

# SAR TEST REPORT

<b>Equipment Under Test</b>	Pocket PC Phone
<b>Model Name</b>	RHOD210
<b>Company Name</b>	HTC Corporation
<b>Company Address</b>	No.23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan, R.O.C.
<b>Date of Receipt</b>	2009.01.23
<b>Date of Test(s)</b>	2009.02.12-2009.03.12
<b>Date of Issue</b>	2009.03.23

Standards:

**FCC OET Bulletin 65 supplement C,  
ANSI/IEEE C95.1, C95.3, IEEE 1528**

In the configuration tested, the EUT complied with the standards specified above.

**Remarks:**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Electronic & Communication Laboratory or testing done by SGS Taiwan Electronic & Communication Laboratory in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Electronic & Communication Laboratory in writing.

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# 1. General Information

## 1.1 Testing Laboratory

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## 1.2 Details of Applicant

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## 1.3 Description of EUT

EUT Name	Pocket PC Phone
FCC ID	NM8RHOD210
Model Name	RHOD210
Brand Name	HTC
IMEI Code	35884902001407001
Mode of Operation	GSM /GPRS/EDGE/WCDMA band
Definition	Production unit

Modulation Mode	GSM/GMSK/8PSK/QPSK/16QAM		
Duty Cycle	GSM	GPRS	WCDMA B4
	1/8	1/4	1
Maximum RF Conducted Power (Average)	GSM 850	GSM1900	WCDMA B4
	33dbm	30.1dbm	22.93dbm
TX Frequency Range (MHz)	GSM 850	GSM1900	WCDMA B4
	824.2-848.8	1850.2- 1909.8	1712.4-1752.6
Channel Number (ARFCN)	GSM 850	GSM1900	WCDMA B4
	128-251	512-810	1312-1513
Battery Type	3.7 V Lithium-Ion		
Antenna Type	Internal Antenna		
Max. SAR Measured (1 g)	Head		Body
	<b>1.2 mW/g</b> (At WCDMA B4 Left Head (Cheek Position)_Slider off_1513 Channel)		<b>0.470 mW/g</b> (At GSM850 Body _190 Channel)

Note:

- EGPRS mode was not measured because maximum averaged output power is 3 dB lower in EGPRS than in GPRS mode.
- WCDMA B4 HSDPA & HSUPA conducted power:

Mode	Sub-test	Band	WCDMA B4		
		Channel	1312	1412	1513
<b>HSDPA</b>	1	$\beta_c/\beta_d(2/15)$	22.74dbm	22.71dbm	22.78dbm
	2	$\beta_c/\beta_d(12/15)$	22.71dbm	22.68dbm	22.62dbm
	3	$\beta_c/\beta_d(15/8)$	22.14dbm	22.21dbm	22.12dbm
	4	$\beta_c/\beta_d(15/4)$	22.13dbm	22.18dbm	22.13dbm

Mode	Sub-test	Band	WCDMA B4		
		Channel	1312	1412	1513
<b>HSUPA</b>	1	$\beta_c/\beta_d(11/15)$	22.72dbm	22.73dbm	22.75dbm
	2	$\beta_c/\beta_d(6/15)$	20.84dbm	20.81dbm	20.77dbm
	3	$\beta_c/\beta_d(15/9)$	21.62dbm	21.53dbm	21.64dbm
	4	$\beta_c/\beta_d(2/15)$	20.78dbm	20.82dbm	20.88dbm
	5	$\beta_c/\beta_d(15/15)$	22.67dbm	22.67dbm	22.71dbm

## 1.4 Test Environment

Ambient Temperature:  $22 \pm 2^\circ \text{C}$

Tissue Simulating Liquid:  $22 \pm 2^\circ \text{C}$

## 1.5 Operation description

### General:

1. The EUT is controlled by using a Radio Communication Tester (R&S CMU200), and the communication between the EUT and the tester is established by air link.
2. WLAN part is controlled by chip-specific software to make it transmit at max power.
3. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.
4. During the SAR testing, the DASY4 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
5. Testing Head SAR at lowest, middle and highest channel for all bands with LET/LEC/RET/REC conditions.
6. Testing body-worn SAR by separating **1.5cm** between the back of the EUT and the flat phantom in GPRS mode.

### SAR evaluation considerations for handsets with multiple transmitters:

7. Since the WLAN function of this device does NOT support VoIP function. Users will not use it close to head. SAR evaluation of head adjacent is unnecessary, only Body condition will be considered for WLAN stand-alone situation.
8. The maximum SAR value for licensed transmitter happens on WCDMA B4, Left Head (Cheek Position)\_Slider off, channel 1513. the value is **1.2W/kg(1g)**. And the max SAR value for un-licensed transmitter WLAN 802.11b happens on Body worn, with 3<sup>rd</sup> Battery, channel 11. The SAR value is **0.207K/kg (1g)** . The summation of the 1g SAR is  $1.2 + 0.207 = \mathbf{1.407 \text{ W/kg, which is lower than the limit 1.6W/kg.}}$  According to KDB648474, simultaneous transmission is not necessary.

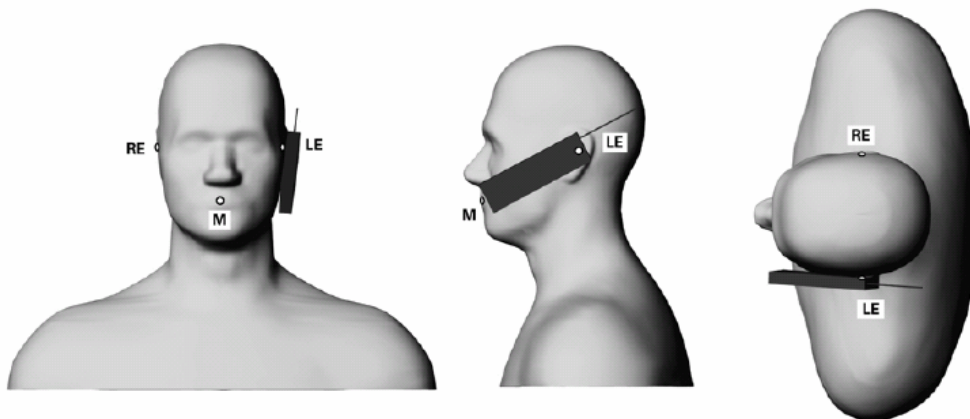
**Additional configuration(Head):**

9. For highest SAR configuration in this band repeated with external Memory card inside.
10. For highest SAR configuration in this band repeated with 2<sup>nd</sup> Battery.
11. For highest SAR configuration in this band repeated with 3<sup>rd</sup> Battery.

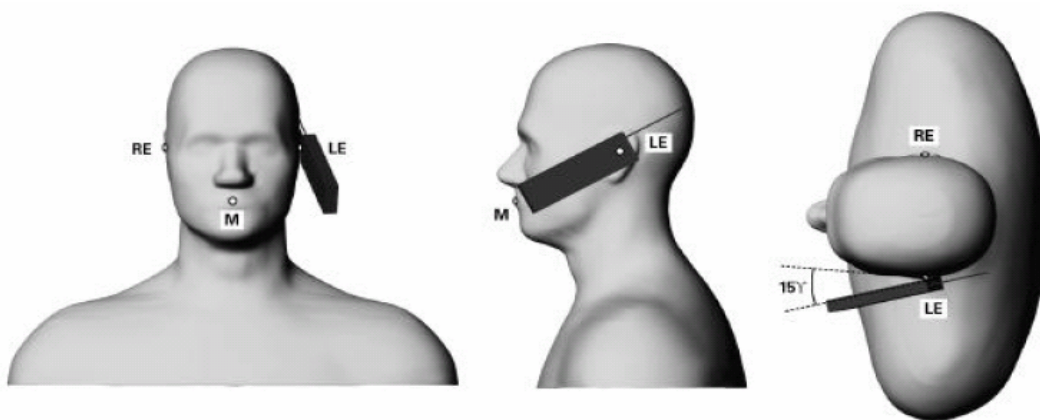
**Additional configuration(Body):**

12. Testing body-worn SAR with Handset and with Bluetooth transmitter OFF by separating **1.5cm** between the front of the EUT and the flat phantom in GPRS mode.
13. Testing body-worn SAR with WLAN and with Bluetooth transmitter both ON, since they use the same antenna.
14. For highest SAR configuration in this band repeated with external Memory card inside.
15. For highest SAR configuration in this band repeated with 2<sup>nd</sup> Battery.
16. For highest SAR configuration in this band repeated with 3<sup>rd</sup> Battery.
17. For highest SAR configuration in this band repeated with headset\_1.
18. For highest SAR configuration in this band repeated with headset\_2.
19. For highest SAR configuration in this band repeated with headset\_3.

**1.6 Positioning Procedure**



Phone position 1, "cheek" or "touch" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning



Phone position 2, "tilted position." The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning

Cheek/Touch Position:

the handset was brought toward the mouth of the head phantom by pivoting against the ear reference point until any point of the mouthpiece or keypad touched the phantom.

Ear/Tilt Position:

With the phone aligned in the Cheek/Touch position, the handset was tilted away from the mouth with respect to the test device reference point by 15 degrees.

## 1.7 EVALUATION PROCEDURES

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. The extraction of the measured data (grid and values) from the Zoom Scan.
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. The generation of a high-resolution mesh within the measured volume
4. The interpolation of all measured values from the measurement grid to the high-resolution grid
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface

## 6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within  $-2$  dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans.

The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found.



If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

## 1.8 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 4 professional system ). A Model EX3DV3 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation  $SAR = \sigma (|E_i|^2) / \rho$  where  $\sigma$  and  $\rho$  are the conductivity and mass density of the tissue-simulant.

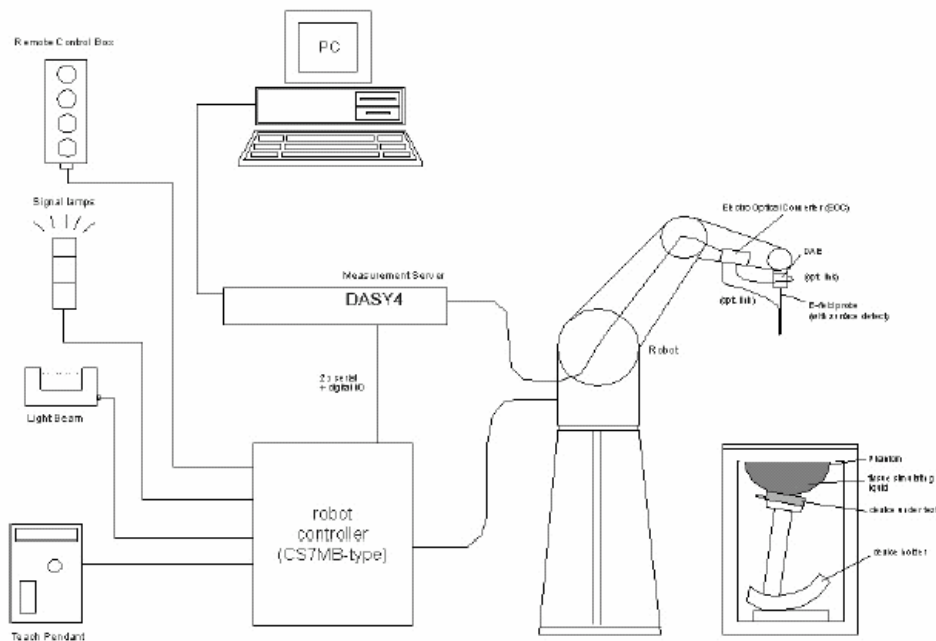


Fig.a The block diagram of SAR system


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

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is 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 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 between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected 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.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
  - A computer operating Windows 2000 or Windows XP.
  - DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
  - The SAM twin phantom enabling testing left-hand and right-hand usage.
  - The device holder for handheld mobile phones.
  - Tissue simulating liquid mixed according to the given recipes.
  - Validation dipole kits allowing to validate the proper functioning of the system.


## 1.9 System Components

### EX3DV3 E-Field Probe


Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	 <p>EX3DV3 E-Field Probe</p>
Calibration:	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL850/1800/1900/2450 Additional CF for other liquids and frequencies upon request	
Frequency:	10 MHz to > 6 GHz; Linearity: $\pm 0.2$ dB (30 MHz to 6 GHz)	

Directivity:	$\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)
Dynamic Range:	10 $\mu$ W/g to > 100 mW/g; Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ 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%.

### SAM PHANTOM V4.0C

Construction:	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-200X, CENELEC 50361 and IEC 62209. 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 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 with the robot.	
Shell Thickness:	$2 \pm 0.2$ mm	
Filling Volume:	Approx. 25 liters	
Dimensions:	Height: 251 mm; Length: 1000 mm; Width: 500 mm	

**DEVICE HOLDER**

<p>Construction</p>	<p>In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).</p>	 <p style="text-align: center;">Device Holder</p>
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**1.10 SAR System Verification**

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 5% from the target SAR values.

These tests were done at 850/1800/1900/2450 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was in the range 22.2°C, the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

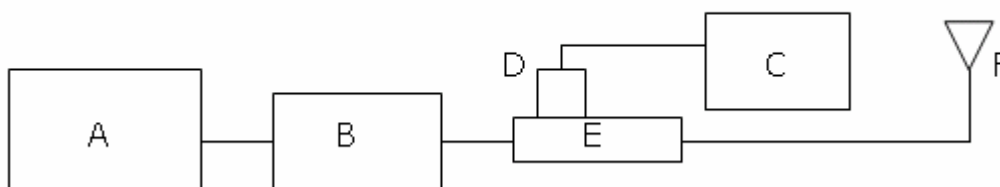
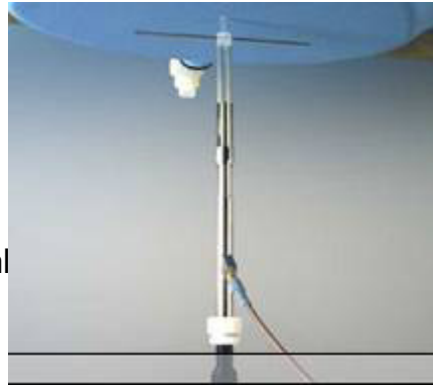


Fig.b The block diagram of system verification

- A. Agilent Model 8648D Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent Model E4416A Power Meter
- D. Agilent Model 8481H Power Sensor
- E. Agilent Model 778D & 777D Dual directional coupling
- F. Reference dipole antenna



Photograph of the dipole Antenna

Validation Kit	Frequency (MHz)	Target SAR (1g) (Pin=250mW)	Measured SAR (1g)	Measured Date
D835V2 S/N: 4d063	835 MHz (Head)	2.29 mW/g	2.25mW/g	2009-02-12
D835V2 S/N: 4d063	835 MHz (Body)	2.44 mW/g	2.51mW/g	2009-03-12
D1900V2 S/N: 5d027	1900 MHz (Head)	10.3 mW/g	10.1mW/g	2009-02-16
D1900V2 S/N: 5d027	1900 MHz (Body)	9.64 mW/g	9.39 mW/g	2009-02-12
D1800V2 S/N: 2d061	1800 MHz (Head)	9.86 mW/g	9.38 mW/g	2009/02/17
D1800V2 S/N: 2d061	1800 MHz (Body)	9.87 mW/g	9.83mW/g	2009/03/12
D2450V2 S/N: 727	2450 MHz (Body)	13.2 mW/g	13.6 mW/g	2009-02-16

Table 1. System validation (follow manufacture target value)

### 1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with HP 8753D Network Analyzer (30 KHz-6000MHz) by using a procedure detailed in Section V.

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue simulant in the ear reference point of the phantom was 15cm±5mm during all tests. (Appendix Fig .2)

Frequency (MHz)	Tissue type	Measurement date/ Limits	Dielectric Parameters		
			$\rho$	$\sigma$ (S/m)	Simulated Tissue Temperature(° C)
850	Head	Measured, 2009-03-12	40.5	0.871	21.7
		Recommended Limits	38.38-42.42	0.84-0.92	20-24
850	Body	Measured, 2009-02-12	53.7	0.951	21.7
		Recommended Limits	50.73-56.07	0.94-1.04	20-24
1900	Head	Measured, 2009-02-16	40.9	1.47	21.7
		Recommended Limits	38.10-42.11	1.4-1.54	20-24
1900	Body	Measured, 2009-02-12	53.3	1.59	21.7
		Recommended Limits	48.83-53.97	1.48-1.64	20-24
1800	Head	Measured, 2009.02.17	39.6	1.44	21.7
		Recommended Limits	38.19-42.21	1.34-1.48	20-24
1800	Body	Measured, 2009.03.12	53.7	1.5	21.7
		Recommended Limits	48.83-53.97	1.43-1.58	20-24
2450	Body	Measured, 2009-02-16	51.2	2.04	21.7
		Recommended Limits	48.36-53.45	1.88-2.08	20-24

Table 2. Dielectric Parameters of Tissue Simulant Fluid

The composition of the brain tissue simulating liquid for 850&1800&1900&2450 band:

Ingredient	850MHz (Head)	850MHz (Body)	1800MHz (Head)	1800MHz (Body)	1900MHz (Head)	1900MHz (Body)	2450Mhz (Body)
DGMBE	X	X	444.52 g	300.67g	444.52 g	300.67g	301.7 ml
Water	532.98 g	631.68 g	552.42 g	716.56 g	552.42 g	716.56 g	698.3 ml
Salt	18.3 g	11.72 g	3.06 g	4.0 g	3.06 g	4.0 g	X
Preventol D-7	2.4 g	1.2 g	X	X	X	X	X
Cellulose	3.2 g	X	X	X	X	X	X
Sugar	766.0 g	600 g	X	X	X	X	X
Total amount	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)

Table 3. Recipes for tissue simulating liquid

## 1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields,"

NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814.

SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter.

Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

(1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube). Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube).

Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).

General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.

Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .6)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 m W/g	8.00 m W/g
Spatial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g

Table 4. RF exposure limits



Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

## 2. Summary of Results

### GSM 850 MHZ

<b>Right Head_ Slider-off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.351	22.1	21.7
	190	836.6	33dbm	0.485	22.1	21.7
	251	848.8	32.9dbm	0.513	22.1	21.7
<b>Left Head_ Slider-off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.325	22.1	21.7
	190	836.6	33dbm	0.462	22.1	21.7
	251	848.8	32.9dbm	0.485	22.1	21.7
<b>Right Head_ Slider-off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.247	22.1	21.7
	190	836.6	33dbm	0.331	22.1	21.7
	251	848.8	32.9dbm	0.346	22.1	21.7
<b>Left Head_ Slider-off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.264	22.1	21.7
	190	836.6	33dbm	0.353	22.1	21.7
	251	848.8	32.9dbm	0.365	22.1	21.7

<b>Right Head_ Slider-on (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.341	22.1	21.7
	190	836.6	33dbm	0.475	22.1	21.7
	251	848.8	32.9dbm	0.528	22.1	21.7
<b>Left Head_ Slider-on(Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.208	22.1	21.7
	190	836.6	33dbm	0.301	22.1	21.7
	251	848.8	32.9dbm	0.355	22.1	21.7
<b>Right Head_ Slider-on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.334	22.1	21.7
	190	836.6	33dbm	0.460	22.1	21.7
	251	848.8	32.9dbm	0.498	22.1	21.7
<b>Left Head_ Slider-on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.181	22.1	21.7
	190	836.6	33dbm	0.259	22.1	21.7
	251	848.8	32.9dbm	0.292	22.1	21.7
<b>Right Head_ Hold up (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.340	22.1	21.7
	190	836.6	33dbm	0.459	22.1	21.7
	251	848.8	32.9dbm	0.496	22.1	21.7

<b>Left Head_ Hold up (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.242	22.1	21.7
	190	836.6	33dbm	0.365	22.1	21.7
	251	848.8	32.9dbm	0.431	22.1	21.7
<b>Body worn (testing in GPRS mode)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	128	824.2	32.8dbm	0.420	22.1	21.7
	190	836.6	32.9dbm	0.470	22.1	21.7
	251	848.8	32.7dbm	0.453	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated for EUT front to phantom</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.206	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated with Memory card</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.456	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated with headset_1</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.199	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated with headset_2</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.201	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated with headset_3</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.203	22.1	21.7

<b>Body worn (testing in GPRS mode) _repeated with 2<sup>nd</sup> battery</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.423	22.1	21.7
<b>Body worn (testing in GPRS mode) _repeated with 3<sup>rd</sup> battery</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
850 MHz	190	836.6	32.9dbm	0.421	22.1	21.7

## PCS 1900 MHZ

<b>Right Head_Slider off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.481	22.1	21.7
	661	1880	30dbm	0.444	22.1	21.7
	810	1909.8	29.8dbm	0.365	22.1	21.7
<b>Left Head_Slider off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.643	22.1	21.7
	661	1880	30dbm	0.559	22.1	21.7
	810	1909.8	29.8dbm	0.446	22.1	21.7
<b>Right Head_Slider off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.529	22.1	21.7
	661	1880	30dbm	0.493	22.1	21.7
	810	1909.8	29.8dbm	0.413	22.1	21.7
<b>Left Head_Slider off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.504	22.1	21.7
	661	1880	30dbm	0.463	22.1	21.7
	810	1909.8	29.8dbm	0.388	22.1	21.7

<b>Right Head_Slider on (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.440	22.1	21.7
	661	1880	30dbm	0.465	22.1	21.7
	810	1909.8	29.8dbm	0.387	22.1	21.7
<b>Left Head_Slider on(Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.315	22.1	21.7
	661	1880	30dbm	0.341	22.1	21.7
	810	1909.8	29.8dbm	0.288	22.1	21.7
<b>Right Head_Slider on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.515	22.1	21.7
	661	1880	30dbm	0.479	22.1	21.7
	810	1909.8	29.8dbm	0.396	22.1	21.7
<b>Left Head_Slider on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.376	22.1	21.7
	661	1880	30dbm	0.402	22.1	21.7
	810	1909.8	29.8dbm	0.336	22.1	21.7
<b>Right Head_Hold up(Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.402	22.1	21.7
	661	1880	30dbm	0.319	22.1	21.7
	810	1909.8	29.8dbm	0.242	22.1	21.7

<b>Left Head_Hold up(Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	30.1dbm	0.249	22.1	21.7
	661	1880	30dbm	0.222	22.1	21.7
	810	1909.8	29.8dbm	0.177	22.1	21.7
<b>Body worn (testing in GPRS mode)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
1900 MHz	512	1850.2	29.9dbm	0.432	22.1	21.7
	661	1880	29.7dbm	0.380	22.1	21.7
	810	1909.8	29.6dbm	0.307	22.1	21.7

## WCDMA BAND 4

<b>Right Head_Slider off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.886	22.1	21.7
	1412	1732.6	22.81dbm	0.886	22.1	21.7
	1513	1752.6	22.93dbm	0.926	22.1	21.7
<b>Left Head_Slider off (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	1.15	22.1	21.7
	1412	1732.6	22.81dbm	1.15	22.1	21.7
	1513	1752.6	22.93dbm	1.20	22.1	21.7
<b>Right Head_Slider off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.939	22.1	21.7
	1412	1732.6	22.81dbm	0.920	22.1	21.7
	1513	1752.6	22.93dbm	0.941	22.1	21.7

<b>Left Head_Slider off (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.943	22.1	21.7
	1412	1732.6	22.81dbm	0.919	22.1	21.7
	1513	1752.6	22.93dbm	0.934	22.1	21.7
<b>Right Head_Slider on (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.709	22.1	21.7
	1412	1732.6	22.81dbm	0.717	22.1	21.7
	1513	1752.6	22.93dbm	0.708	22.1	21.7
<b>Left Head_Slider on (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.474	22.1	21.7
	1412	1732.6	22.81dbm	0.472	22.1	21.7
	1513	1752.6	22.93dbm	0.458	22.1	21.7
<b>Right Head_Slider on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.824	22.1	21.7
	1412	1732.6	22.81dbm	0.830	22.1	21.7
	1513	1752.6	22.93dbm	0.716	22.1	21.7
<b>Left Head_Slider on (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.544	22.1	21.7
	1412	1732.6	22.81dbm	0.539	22.1	21.7
	1513	1752.6	22.93dbm	0.525	22.1	21.7



<b>Right Head_Hold up (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.780	22.1	21.7
	1412	1732.6	22.81dbm	0.746	22.1	21.7
	1513	1752.6	22.93dbm	0.750	22.1	21.7
<b>Left Head_Hold up (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.579	22.1	21.7
	1412	1732.6	22.81dbm	0.546	22.1	21.7
	1513	1752.6	22.93dbm	0.527	22.1	21.7
<b>Left Head_Slider off(Cheek Position)_repeated with Memory card</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1513	1752.6	22.93dbm	1.04	22.1	21.7
<b>Left Head_Slider off(Cheek Position)_repeated with 2<sup>nd</sup> Battery</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1513	1752.6	22.93dbm	1.08	22.1	21.7
<b>Left Head_Slider off(Cheek Position)_repeated with 3<sup>rd</sup> Battery</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1513	1752.6	22.93dbm	1.05	22.1	21.7
<b>Body worn</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.86dbm	0.426	22.1	21.7
	1412	1732.6	22.81dbm	0.442	22.1	21.7
	1513	1752.6	22.93dbm	0.463	22.1	21.7
<b>Body worn_HSDPA mode (sub-test1)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	23.01dbm	0.386	22.1	21.7
	1412	1732.6	22.81dbm	0.438	22.1	21.7
	1513	1752.6	22.62dbm	0.454	22.1	21.7

<b>Body worn_HSUPA mode(sub-test5)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WCDMA B4	1312	1712.4	22.51dbm	0.395	22.1	21.7
	1412	1732.6	22.41dbm	0.401	22.1	21.7
	1513	1752.6	22.32dbm	0.408	22.1	21.7

## WLAN802.11 b

<b>Body worn</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	1	2412	18.35dbm	0.106	22.1	21.7
	6	2437	18.41dbm	0.124	22.1	21.7
	11	2462	18.4dbm	0.111	22.1	21.7

### Body worn- repeated for EUT front to phantom

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	6	2437	18.41dbm	0.046	22.1	21.7

### Body worn-repeated with Memory card

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	6	2437	18.41dbm	0.154	22.1	21.7

### Body worn-repeated with Bluetooth active

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	6	2437	18.41dbm	0.130	22.1	21.7

### Body worn- repeated with 2<sup>nd</sup> Battery

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	6	2437	18.41dbm	0.177	22.1	21.7

<b>Body worn- repeated with 3<sup>rd</sup> Battery</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 b	6	2437	18.41dbm	0.207	22.1	21.7

## WLAN 802.11 g

<b>Body worn</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
WLAN 802.11 g	1	2412	13.78dbm	0.116	22.1	21.7
	6	2437	13.74dbm	0.096	22.1	21.7
	11	2462	13.12dbm	0.070	22.1	21.7

### 3. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-FieldProbe	EX3DV3	3526	Aug.26.2008
Schmid & Partner Engineering AG	850/1800/1900/2450MHz System Validation Dipole	D835V2 D1800V2 D1900V2 D2450V2	4d063 2d061 5d027 727	Jun.06.2008 Apr.15.2008 Apr.15.2008 Apr.11.2008
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	547	Jan.20.2009
Schmid & Partner Engineering AG	Software	DASY 4 V4.7 Build71	N/A	Calibration not required
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration not required
Agilent	Network Analyzer	8753D	3410A56662	Apr.16.2008
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration not required
Agilent	Dual-directional coupler	778D	50313	Aug.26.2008
		777D	50014	Aug.26.2008
Agilent	RF Signal Generator	E4438c	MY45093613	May.21.2008
Agilent	Power Sensor	8481H	MY41091361	May.20.2008
R&S	Radio Communication Test	CMU200	113505	Sep.03.2008

## 4. Measurements

Date/Time: 2009/2/12 01:23:00

### RE Cheek\_CH128\_slider off

#### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.861$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

#### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.370 mW/g

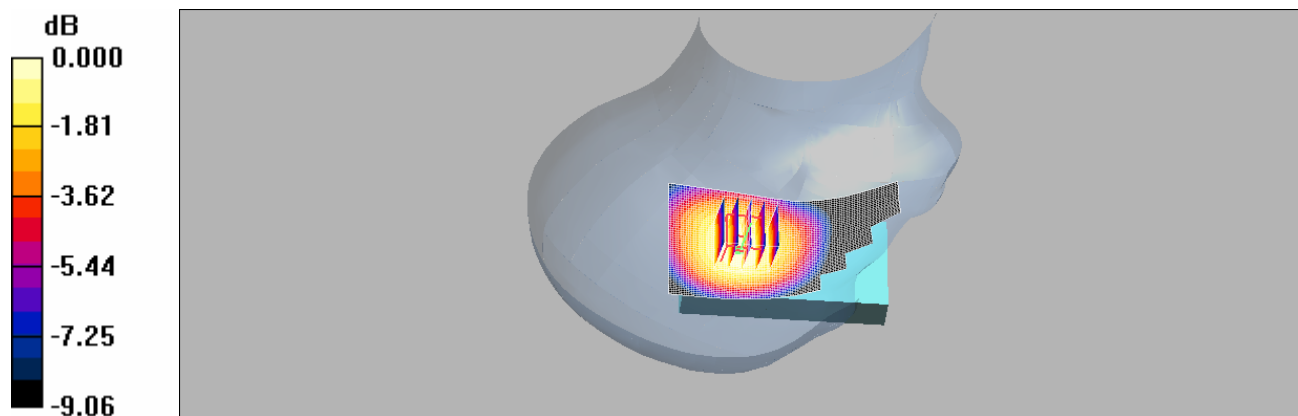
**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.438 W/kg

**SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.262 mW/g**

Maximum value of SAR (measured) = 0.367 mW/g



0 dB = 0.367mW/g

## RE Cheek\_CH190\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.872$  mho/m;  $\epsilon_r = 40.5$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

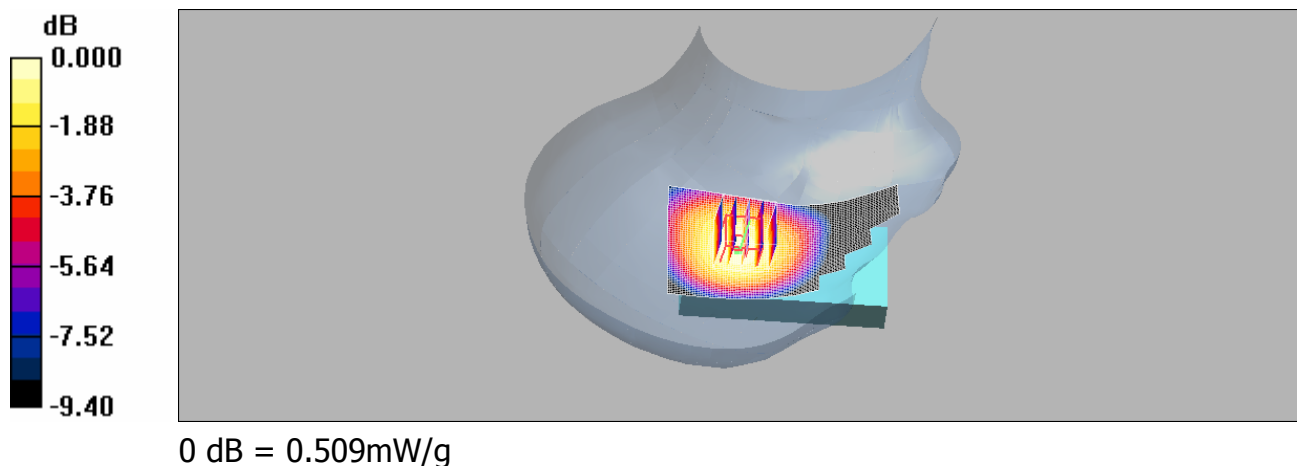
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.492 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,  
dz=5mm  
Reference Value = 17.8 V/m; Power Drift = 0.102 dB  
Peak SAR (extrapolated) = 0.606 W/kg

**SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.361 mW/g**  
Maximum value of SAR (measured) = 0.509 mW/g



## RE Cheek\_CH251\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 40.3$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

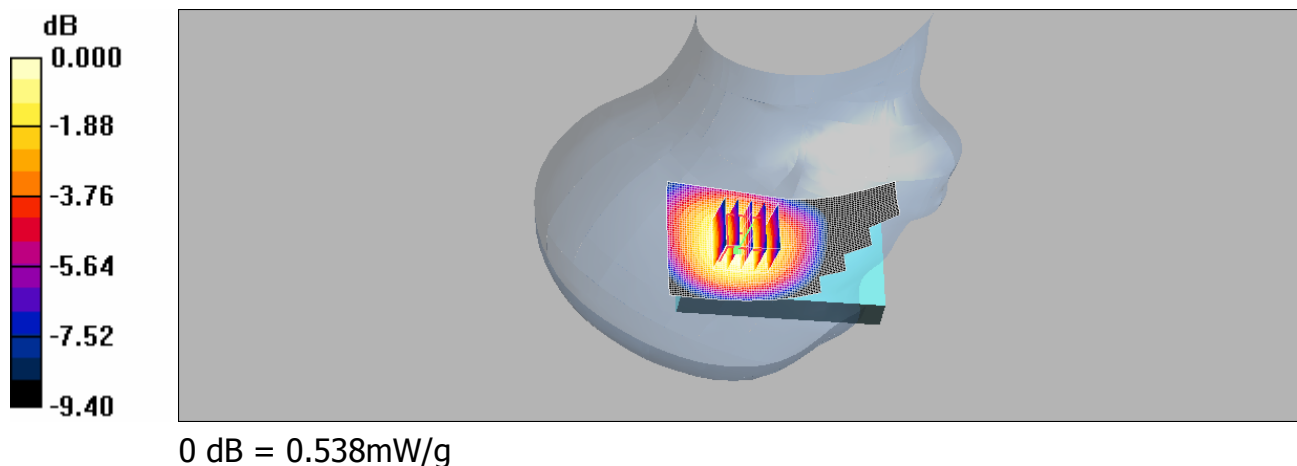
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.536 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 18.4 V/m; Power Drift = 0.055 dB  
Peak SAR (extrapolated) = 0.644 W/kg

**SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.381 mW/g**  
Maximum value of SAR (measured) = 0.538 mW/g



## LE Cheek\_CH128\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.861$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

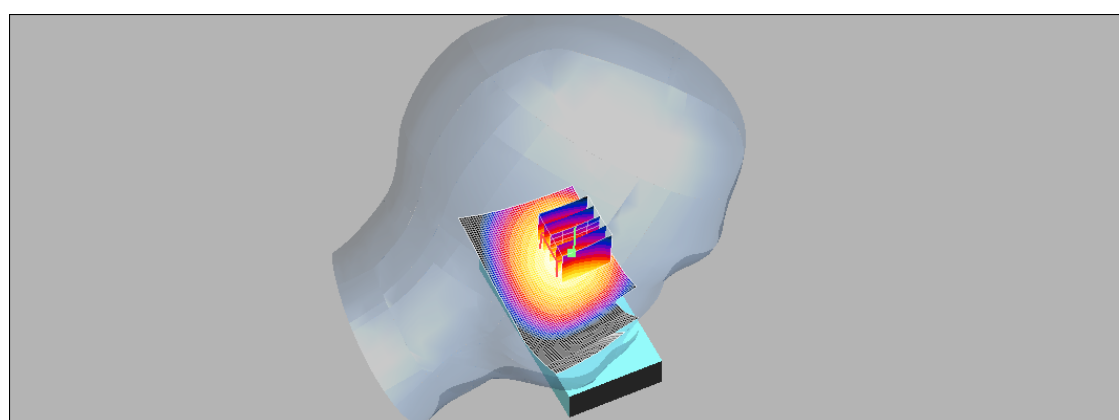
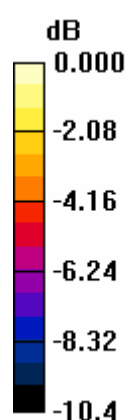
### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**LE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.350 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 14.6 V/m; Power Drift = -0.150 dB  
Peak SAR (extrapolated) = 0.439 W/kg

**SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.237 mW/g**  
Maximum value of SAR (measured) = 0.339 mW/g



0 dB = 0.339mW/g



## LE Cheek\_CH190\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.872$  mho/m;  $\epsilon_r = 40.5$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

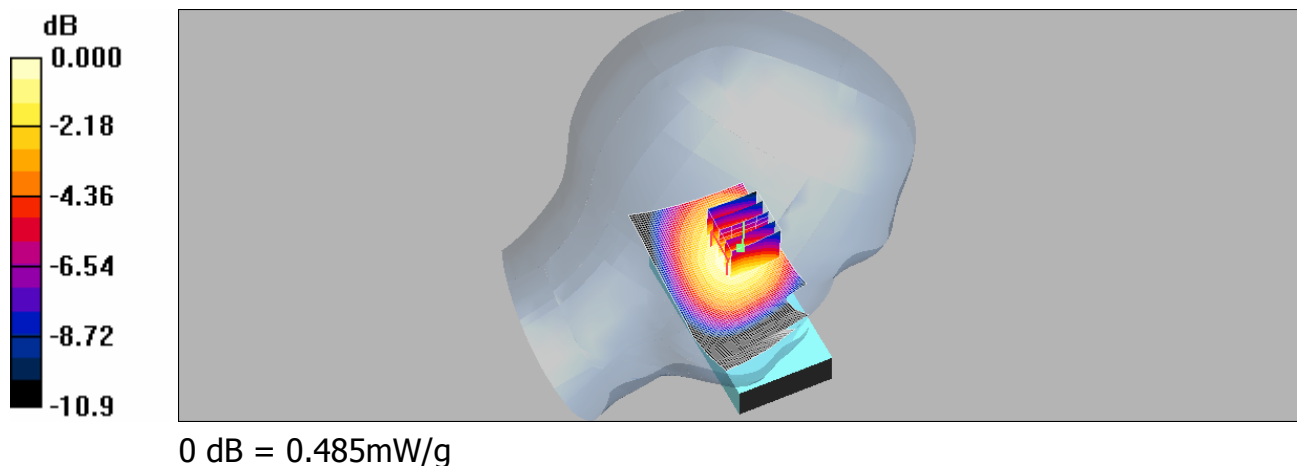
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**LE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.494 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,  
dz=5mm  
Reference Value = 17.1 V/m; Power Drift = 0.029 dB  
Peak SAR (extrapolated) = 0.623 W/kg

**SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.334 mW/g**  
Maximum value of SAR (measured) = 0.485 mW/g



## LE Cheek\_CH251\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 40.3$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

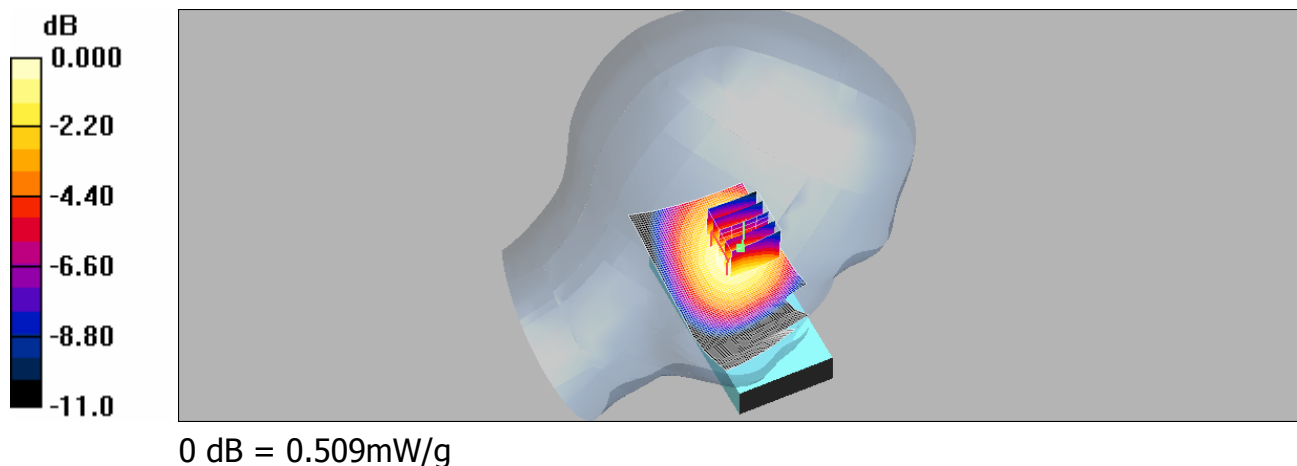
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**LE\_Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.519 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,  
dz=5mm  
Reference Value = 17.4 V/m; Power Drift = 0.014 dB  
Peak SAR (extrapolated) = 0.667 W/kg

**SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.351 mW/g**  
Maximum value of SAR (measured) = 0.509 mW/g



## RE Tilt\_CH128\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.861$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

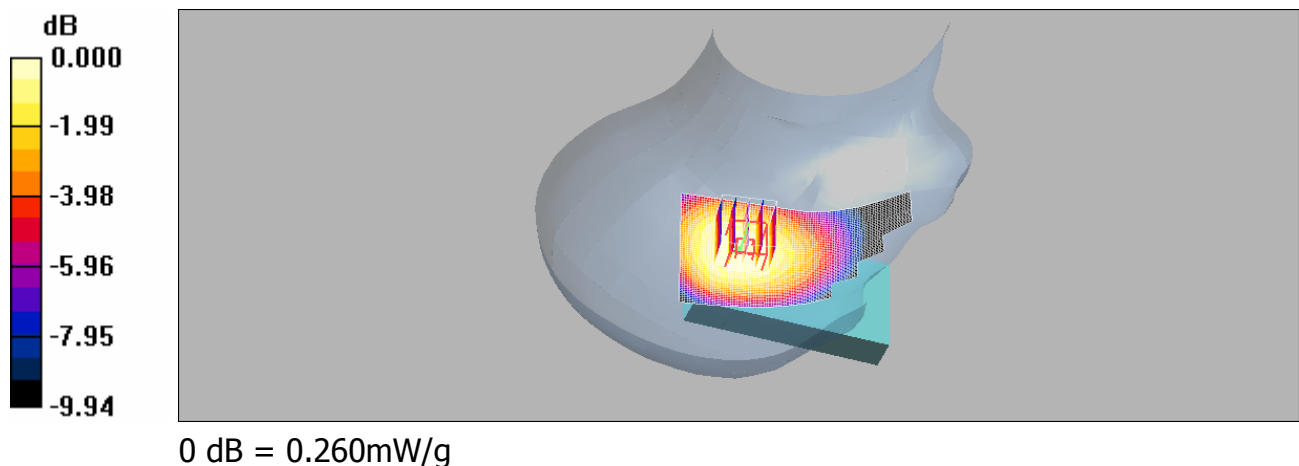
### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.258 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 15.3 V/m; Power Drift = -0.013 dB  
Peak SAR (extrapolated) = 0.308 W/kg

**SAR(1 g) = 0.247 mW/g; SAR(10 g) = 0.186 mW/g**  
Maximum value of SAR (measured) = 0.260 mW/g



## RE Tilt\_CH190\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.872$  mho/m;  $\epsilon_r = 40.5$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

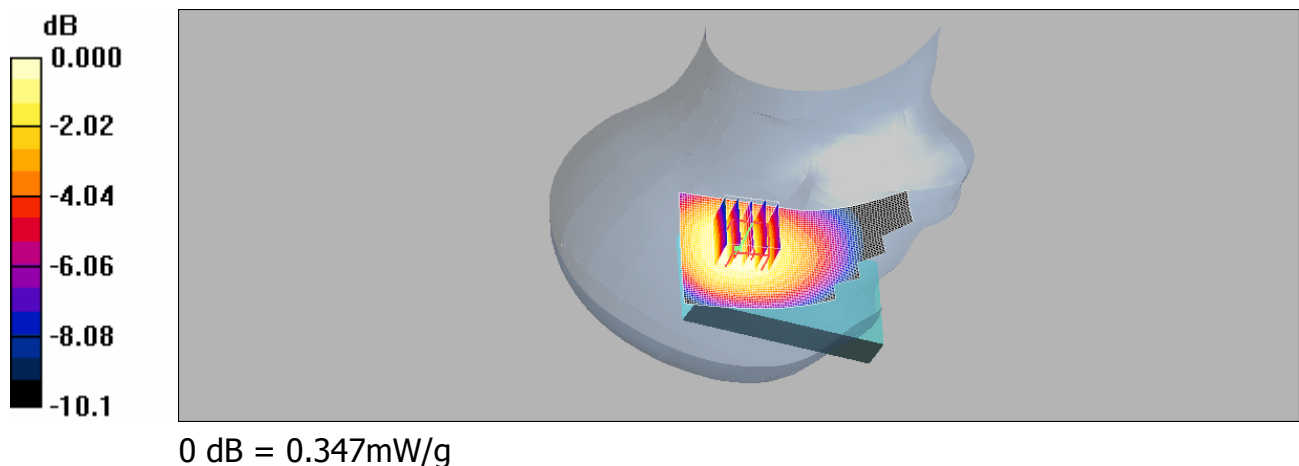
### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.343 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 17.6 V/m; Power Drift = -0.008 dB  
Peak SAR (extrapolated) = 0.419 W/kg

**SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.249 mW/g**  
Maximum value of SAR (measured) = 0.347 mW/g



## RE Tilt\_CH251\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850 MHz Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.885$  mho/m;  $\epsilon_r = 40.3$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

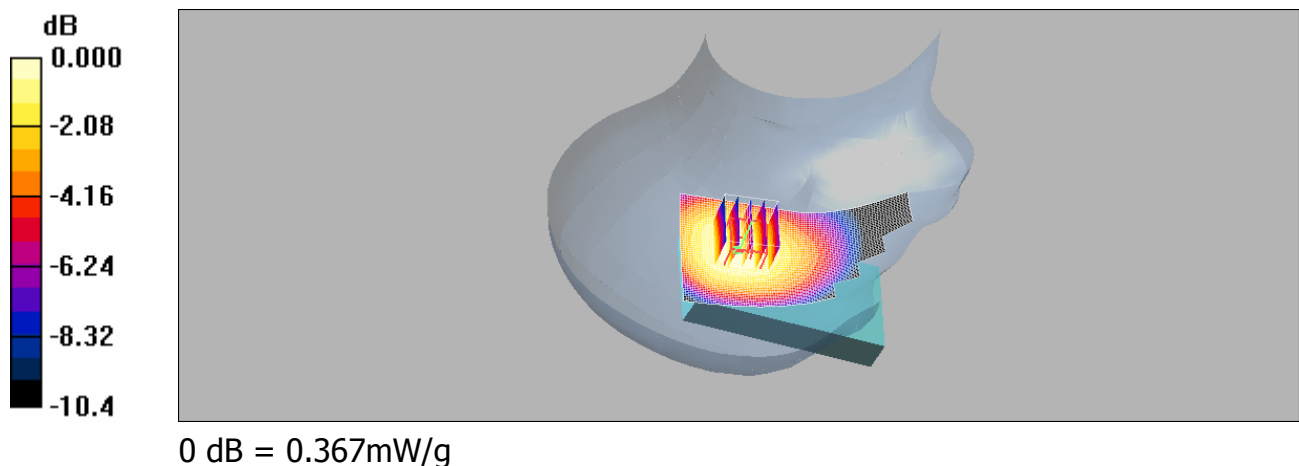
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**RE\_Tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.357 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,  
dz=5mm  
Reference Value = 17.6 V/m; Power Drift = 0.001 dB  
Peak SAR (extrapolated) = 0.437 W/kg

**SAR(1 g) = 0.346 mW/g; SAR(10 g) = 0.257 mW/g**  
Maximum value of SAR (measured) = 0.367 mW/g



## LE Tilt\_CH128\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used (interpolated):  $f = 824.2$  MHz;  $\sigma = 0.861$  mho/m;  $\epsilon_r = 40.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

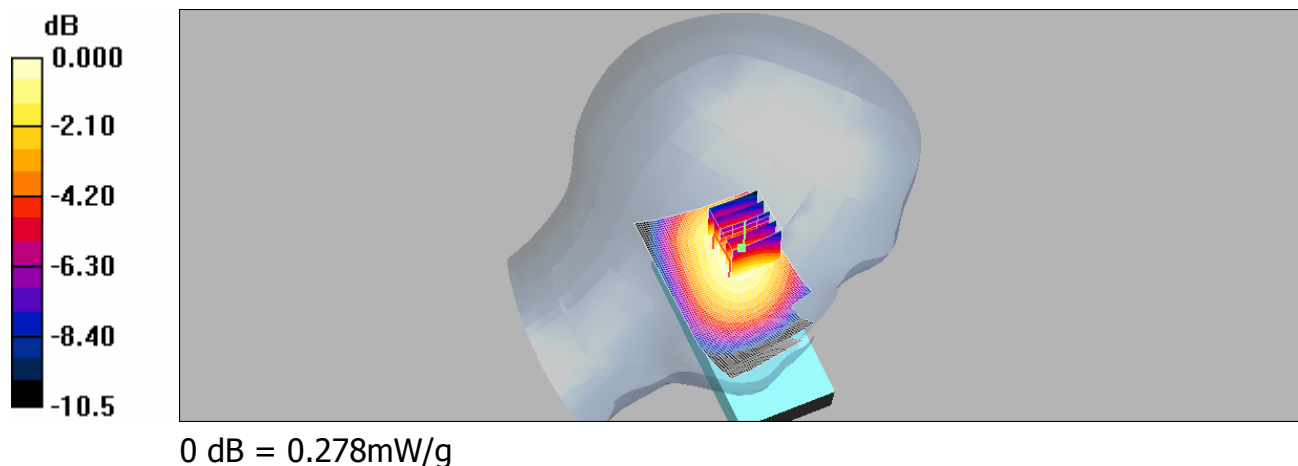
### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**LE\_Tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.276 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 15.2 V/m; Power Drift = -0.103 dB  
Peak SAR (extrapolated) = 0.347 W/kg

**SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.195 mW/g**  
Maximum value of SAR (measured) = 0.278 mW/g



## LE Tilt\_CH190\_slider off

### DUT: RHOD 210;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
Medium: Head 850 MHz Medium parameters used:  $f = 837$  MHz;  $\sigma = 0.872$  mho/m;  $\epsilon_r = 40.5$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.93, 10.93, 10.93); Calibrated: 2008/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM2; Type: SAM 4.0; Serial: TP:1270
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**LE\_Tilt/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.373 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 17.4 V/m; Power Drift = -0.161 dB  
Peak SAR (extrapolated) = 0.468 W/kg

**SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.260 mW/g**  
Maximum value of SAR (measured) = 0.371 mW/g

