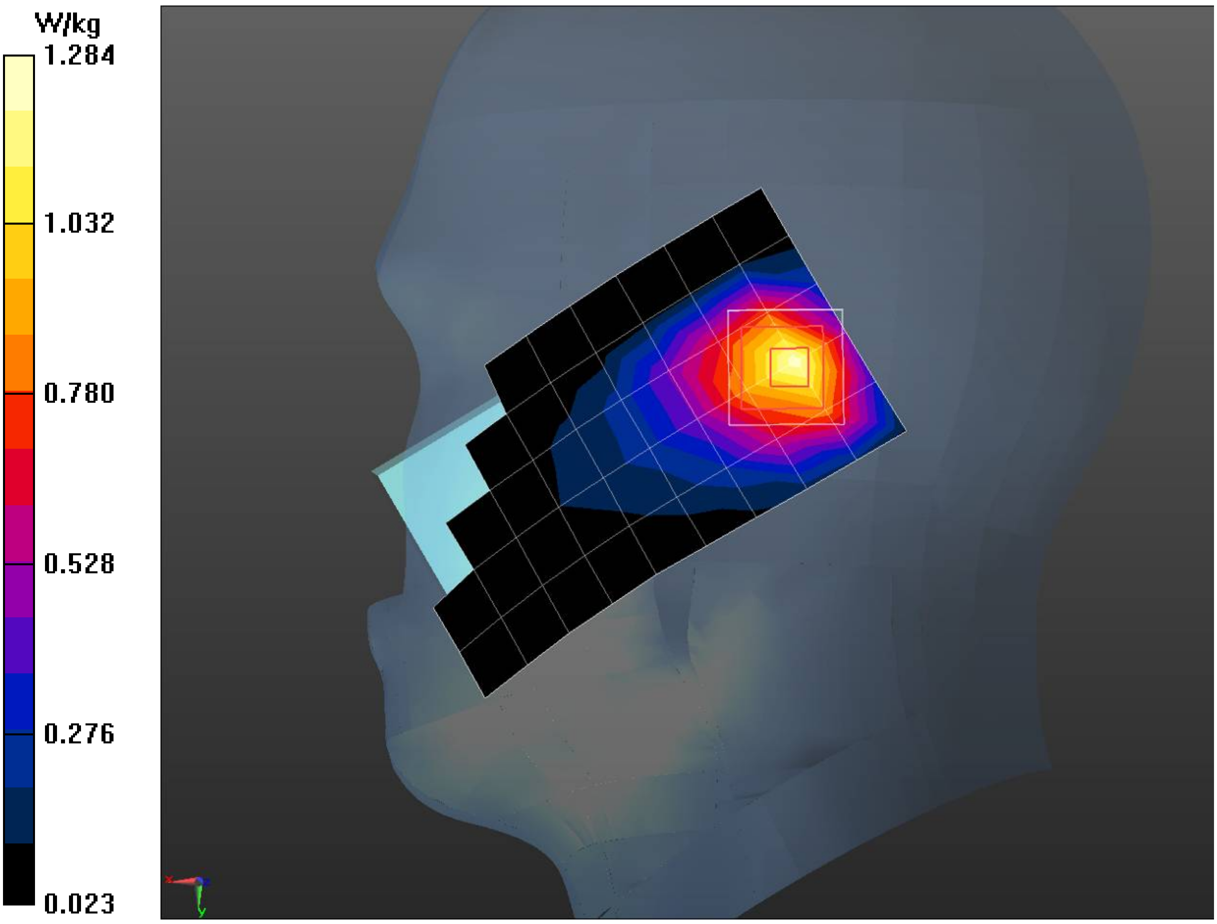
GSM1900 Left Tilt Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.358 S/m; εr = 40.817; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Low Tilt Left GSM 1900MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.38 W/kg
Low Tilt Left GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.82 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 2.14 W/kg
SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.713 W/kg
Maximum value of SAR (measured) = 1.42 W/kg



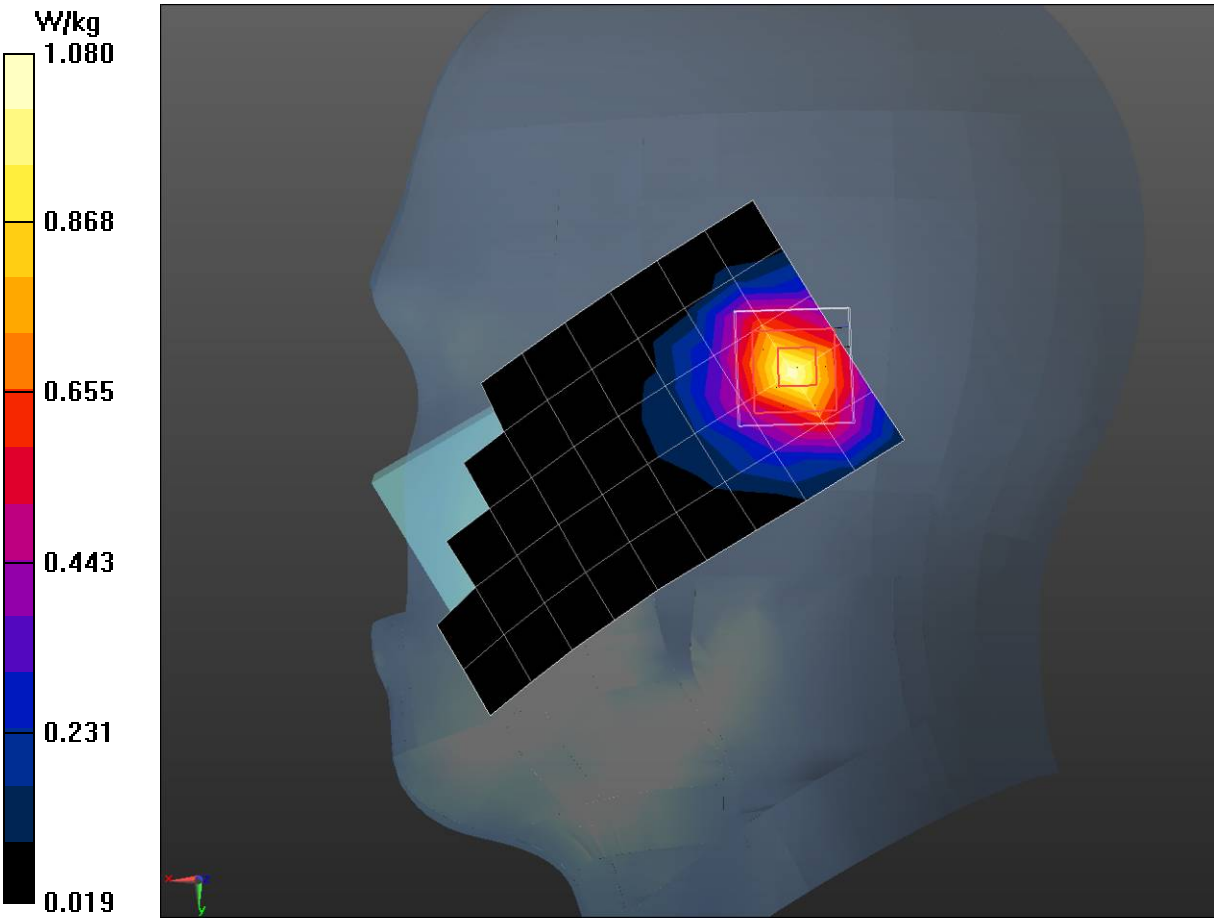
GSM1900 Right Check Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.358 S/m; εr = 40.817; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Low Cheek Right GSM 1900MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.26 W/kg
Low Cheek Right GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.57 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.685 W/kg
Maximum value of SAR (measured) = 1.28 W/kg



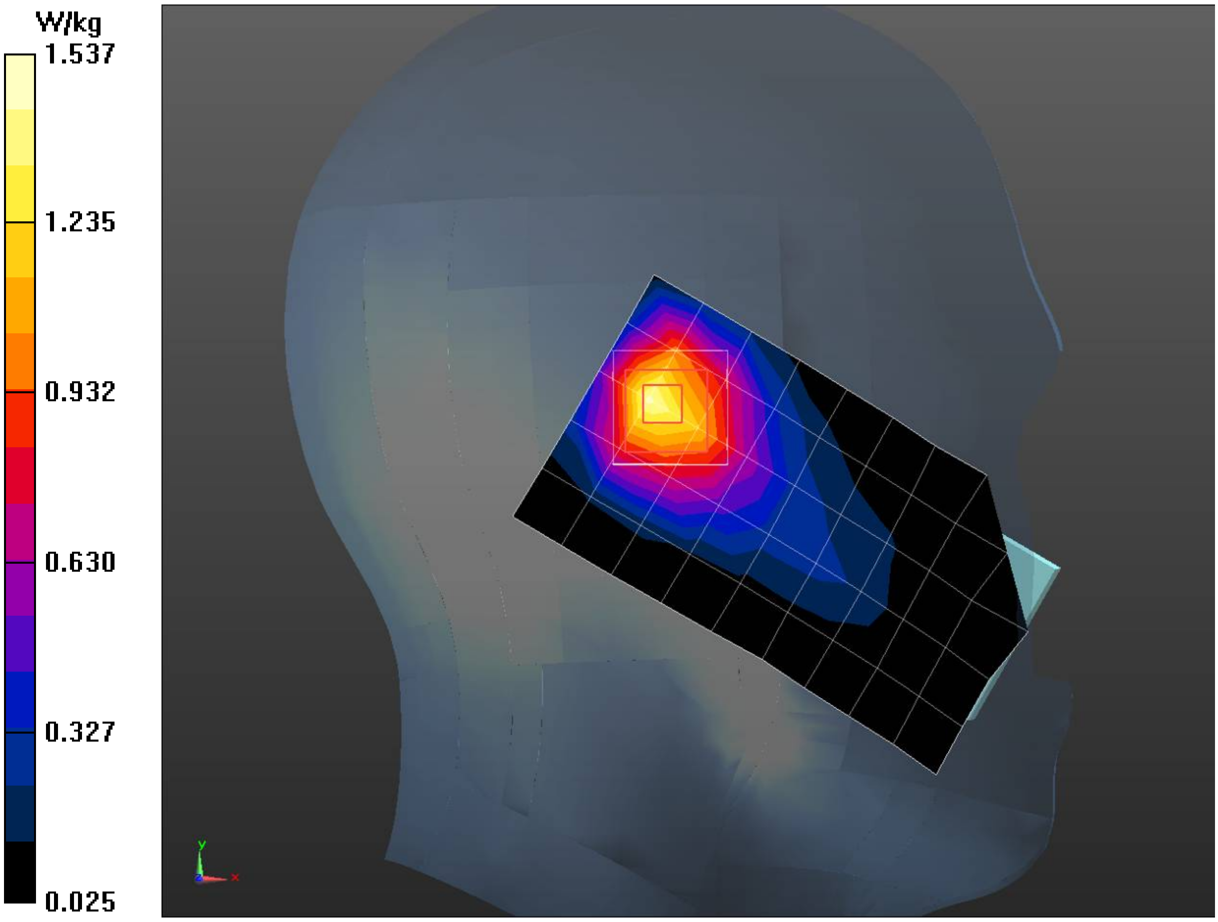
GSM1900 Right Tilt Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.358 S/m; εr = 40.817; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Low Tilt Right GSM 1900MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.06 W/kg
Low Tilt Right GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.81 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.968 W/kg; SAR(10 g) = 0.548 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



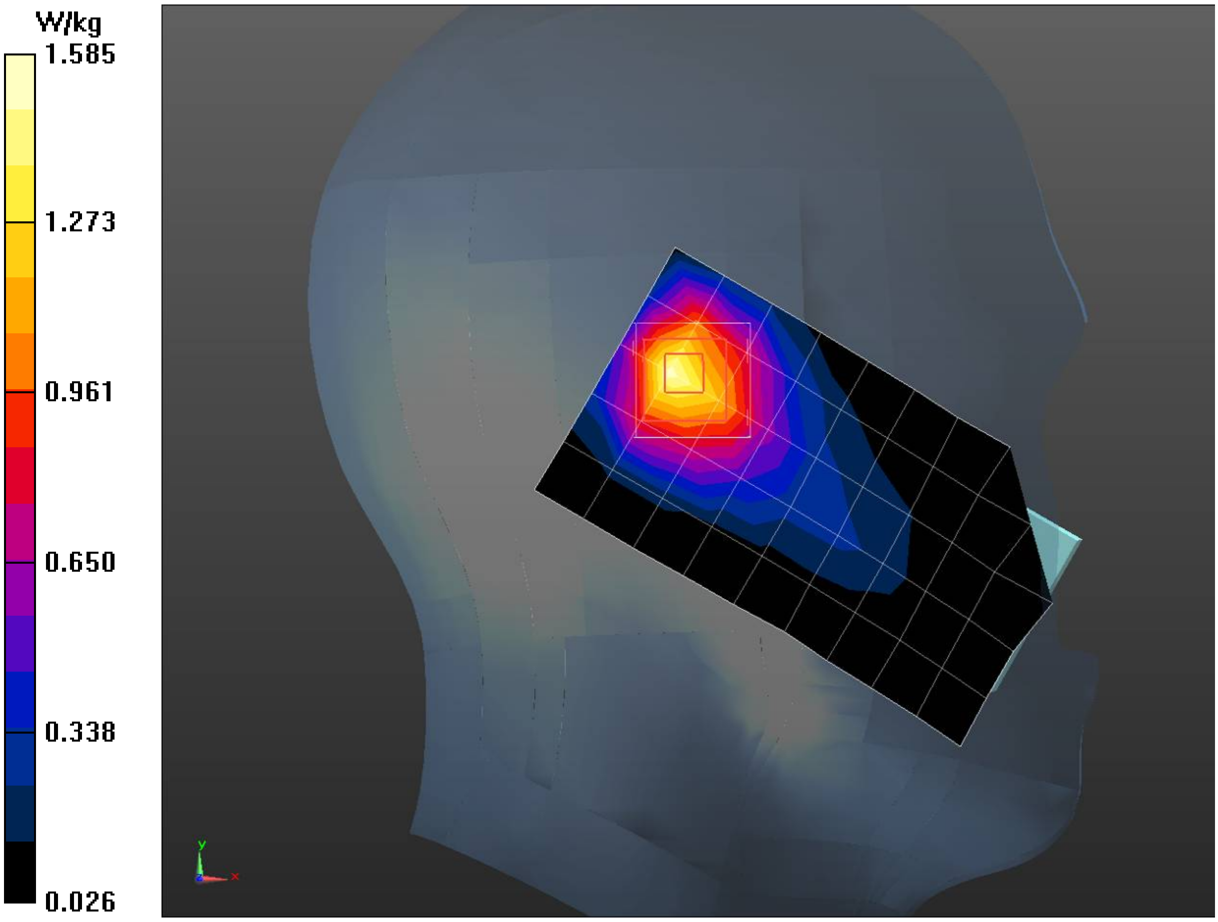
GSM1900 Left Check High

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.394 S/m; εr = 40.581; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
High Cheek Left GSM 1900MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.48 W/kg
High Cheek Left GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.59 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 2.41 W/kg
SAR(1 g) = 1.41 W/kg; SAR(10 g) = 0.792 W/kg
Maximum value of SAR (measured) = 1.54 W/kg



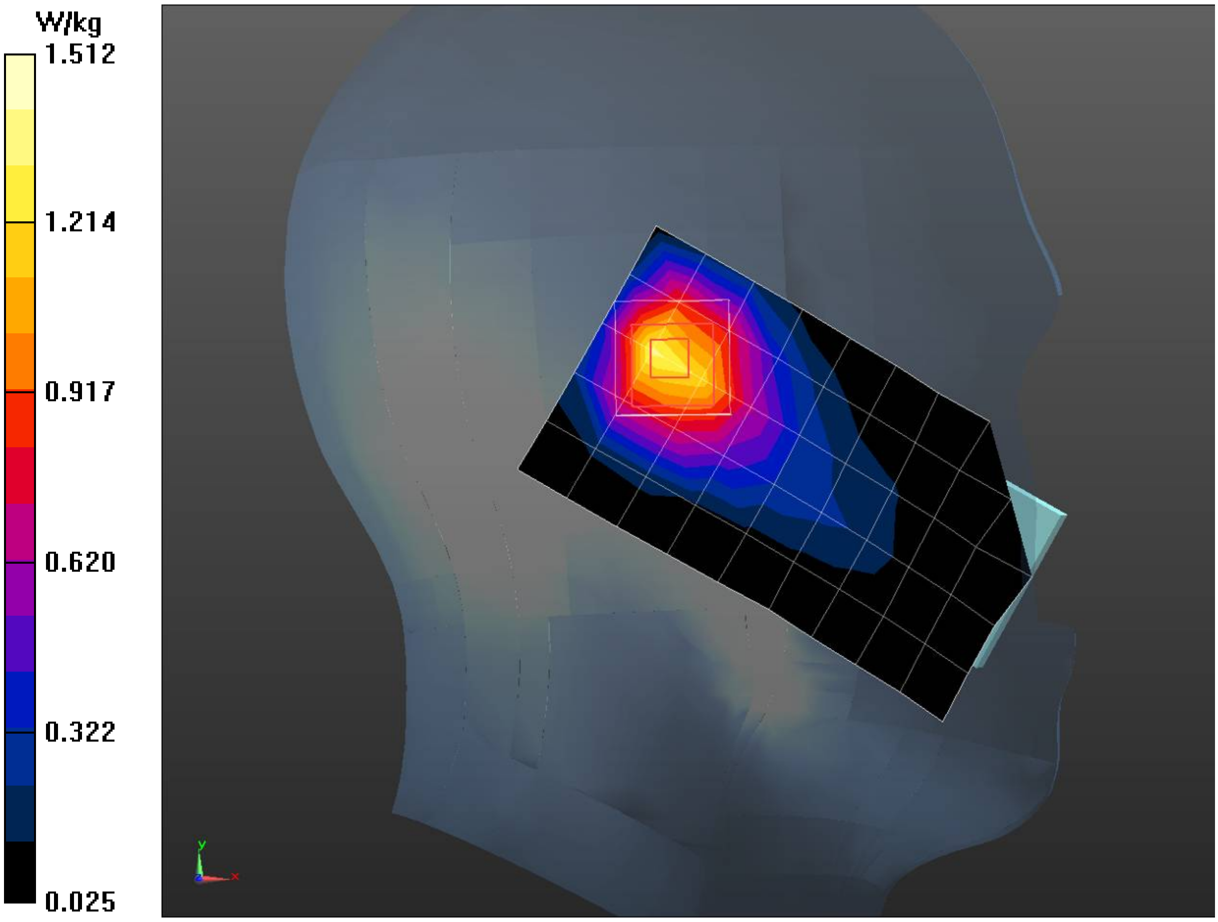
GSM1900 Left Check Middle

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.378 S/m; εr = 40.709; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Middle Cheek Left GSM 1900MHz/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.54 W/kg
Middle Cheek Left GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.17 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.48 W/kg
SAR(1 g) = 1.45 W/kg; SAR(10 g) = 0.818 W/kg
Maximum value of SAR (measured) = 1.59 W/kg



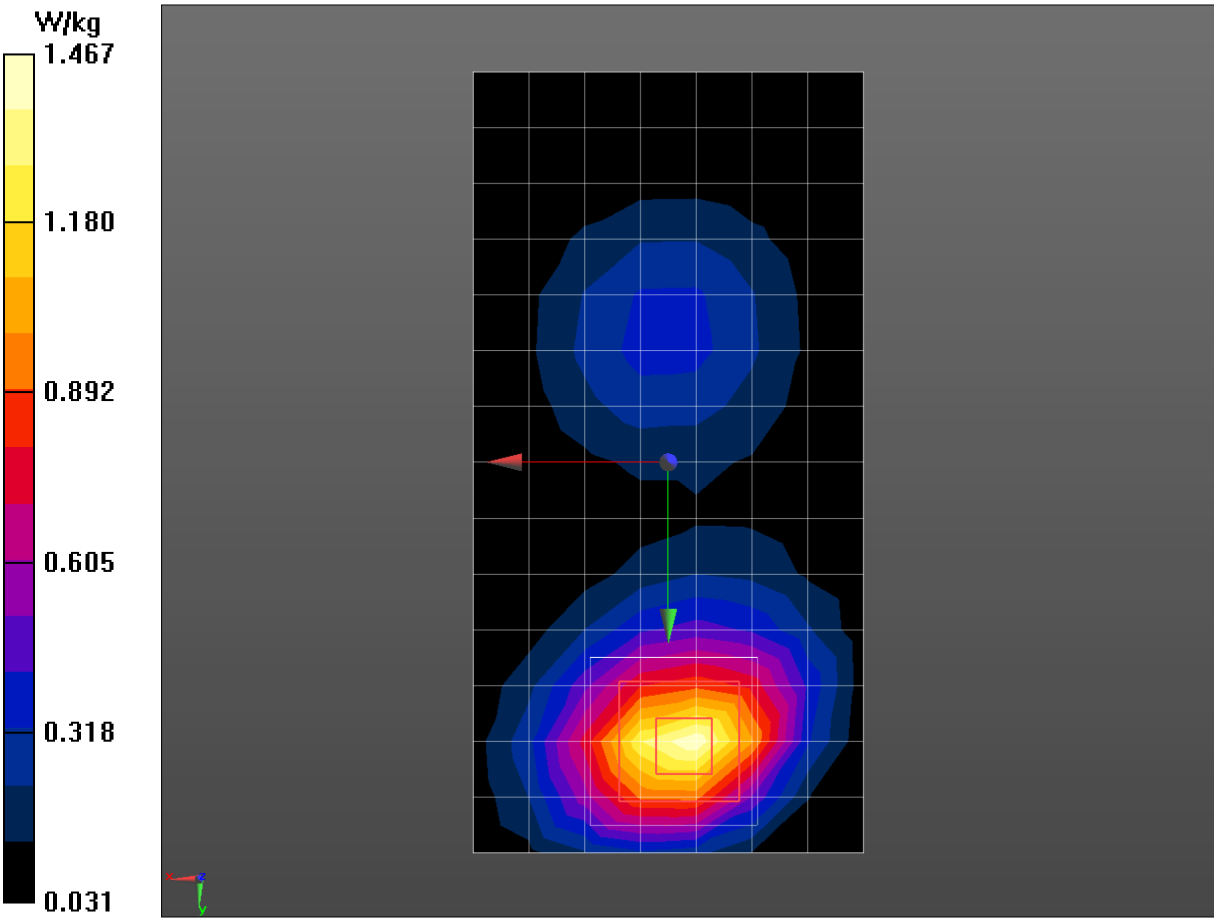
GSM1900 Left Check Middle SIM2

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.378 S/m; εr = 40.709; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Middle Cheek Left GSM 1900MHz SIM2/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.35 W/kg
Middle Cheek Left GSM 1900MHz SIM2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.26 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.33 W/kg
SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.765 W/kg
Maximum value of SAR (measured) = 1.51 W/kg



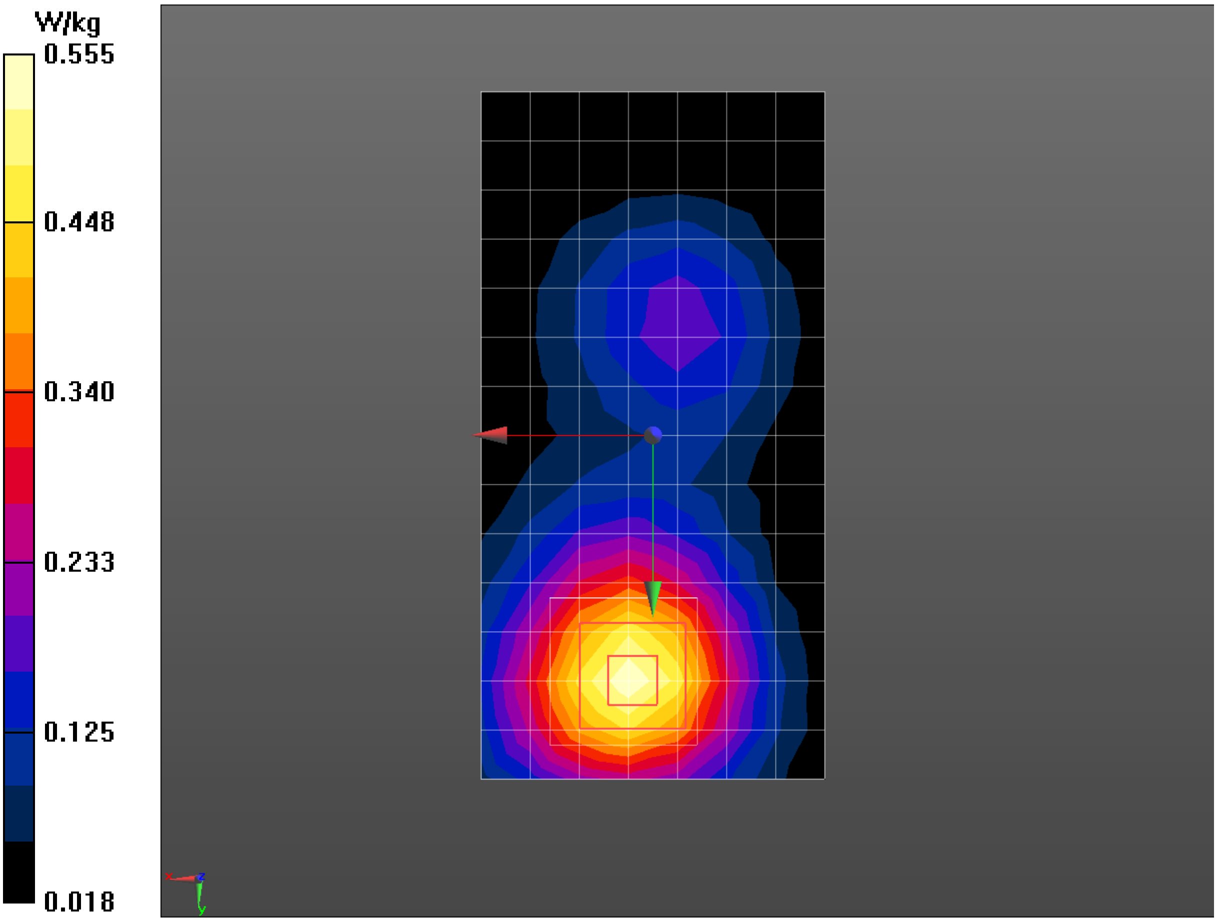
GSM1900 Body Toward Ground Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.465 S/m; εr = 53.981; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Ground GSM 1900MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.46 W/kg
Low Toward Ground GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.43 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.25 W/kg
SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.709 W/kg
Maximum value of SAR (measured) = 1.47 W/kg



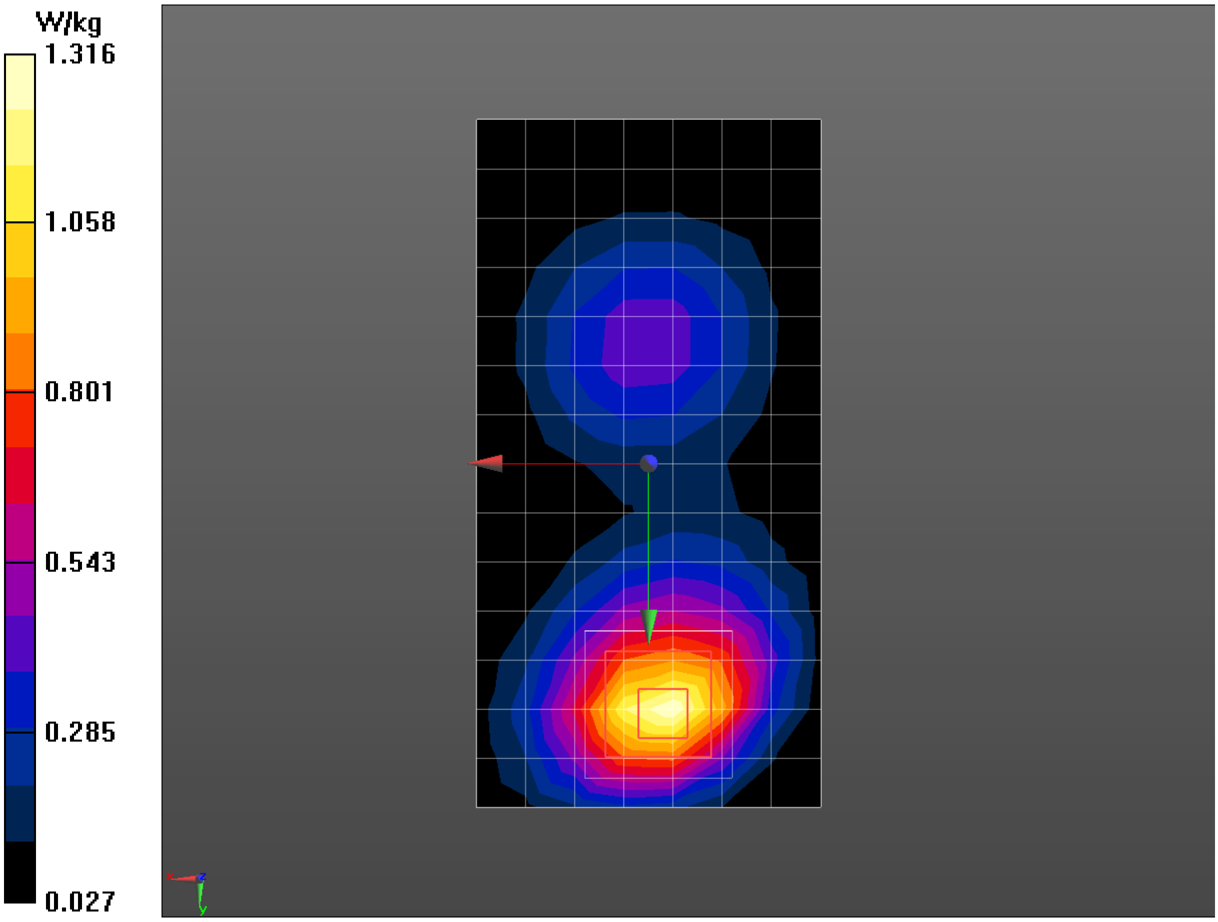
GSM1900 Body Toward Phantom Low

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.465 S/m; εr = 53.981; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Phantom GSM 1900MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.555 W/kg
Low Toward Phantom GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.145 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.514 W/kg; SAR(10 g) = 0.315 W/kg
Maximum value of SAR (measured) = 0.555 W/kg



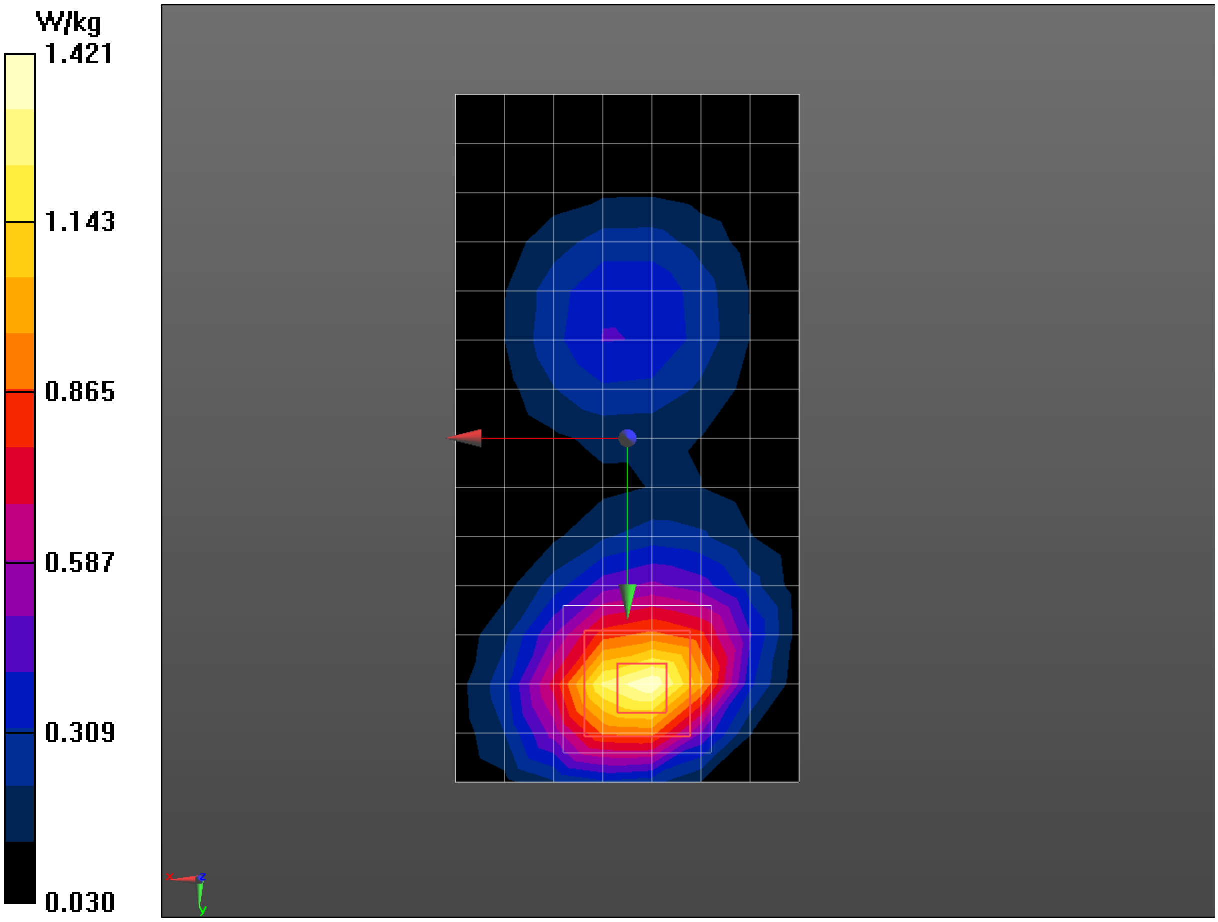
GSM1900 Body Toward Ground High

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used: f = 1910 MHz; σ = 1.516 S/m; εr = 53.798; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
High Toward Ground GSM 1900MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.32 W/kg
High Toward Ground GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.46 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.647 W/kg
Maximum value of SAR (measured) = 1.32 W/kg



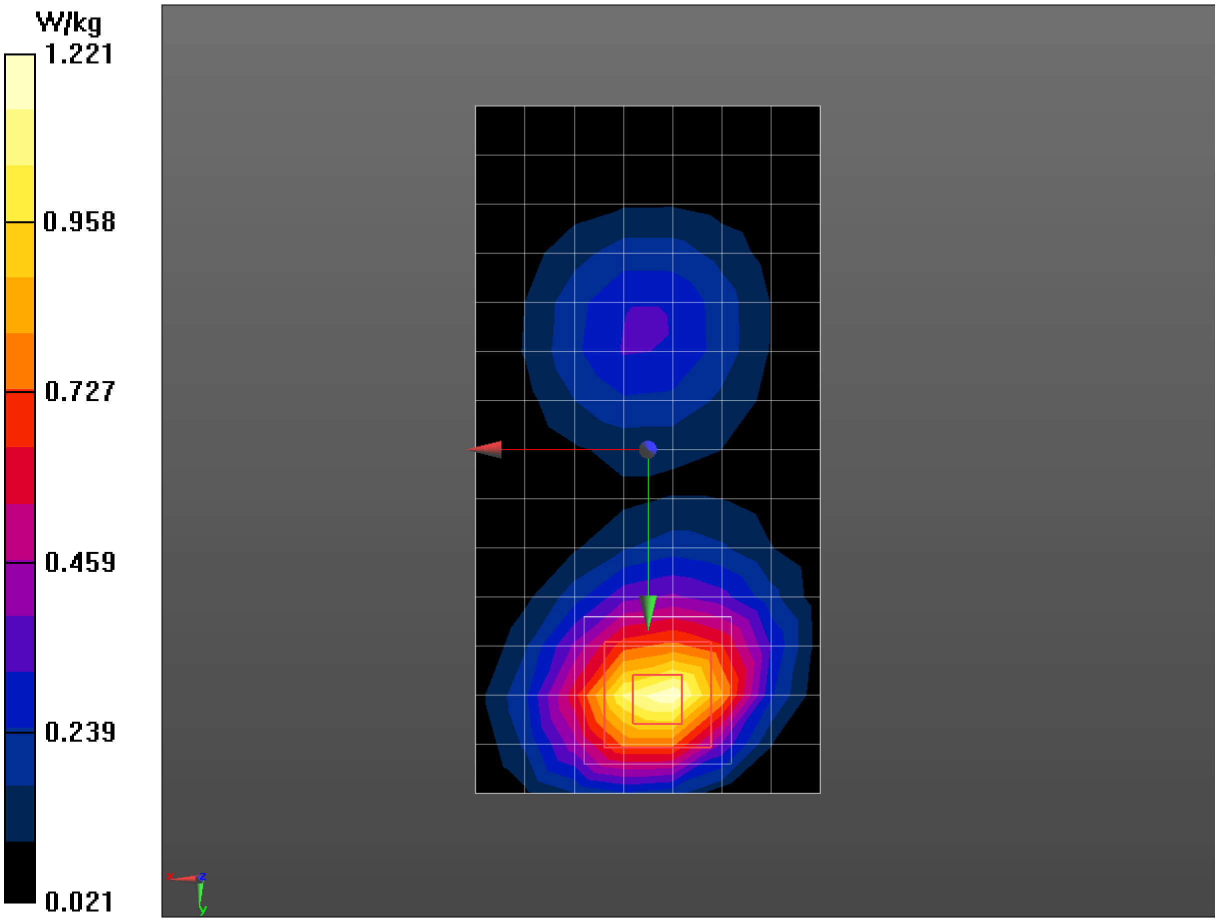
GSM1900 Body Toward Ground Middle

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.494 S/m; εr = 53.898; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1880 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
Middle Toward Ground GSM 1900MHz/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.42 W/kg
Middle Toward Ground GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.30 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.21 W/kg
SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.696 W/kg
Maximum value of SAR (measured) = 1.42 W/kg



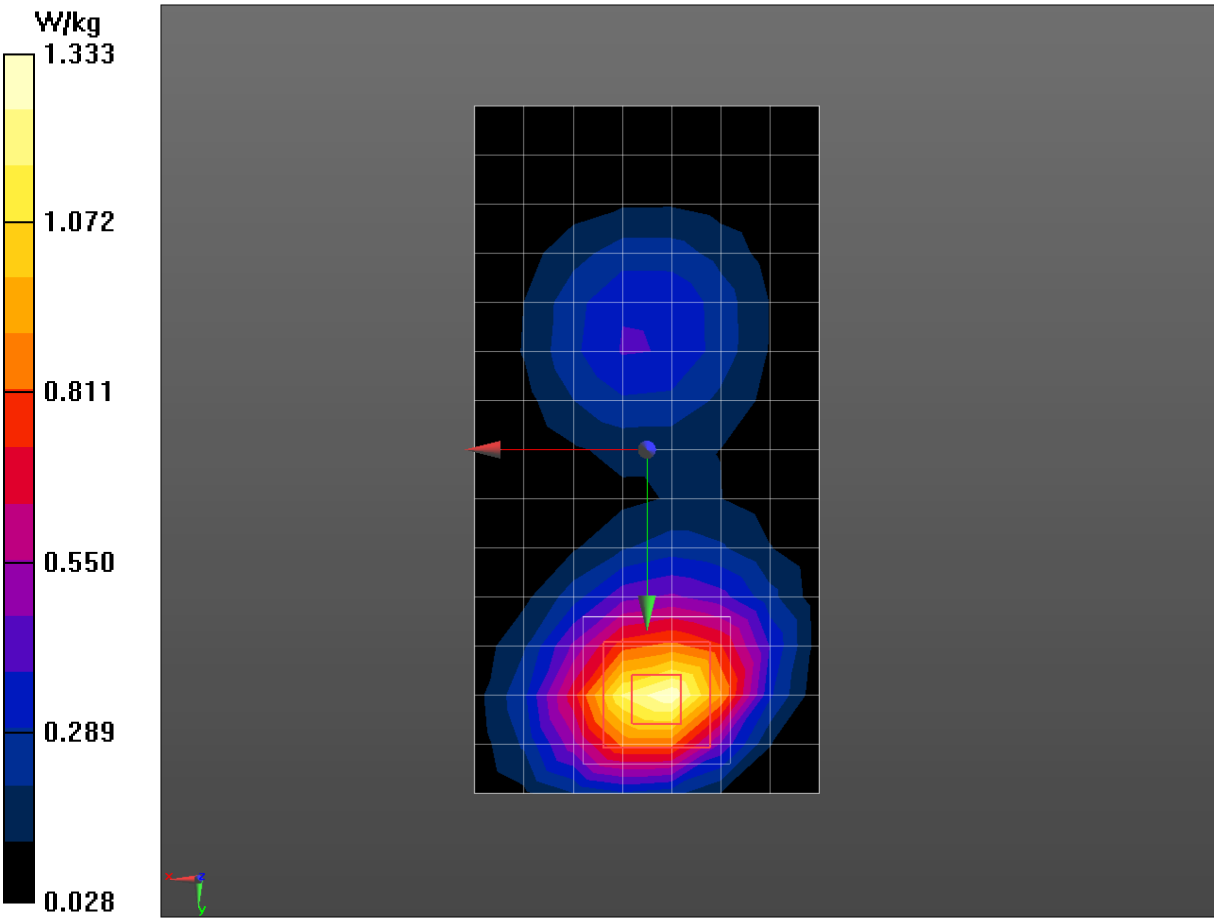
GSM1900 Body Toward Ground Low with Headset

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.465 S/m; εr = 53.981; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Ground GSM 1900MHz with Headset/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.20 W/kg
Low Toward Ground GSM 1900MHz with Headset/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.17 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.596 W/kg
Maximum value of SAR (measured) = 1.22 W/kg



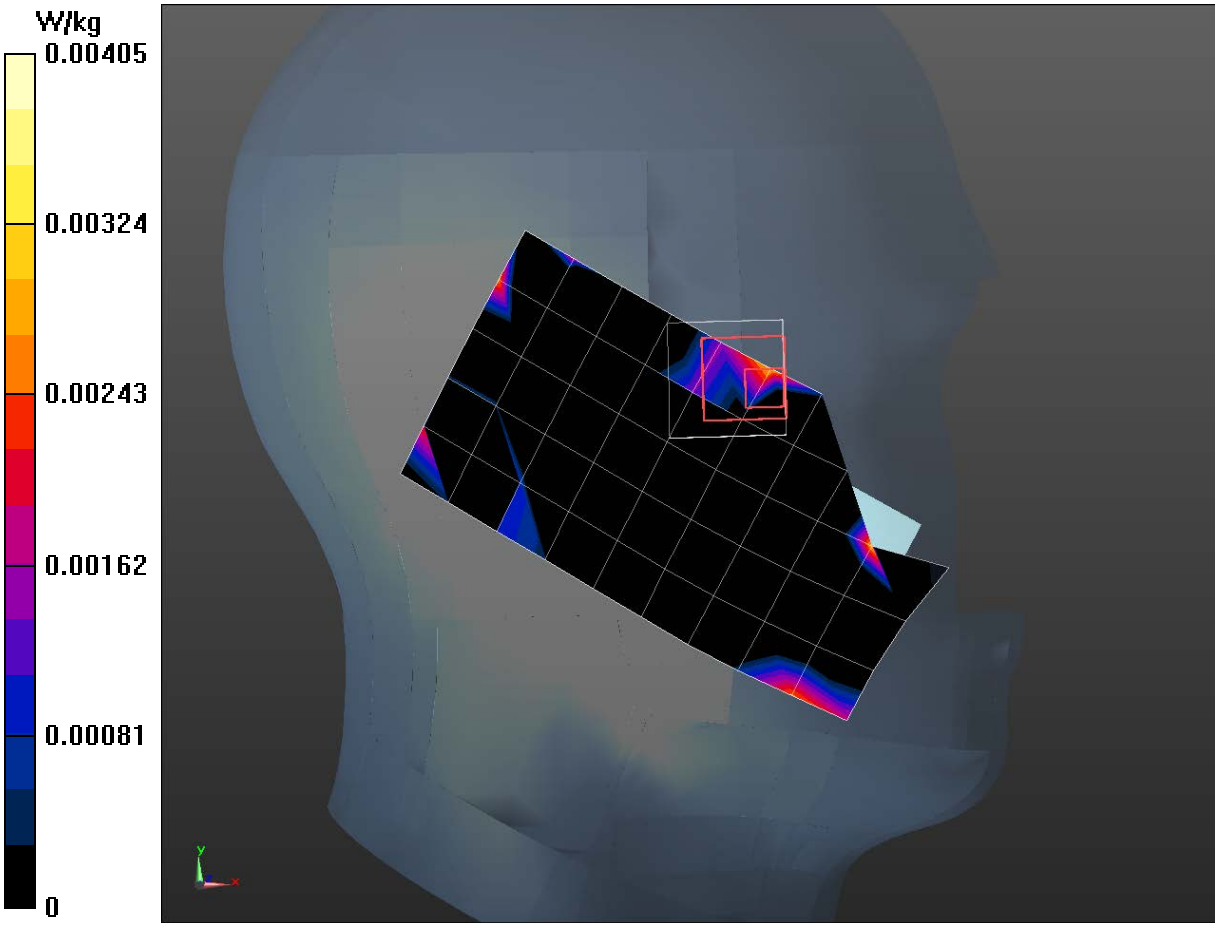
GSM1900 Body Toward Ground Low SIM2

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.465 S/m; εr = 53.981; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Ground GSM 1900MHz SIM2/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.33 W/kg
Low Toward Ground GSM 1900MHz SIM2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.13 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.655 W/kg
Maximum value of SAR (measured) = 1.33 W/kg



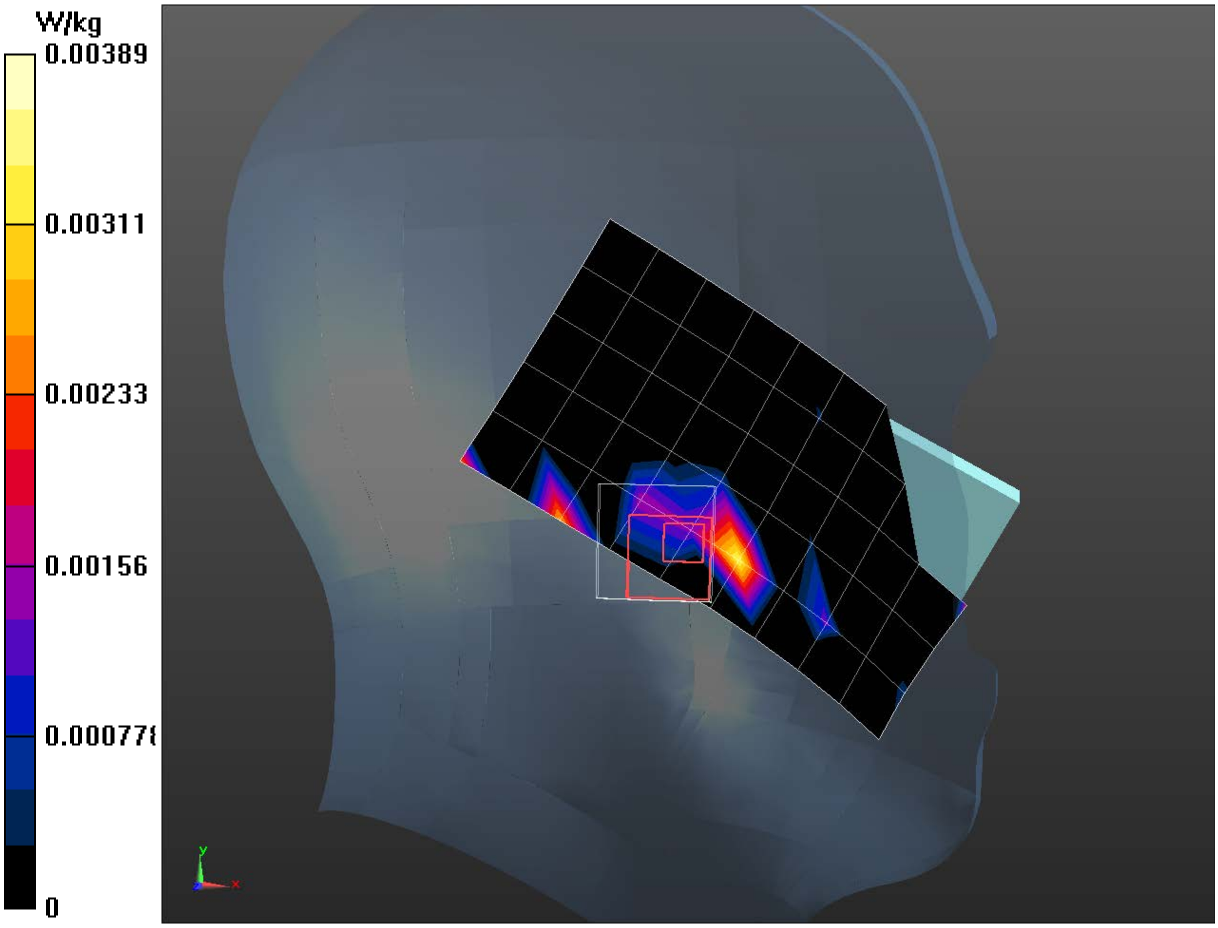
Bluetooth GFSK Left Check Middle

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Head 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.8 S/m; εr = 39.534; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.54, 7.54, 7.54);
Middle Cheek Left Bluetooth GFSK/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.00300 W/kg
Middle Cheek Left Bluetooth GFSK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5340 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.00515 W/kg
SAR(1 g) = 0.00202 W/kg; SAR(10 g) = 0.00126 W/kg
Maximum value of SAR (measured) = 0.00405 W/kg



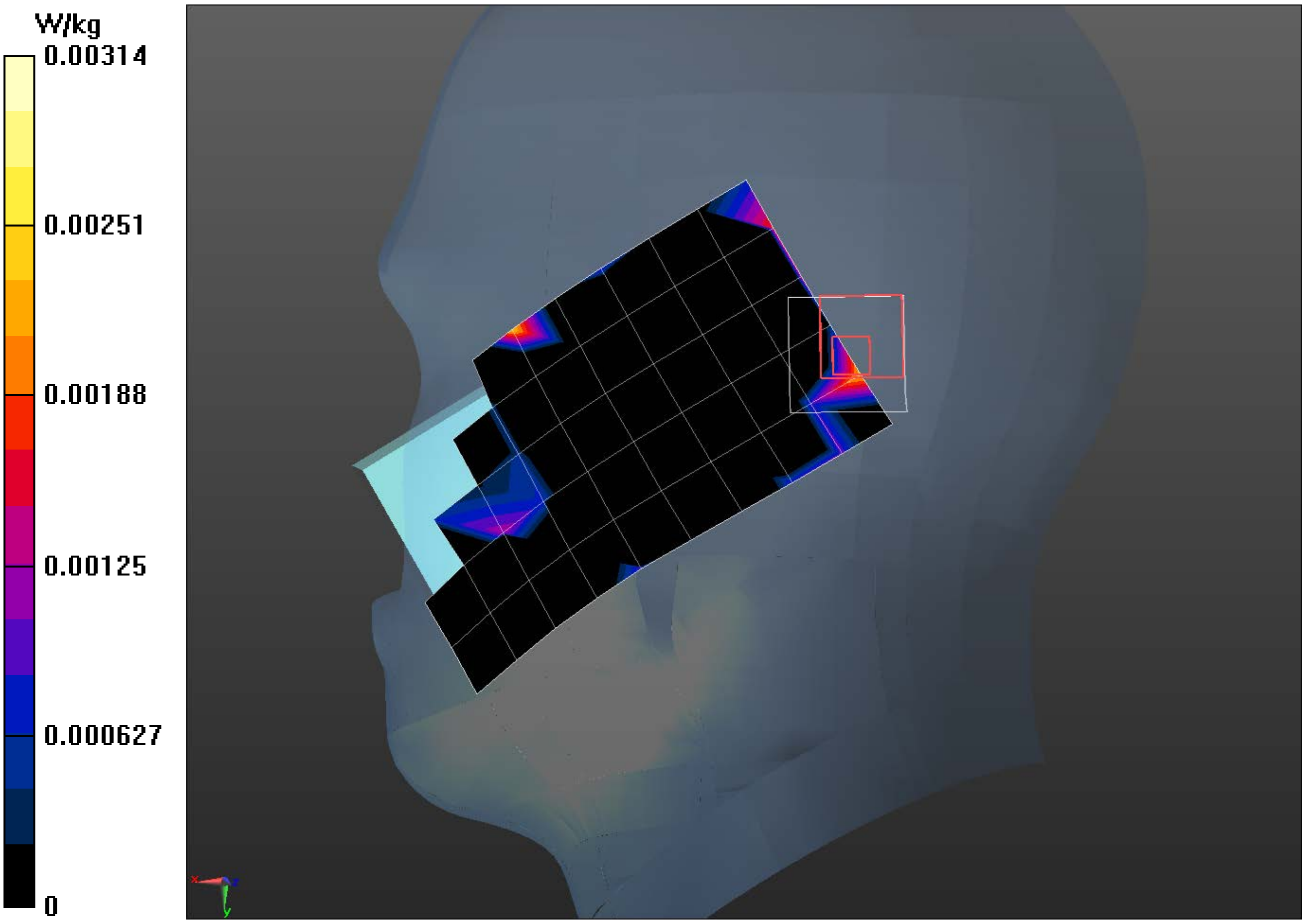
Bluetooth GFSK Left Tilt Middle

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Head 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.8 S/m; εr = 39.534; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.54, 7.54, 7.54);
Middle Tilt Left Bluetooth GFSK/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.00402 W/kg
Middle Tilt Left Bluetooth GFSK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9930 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.00886 W/kg
SAR(1 g) = 0.0019 W/kg; SAR(10 g) = 0.000896 W/kg
Maximum value of SAR (measured) = 0.00389 W/kg



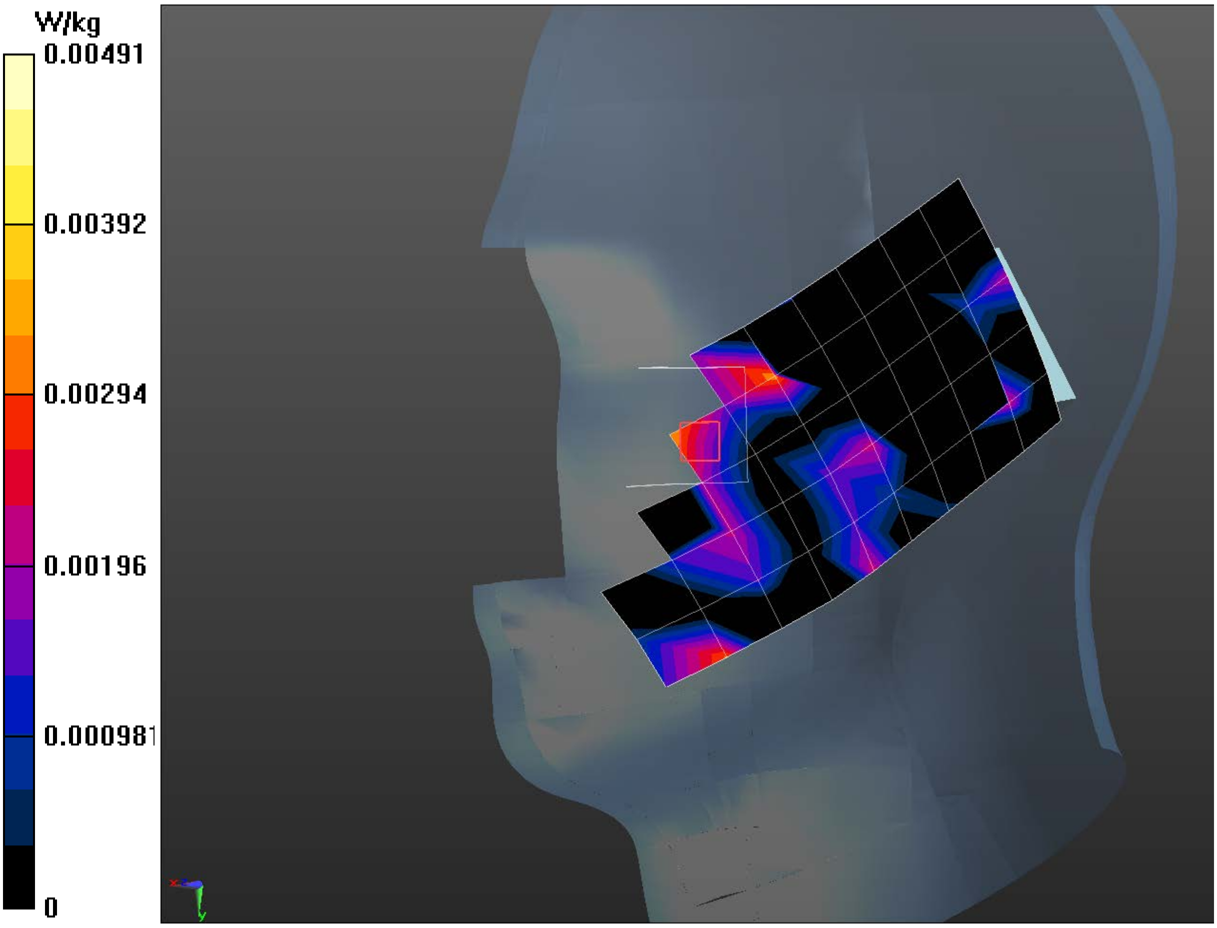
Bluetooth GFSK Right Check Middle

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Head 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.8 S/m; εr = 39.534; ρ = 1000 kg/m3
Ambient Temperature:22.5°C   Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.54, 7.54, 7.54);
Middle Cheek Right Bluetooth GFSK/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.00272 W/kg
Middle Cheek Right Bluetooth GFSK/Zoom Scan (7x7x4)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5850 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.00596 W/kg
SAR(1 g) = 0.00236 W/kg; SAR(10 g) = 0.00113 W/kg
Maximum value of SAR (measured) = 0.00314 W/kg



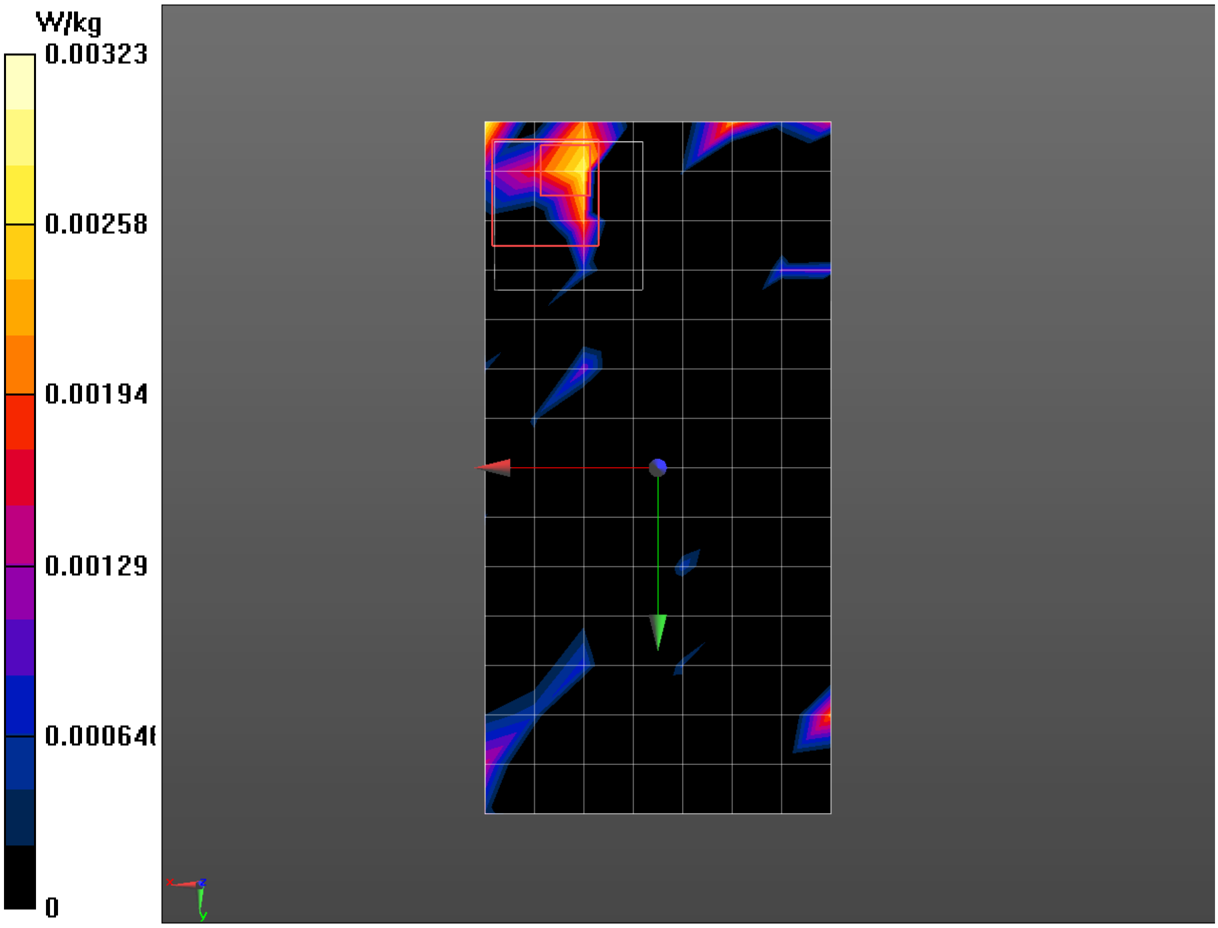
Bluetooth GFSK Right Tilt Middle

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Head 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.8 S/m; εr = 39.534; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.54, 7.54, 7.54);
Middle Tilt Right Bluetooth GFSK/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.00269 W/kg
Middle Tilt Right Bluetooth GFSK/Zoom Scan (7x7x4)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 5.96 W/kg
SAR(1 g) = 0.00205 W/kg; SAR(10 g) =0.000942 W/kg
Maximum value of SAR (measured) = 0.00491 W/kg



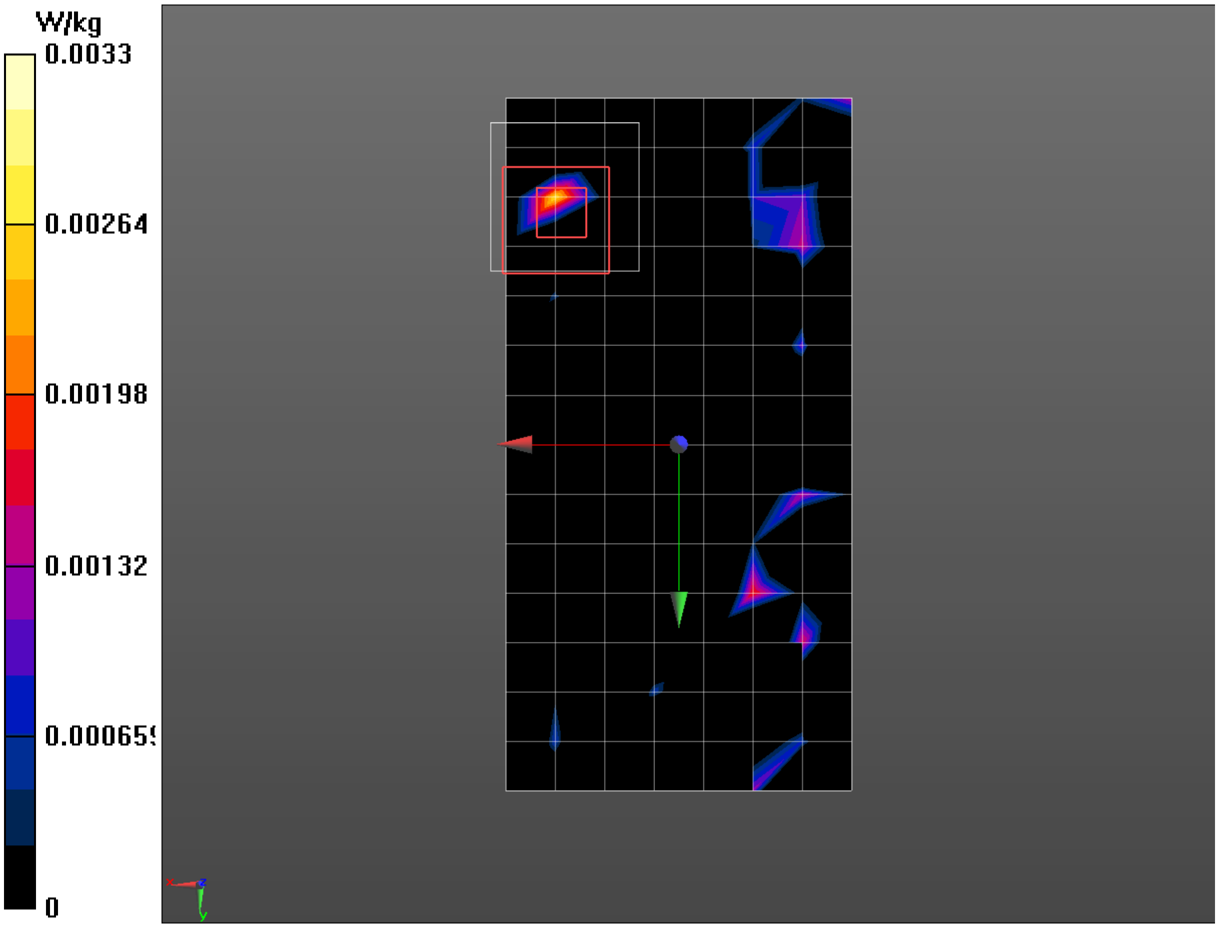
Bluetooth GFSK Body Toward Ground Middle

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Body 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.916 S/m; εr = 53.621; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.56, 7.56, 7.56);
Middle Toward Ground Bluetooth GFSK/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.00492 W/kg
Middle Toward Ground Bluetooth GFSK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9910 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.00635 W/kg
SAR(1 g) = 0.0015 W/kg; SAR(10 g) = 0.000868 W/kg
Maximum value of SAR (measured) = 0.00323 W/kg



Bluetooth GFSK Body Toward Phantom Middle

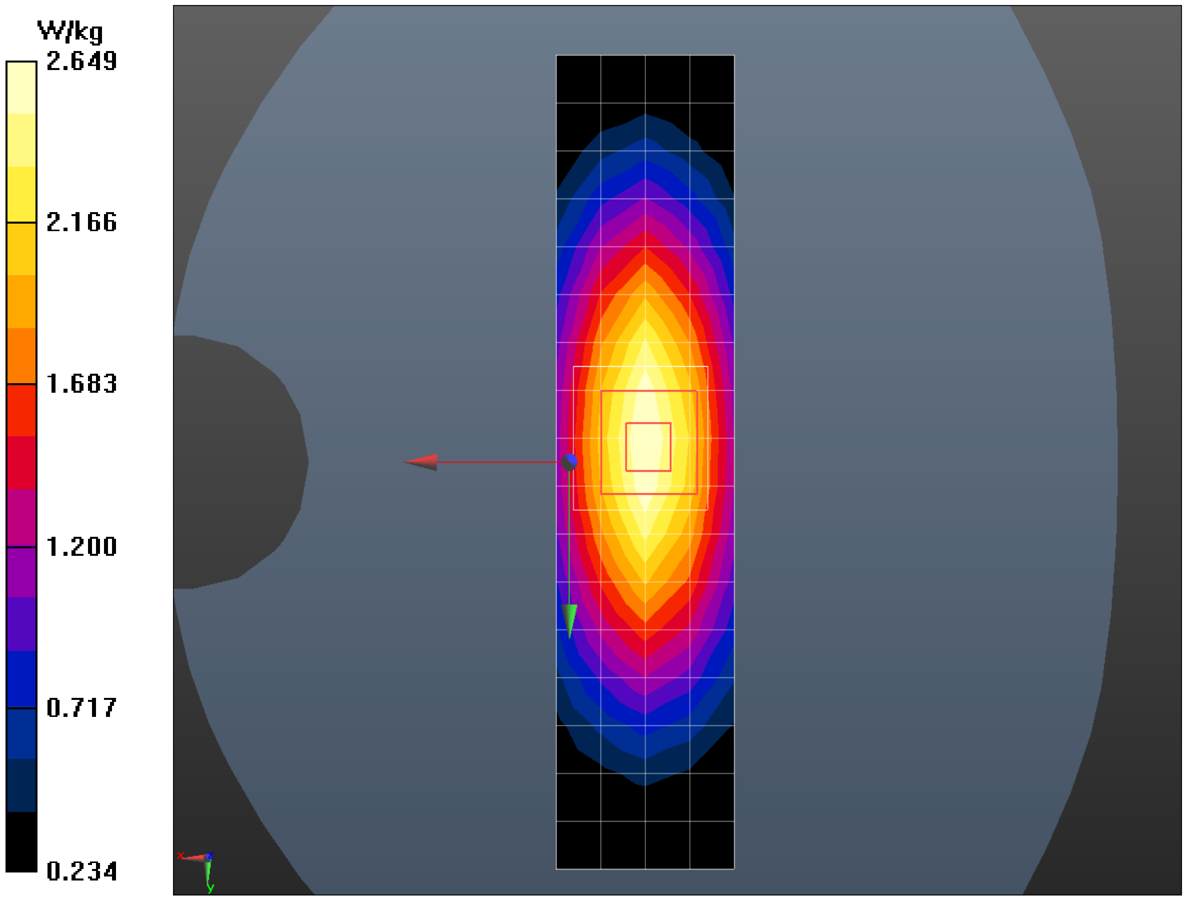
Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Body 2450MHz
Medium parameters used: f = 2441 MHz; σ = 1.916 S/m; εr = 53.621; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.56, 7.56, 7.56);
Middle Toward Phantom Bluetooth GFSK/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.00290 W/kg
Middle Toward Phantom Bluetooth GFSK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5120 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.00552 W/kg
SAR(1 g) = 0.00173 W/kg; SAR(10 g) = 0.000685 W/kg
Maximum value of SAR (measured) = 0.00330 W/kg



ANNEX B. SYSTEM VALIDATION RESULTS

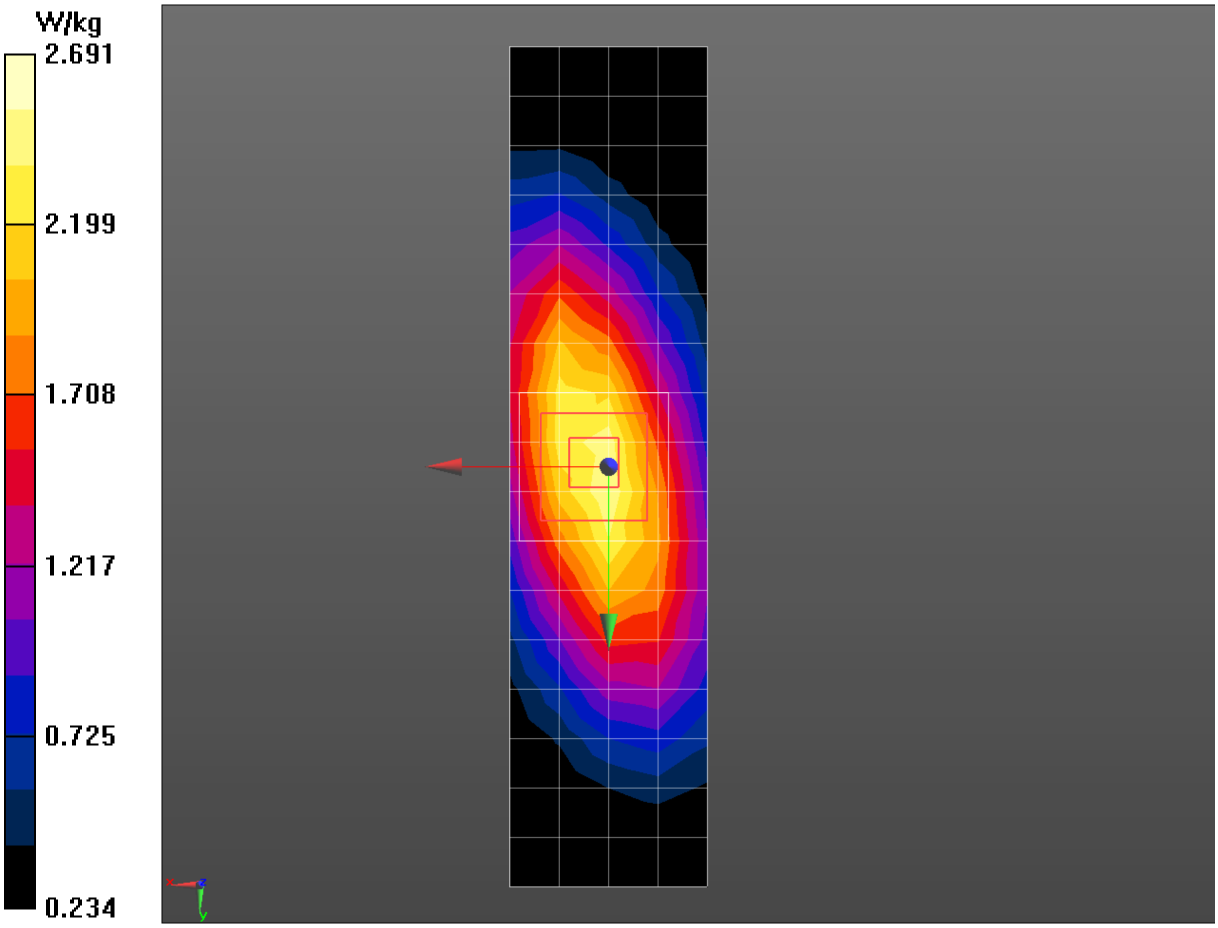
835MHz Head

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Head 900MHz
Medium parameters used: f = 835 MHz; σ = 0.901 S/m; εr = 42.666; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(10.08, 10.08, 10.08);
System Check Diople 835 MHz/Area Scan (5x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.71 W/kg
System Check Diople 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.23 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 2.65 W/kg



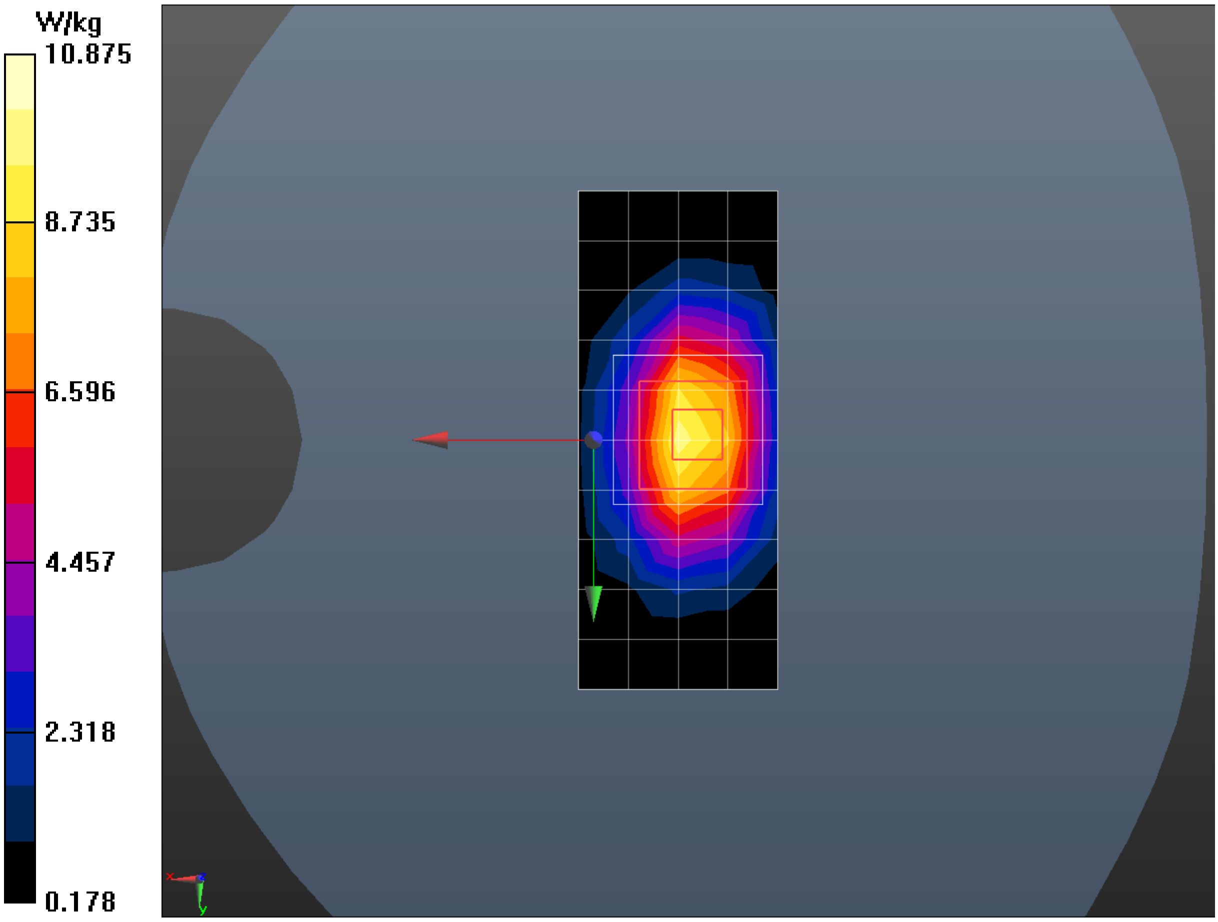
835MHz Body

Date/Time: 2016/5/30
Electronics: DAE4 Sn1329
Medium: Body 900MHz
Medium parameters used: f = 835 MHz; σ = 0.97 S/m; εr = 56.481; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW ; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(10.1, 10.1, 10.1);
System Check Diople 835 MHz/Area Scan (5x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.52 W/kg
System Check Diople 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.51 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.65 W/kg
Maximum value of SAR (measured) = 2.69 W/kg



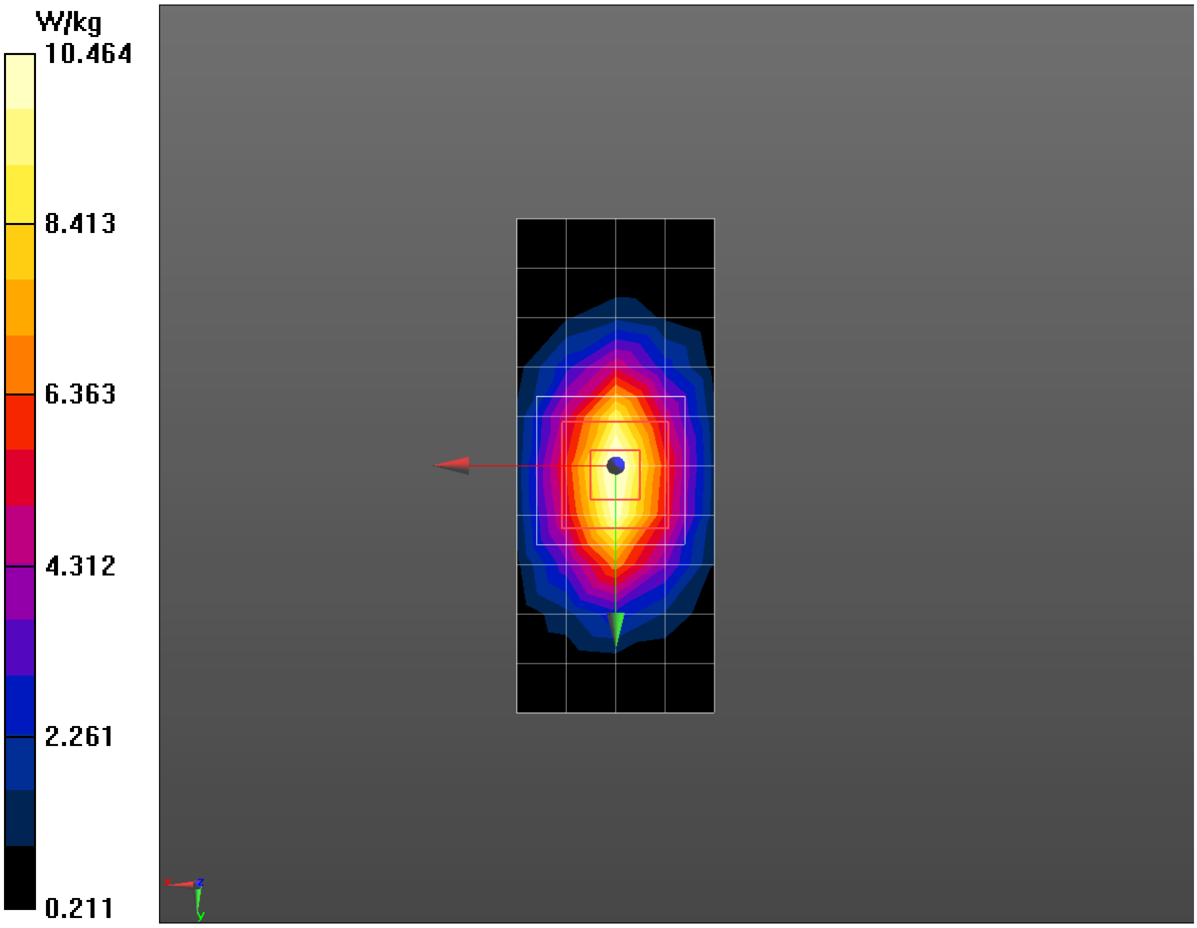
1900MHz Head

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Head 1850-1980MHz
Medium parameters used: f = 1900 MHz; σ = 1.388 S/m; εr = 40.622; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
System Check Diople 1900 MHz/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.92 W/kg
System Check Diople 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.03 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 9.73 W/kg; SAR(10 g) = 5.04 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



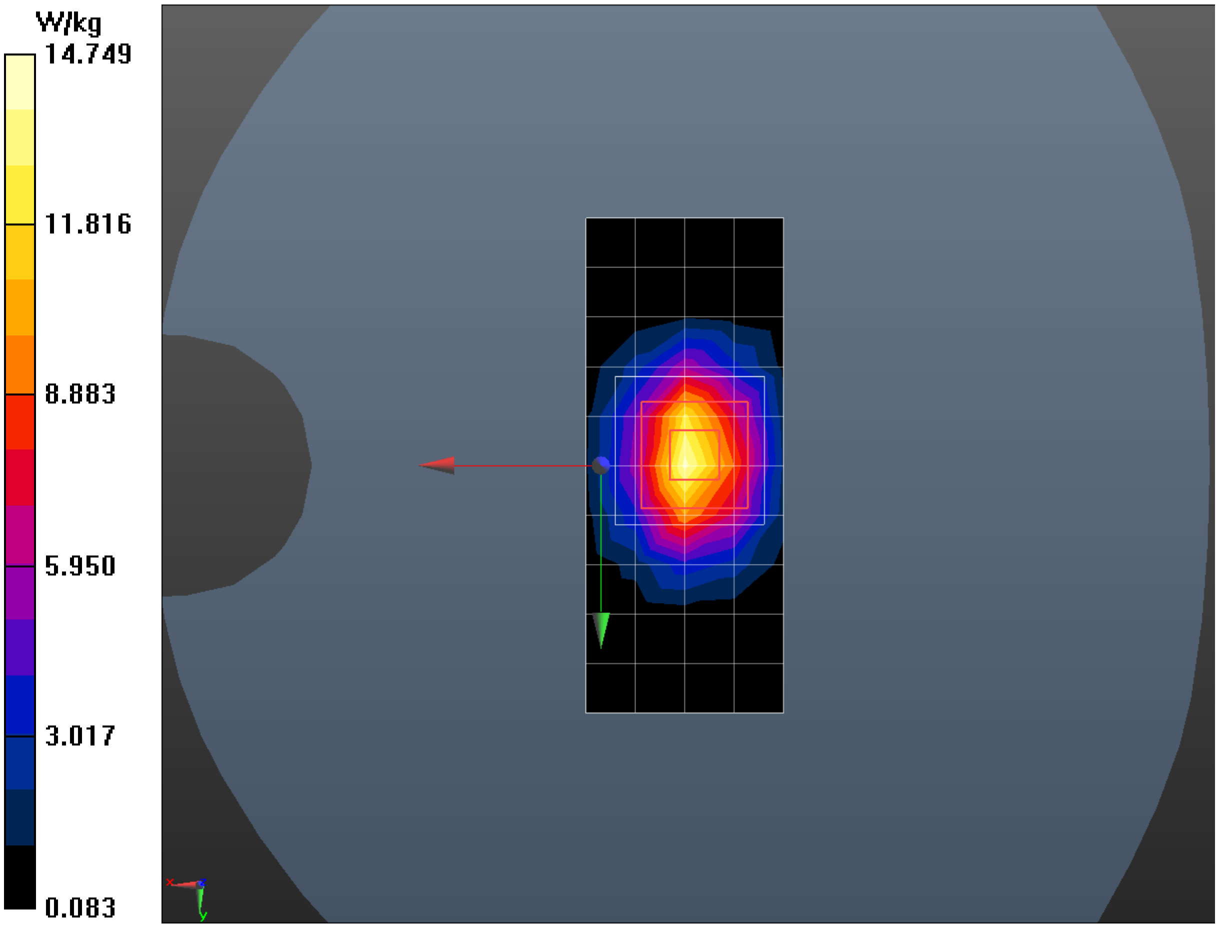
1900MHz Body

Date/Time: 2016/5/31
Electronics: DAE4 Sn1329
Medium: Body 1950MHz
Medium parameters used: f = 1900 MHz; σ = 1.509 S/m; εr = 53.83; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.93, 7.93, 7.93);
System Check Diople 1900 MHz/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.2 W/kg
System Check Diople 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 84.02 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 16.7 W/kg
SAR(1 g) = 9.36 W/kg; SAR(10 g) = 4.98 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



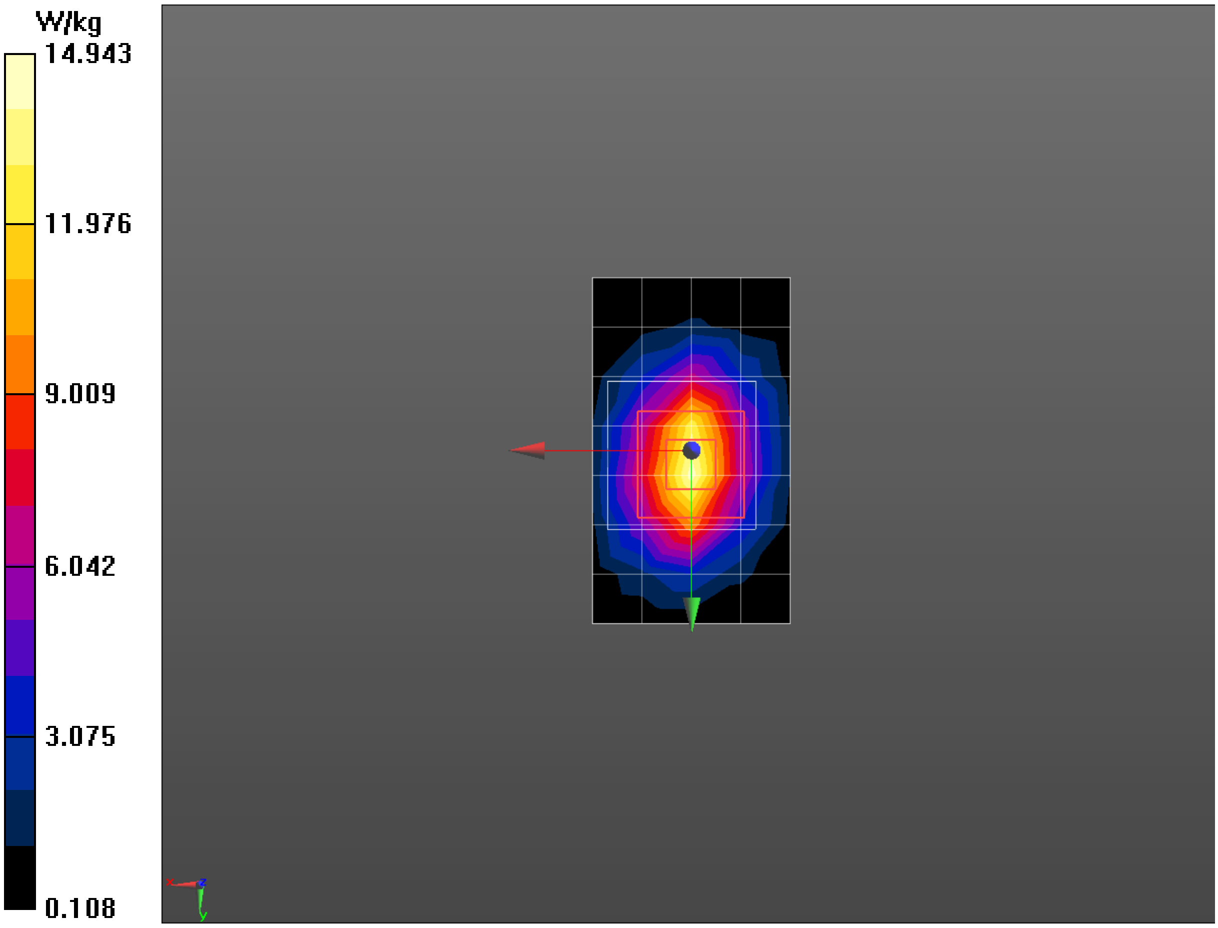
2450MHz Head

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Head 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.809 S/m; εr = 39.491; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.54, 7.54, 7.54);
System Check Diople 2450 MHz/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.2 W/kg
System Check Diople 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.24 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 27.1 W/kg
SAR(1 g) = 13 W/kg; SAR(10 g) = 5.98 W/kg
Maximum value of SAR (measured) = 14.7 W/kg



2450MHz Body

Date/Time: 2016/6/22
Electronics: DAE4 Sn1329
Medium: Body 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.929 S/m; εr = 53.594; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(7.56, 7.56, 7.56); Calibrated: 2016/4/15
System Check Diople 2450 MHz/Area Scan (5x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.6 W/kg
System Check Diople 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.04 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 26.4 W/kg
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.33 W/kg
Maximum value of SAR (measured) = 14.9 W/kg



*****End Of Report******