

# SAR TEST REPORT

Equipment Under Test	Mobile Phone
Model Name	H-21
Company Name	Opto Electronics Co.,Ltd
Company Address	4-12-17, Tsukagoshi, Warabi-shi, Saitama-ken 335-0002, Japan
Date of Receipt	2009.11.20
Date of Test(s)	2009.12.04-2009.12.09
Date of Issue	2010.04.23

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.

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Tested by : Ricky Huang Date : 2010.04.23  
Asst. Supervisor

Approved by : Nick Hsu Date : 2010.04.23  
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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	Mobile Phone
FCC ID	UFOH-21
Model Name	H-21
Brand Name	OPTICON,PEGATRON
IMEI Code	004402050078710
Mode of Operation	GSM /GPRS/EDGE/WCDMA/HSDPA/HSUPA/WLAN802.11 b/g band
Definition	Production unit

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Modulation Mode	GSM/GMSK/8PSK/QPSK/16QAM			
VoIP function	NO			
Duty Cycle	GSM	GPRS	WCDMA B2	WCDMA B5
	1/8	1/4	1	1
TX Frequency Range (MHz)	GSM 850	GSM 1900	WCDMA B2	WCDMA B5
	824.2-848.8	1850.2-1909.8	1852.4-1907.6	826.4-846.6
Channel Number (ARFCN)	GSM 850	GSM 1900	WCDMA B2	WCDMA B5
	128-251	512-810	9262-9538	4132-4233
Battery Type	3.7 V Lithium-Ion			
Antenna Type	Internal Antenna			
Max. SAR Measured (1 g)	<b>GSM850</b>			
	Head		Body	
	<b>0.581 mW/g</b> (Right Head (Cheek Position)_ 128 channel)		<b>1.17 mW/g</b> (Body_ 190 Channel _repeated with Memory card)	
	<b>GSM1900</b>			
	Head		Body	
	<b>0.597 mW/g</b> (Right Head (Cheek Position)_ 810 channel)		<b>0.582 mW/g</b> (Body_ 512 Channel)	
	<b>WCDMA B2</b>			
	Head		Body	
	<b>1.27 mW/g</b> (Right Head (Cheek Position)_ 9262 channel)		<b>0.606 mW/g</b> (Body_ 9262 Channel)	

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WCDMA B5	
Head	Body
<b>0.640 mW/g</b> (Right Head (Cheek Position)_ 4132 channel)	<b>0.526 mW/g</b> (Body_ 4132 Channel)
WLAN802.11 b/g	
Body	
<b>0.111 mW/g</b> (Body_WLAN802.11 b_1 channel)	

#Note: WCDMA B2 & WCDMA B5 HSDPA & HSUPA conducted power:

Mode	Subtest	WCDMA Band V Channel			WCDMA Band II Channel		
		4132	4182	4233	9262	9400	9538
Rel99	R99	23.80	23.69	23.75	23.12	23.06	23.23
Rel6 HSDPA	1	24.02	23.94	23.94	23.41	23.32	23.50
	2	23.73	23.58	23.62	23.00	22.92	23.08
	3	23.56	23.46	23.45	22.93	22.87	22.97
	4	23.61	23.50	23.51	23.00	22.88	23.09
Rel6 HSUPA	1	23.76	23.62	23.67	23.04	23.04	23.17
	2	21.82	21.70	21.71	21.09	21.11	21.21
	3	22.80	22.68	22.75	22.10	22.06	22.25
	4	21.87	21.76	21.79	21.22	21.16	21.25
	5	23.62	23.45	23.56	22.93	22.90	23.08

## 1.4 Test Environment

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

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

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## 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.
7. When the maximum transmitter and antenna output power are  $\leq 60/f(\text{GHz})$  (mW) SAR evaluation is typically not required for FCC or TCB approval (BT power= 3.62dBm)

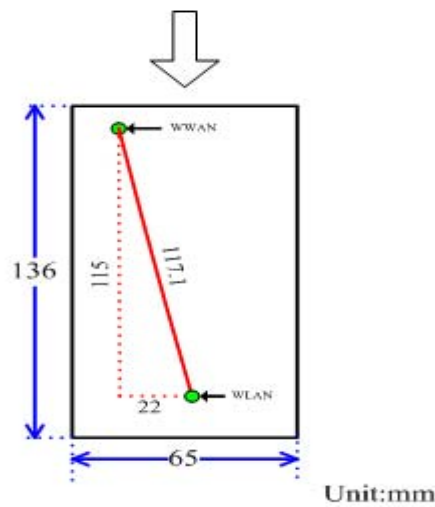
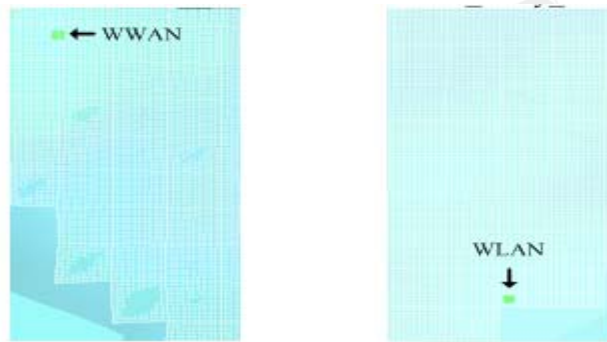
### SAR evaluation considerations for handsets with multiple transmitters:

8. 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.

The maximum SAR value for licensed transmitter happens on WCDMA B2 band, Right Head (Cheek Position), channel 9262. the value is **1.27W/kg(1g)**. And the max SAR value for un-licensed transmitter WLAN 802.11b happens on Body worn, channel 1 The SAR value is **0.111W/kg (1g)** . The summation of the 1g SAR is  $1.27+0.111 = 1.381 \text{ W/kg}$ , which lower than the limit **1.6W/kg**. **NO simultaneous transmission SAR evaluation is necessary.**

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**Additional configuration(Head):**

9. For highest SAR configuration in this band repeated with external Memory card inside.

**Additional configuration(Body):**

10. For highest SAR configuration in this band repeated with external Memory card inside.

11. For highest SAR configuration in this band repeated with EGPRS mode.

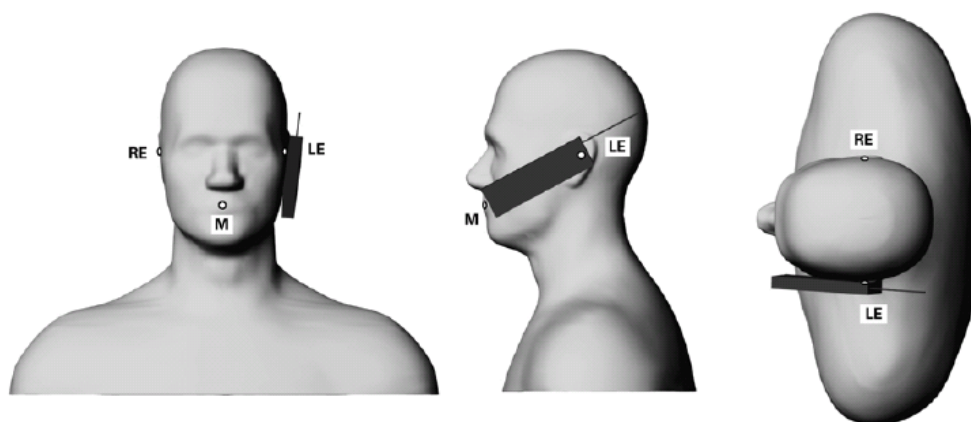
12. For highest SAR configuration in this band repeated with Headset.

13. Since WLAN and Bluetooth use same antenna, both WLAN and Bluetooth turn ON co-transmit is evaluated.

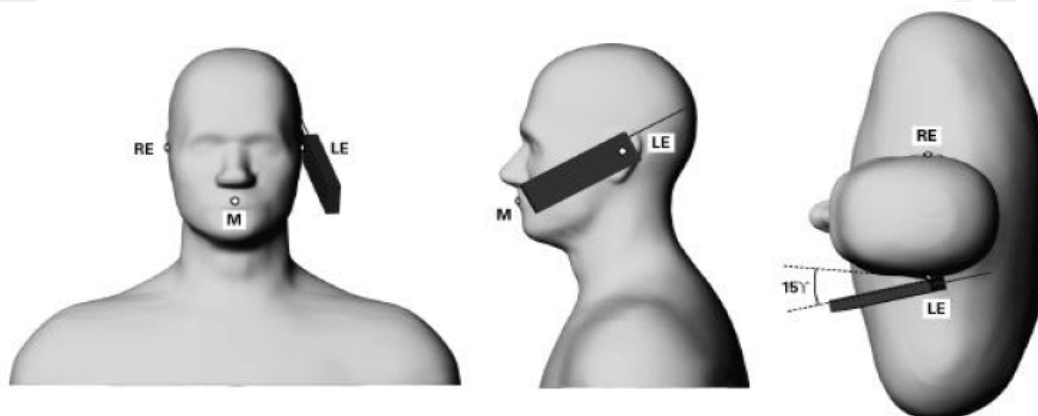
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## 1.6 Positioning Procedure



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.

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## 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

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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 then 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.

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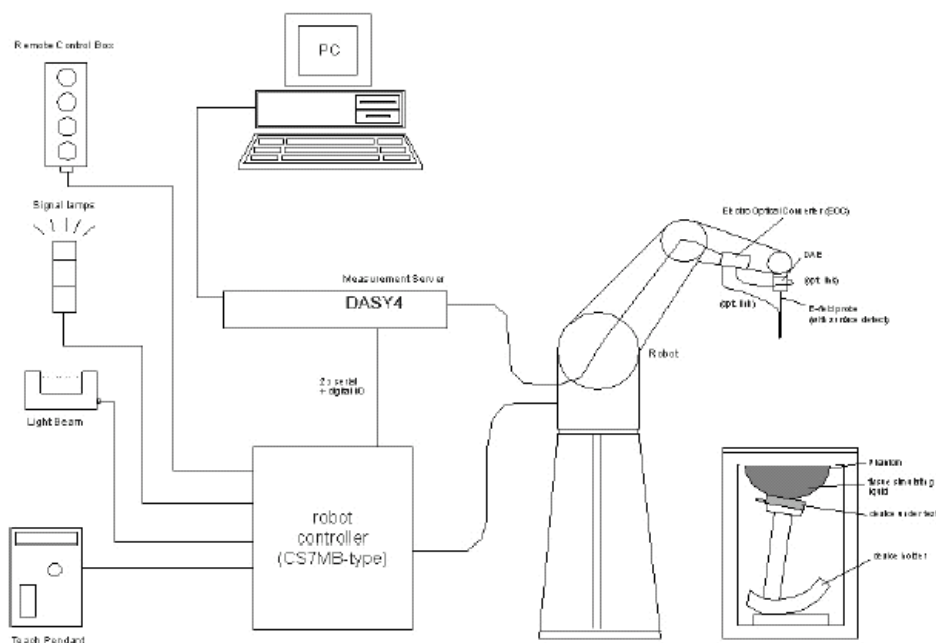


Fig.a The block diagram of SAR system

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 detection 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.


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- 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)	
Calibration:	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL835/1900/2450 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%.	

E-Field Probe


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### 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 ± 0.2 mm	
Filling Volume:	Approx. 25 liters	
Dimensions:	Height: 251 mm; Length: 1000 mm; Width: 500 mm	

### DEVICE HOLDER

Construction	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).	 Device Holder
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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 835/1900/2450 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 22.1°C, the

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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.

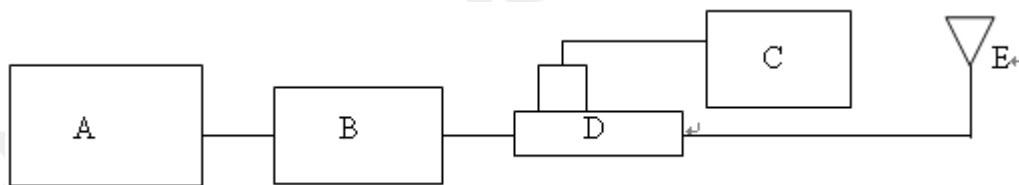
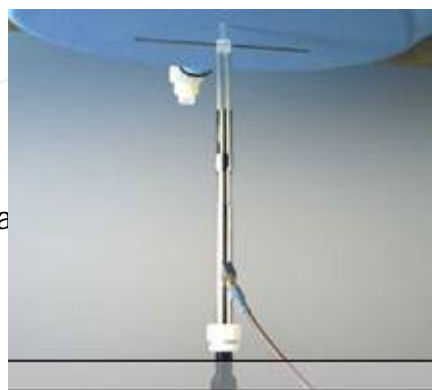


Fig.b The block diagram of system verification

- A. Agilent Model 8648D Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent Model U2001B Power Sensor
- D. Agilent Model 778D & 777D Dual directional coupling
- E. 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)	2.38 mW/g	2.38 mW/g	2009/12/08
D835V2 S/N: 4d063	835 MHz (Body)	2.55 mW/g	2.46 mW/g	2009/12/08
D1900V2 S/N: 5d027	1900 MHz (Head)	10.5 mW/g	10.6 mW/g	2009/12/04
D1900V2 S/N: 5d027	1900 MHz (Body)	10.6 mW/g	10.6 mW/g	2009/12/04
D2450V2 S/N: 727	2450 MHz (Body)	13.2 mW/g	13.8mW/g	2009/12/09

Table 1. System validation (follow manufacture target value)

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### 1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the Agilent 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, 2009.12.08	42.4	0.891	21.7
		Recommended Limits	38.76-42.84	0.85-0.93	20-24
850	Body	Measured, 2009.12.08	55.6	0.991	21.7
		Recommended Limits	51.11-56.49	0.96-1.06	20-24
1900	Head	Measured, 2009.12.04	38.9	1.46	21.7
		Recommended Limits	36.67-40.53	1.4-1.54	20-24
1900	Body	Measured, 2009.12.04	54.4	1.61	21.7
		Recommended Limits	52.16-57.65	1.48-1.64	20-24
2450	Body	Measured, 2009.12.09	54.4	2.03	21.7
		Recommended Limits	51.68-57.12	1.88-2.08	20-24

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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

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

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

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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

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## 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.

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## 2. Summary of Results

### GSM 850 MHZ

Right Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	32.8dbm	0.581	22.1	21.7
	190	836.6	32.9dbm	0.572	22.1	21.7
	251	848.8	33dbm	0.58	22.1	21.7
Left Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	32.8dbm	0.389	22.1	21.7
	190	836.6	32.9dbm	0.382	22.1	21.7
	251	848.8	33dbm	0.397	22.1	21.7
Right Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	32.8dbm	0.405	22.1	21.7
	190	836.6	32.9dbm	0.409	22.1	21.7
	251	848.8	33dbm	0.414	22.1	21.7
Left Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	128	824.2	32.8dbm	0.295	22.1	21.7
	190	836.6	32.9dbm	0.290	22.1	21.7
	251	848.8	33dbm	0.295	22.1	21.7

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<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	0.982	22.1	21.7
	190	836.6	32.9dbm	1.02	22.1	21.7
	251	848.8	33dbm	0.983	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	0.515	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	1.17	22.1	21.7
<b>Body worn (testing in GPRS mode)_repeated with headset</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	0.897	22.1	21.7
<b>Body worn (testing in EGPRS mode)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
850 MHz	190	836.6	27.6dbm	0.321	22.1	21.7

## PCS 1900 MHZ

<b>Right Head (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	29.7dbm	0.529	22.1	21.7
	661	1880	29.6dbm	0.532	22.1	21.7
	810	1909.8	29.5dbm	0.597	22.1	21.7
<b>Left Head (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	29.7dbm	0.412	22.1	21.7
	661	1880	29.6dbm	0.408	22.1	21.7

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	810	1909.8	29.5dbm	0.442	22.1	21.7
<b>Right Head (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	29.7dbm	0.485	22.1	21.7
	661	1880	29.6dbm	0.438	22.1	21.7
	810	1909.8	29.5dbm	0.450	22.1	21.7
<b>Left Head (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	29.7dbm	0.581	22.1	21.7
	661	1880	29.6dbm	0.543	22.1	21.7
	810	1909.8	29.5dbm	0.524	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	29.7dbm	0.582	22.1	21.7
	661	1880	29.6dbm	0.510	22.1	21.7
	810	1909.8	29.5dbm	0.465	22.1	21.7

## WCDMA Band 2

<b>Right Head (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	23.12dbm	1.27	22	21.6
	9400	1880.0	23.06dbm	1.23	22	21.6
	9538	1907.6	23.23dbm	1.16	22	21.6
<b>Left Head (Cheek Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	23.12dbm	0.976	22	21.6
	9400	1880.0	23.06dbm	0.913	22	21.6
	9538	1907.6	23.23dbm	0.853	22	21.6

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<b>Right Head (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	23.12dbm	1.09	22	21.6
	9400	1880.0	23.06dbm	0.987	22	21.6
	9538	1907.6	23.23dbm	0.863	22	21.6
<b>Left Head (15° Tilt Position)</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	23.12dbm	1.22	22	21.6
	9400	1880.0	23.06dbm	1.1	22	21.6
	9538	1907.6	23.23dbm	1	22	21.6
<b>Right Head (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 B2	9262	1852.4	23.12dbm	1.19	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 B2	9262	1852.4	23.12dbm	0.606	22.1	21.7
	9400	1880.0	23.06dbm	0.527	22.1	21.7
	9538	1907.6	23.23dbm	0.536	22.1	21.7
<b>Body worn_HSDPA mode</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	23.41dbm	0.546	22.1	21.7
	9400	1880.0	23.32dbm	0.459	22.1	21.7
	9538	1907.6	23.50dbm	0.467	22.1	21.7
<b>Body worn_HSUPA mode</b>						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B2	9262	1852.4	22.93dbm	0.547	22.1	21.7
	9400	1880.0	22.90dbm	0.455	22.1	21.7
	9538	1907.6	23.08dbm	0.456	22.1	21.7

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## WCDMA Band 5

Right Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.80dbm	0.640	22	21.6
	4183	836.6	23.69dbm	0.519	22	21.6
	4233	846.6	23.75dbm	0.627	22	21.6
Left Head (Cheek Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.80dbm	0.339	22	21.6
	4183	836.6	23.69dbm	0.244	22	21.6
	4233	846.6	23.75dbm	0.399	22	21.6
Right Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.80dbm	0.426	22	21.6
	4183	836.6	23.69dbm	0.365	22	21.6
	4233	846.6	23.75dbm	0.446	22	21.6
Left Head (15° Tilt Position)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.80dbm	0.262	22	21.6
	4183	836.6	23.69dbm	0.185	22	21.6
	4233	846.6	23.75dbm	0.297	22	21.6
Body worn						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.80dbm	0.526	22.1	21.7
	4183	836.6	23.69dbm	0.292	22.1	21.7
	4233	846.6	23.75dbm	0.491	22.1	21.7

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Body worn_HSDPA mode						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	24.02dbm	0.425	22.1	21.7
	4183	836.6	23.94dbm	0.246	22.1	21.7
	4233	846.6	23.94dbm	0.426	22.1	21.7
Body worn_HSUPA mode						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WCDMA B5	4132	826.4	23.62dbm	0.432	22.1	21.7
	4183	836.6	23.45dbm	0.244	22.1	21.7
	4233	846.6	23.56dbm	0.429	22.1	21.7

## WLAN802.11 b

Body worn						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WLAN 802.11 b	1	2412	14.55dbm	0.111	22.1	21.7
	6	2437	14.09dbm	0.109	22.1	21.7
	11	2462	14.05dbm	0.104	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	1	2412	14.55dbm	0.032	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	1	2412	14.55dbm	0.091	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	1	2412	14.55dbm	0.101	22.1	21.7

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**Body worn- repeated with headset**

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WLAN 802.11 b	1	2412	14.55dbm	0.096	22.1	21.7

## WLAN 802.11 g

**Body worn**

Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[ °C]	Liquid Temp[ °C]
WLAN 802.11 g	1	2412	12.13dbm	0.097	22.1	21.7
	6	2437	11.96dbm	0.096	22.1	21.7
	11	2462	11.69dbm	0.097	22.1	21.7

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### 3. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV3	3526	Aug.26.2009
Schmid & Partner Engineering AG	835/1900/2450 MHz System Validation Dipole	D835V2 D1900V2 D2450V2	4d063 5d027 727	Apr.22.2009 Apr.27.2009 Apr.27.2009
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	547	Jan.20.2009
Schmid & Partner Engineering AG	Software	DASY 4 V4.7 Build 80	N/A	Calibration not required
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration not required
HP	Network Analyzer	8753D	3410A05547	Mar.31.2009
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration not required
Agilent	Dual-directional coupler	778D 777D	50313 50014	Aug.26.2009 Aug.27.2009
Agilent	RF Signal Generator	8648D	3847M00432	May.25.2009
Agilent	Power Sensor	U2001B	MY48100169	Apr.23.2009
R&S	Radio Communication Test	CMU200	109326	Mar.17.2009

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## 4. Measurements

Date/Time: 2009/12/8 07:11:21

### RE Cheek\_CH128

DUT: H-21;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.879 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 0.597 mW/g

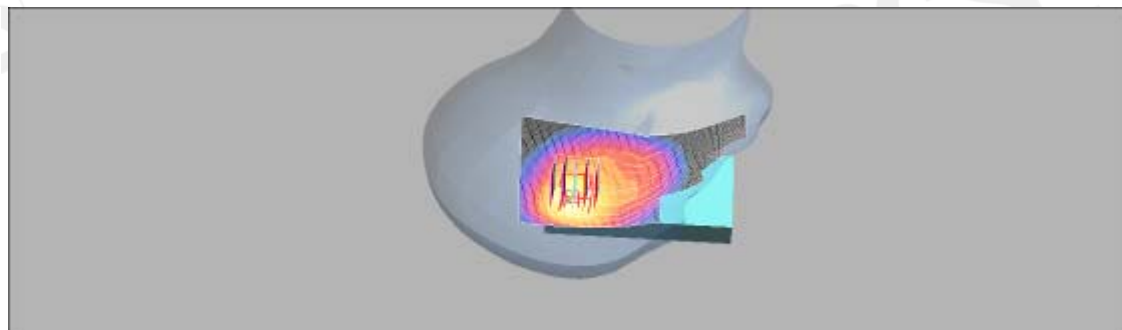
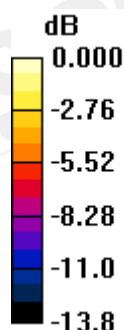
**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 17.8 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 1.00 W/kg

**SAR(1 g) = 0.581 mW/g; SAR(10 g) = 0.341 mW/g**

Maximum value of SAR (measured) = 0.632 mW/g



0 dB = 0.632mW/g

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## RE Cheek\_CH190

DUT: H-21;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

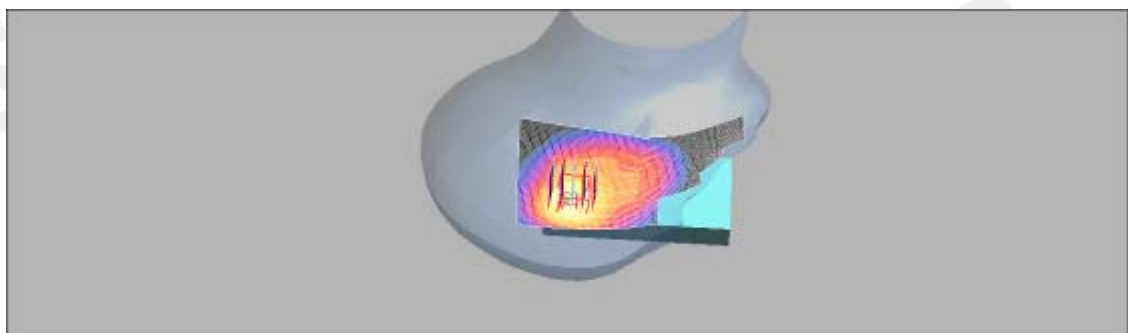
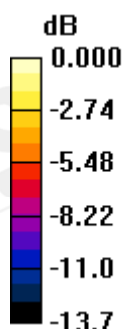
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.603 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.6 V/m; Power Drift = 0.030 dB  
 Peak SAR (extrapolated) = 0.977 W/kg

**SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.337 mW/g**  
 Maximum value of SAR (measured) = 0.625 mW/g



0 dB = 0.625mW/g

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## RE Cheek\_CH251

DUT: H-21;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.906 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.613 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.9 V/m; Power Drift = -0.015 dB  
 Peak SAR (extrapolated) = 0.986 W/kg

**SAR(1 g) = 0.580 mW/g; SAR(10 g) = 0.343 mW/g**  
 Maximum value of SAR (measured) = 0.635 mW/g



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## LE Cheek\_CH128

DUT: H-21;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.879 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

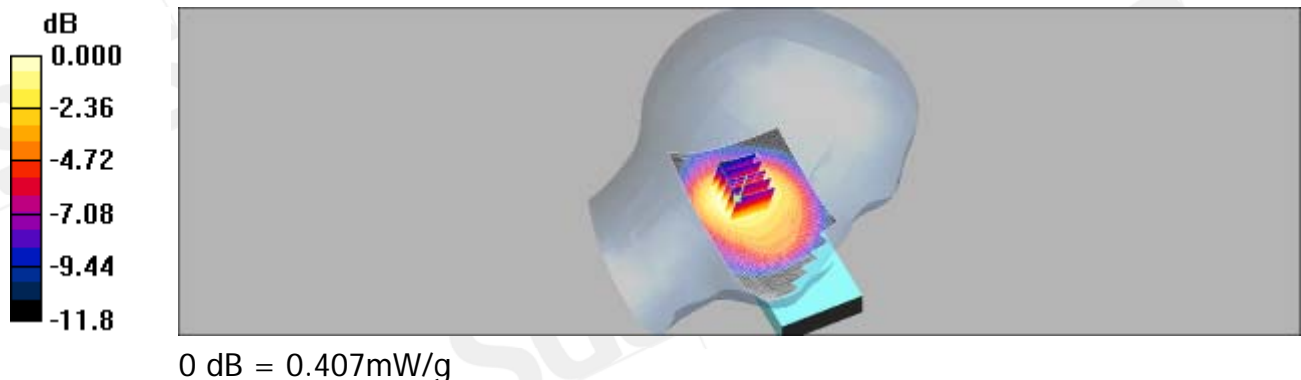
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.421 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 18.1 V/m; Power Drift = 0.017 dB  
 Peak SAR (extrapolated) = 0.575 W/kg

**SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.261 mW/g**  
 Maximum value of SAR (measured) = 0.407 mW/g



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## LE Cheek\_CH190

DUT: H-21;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

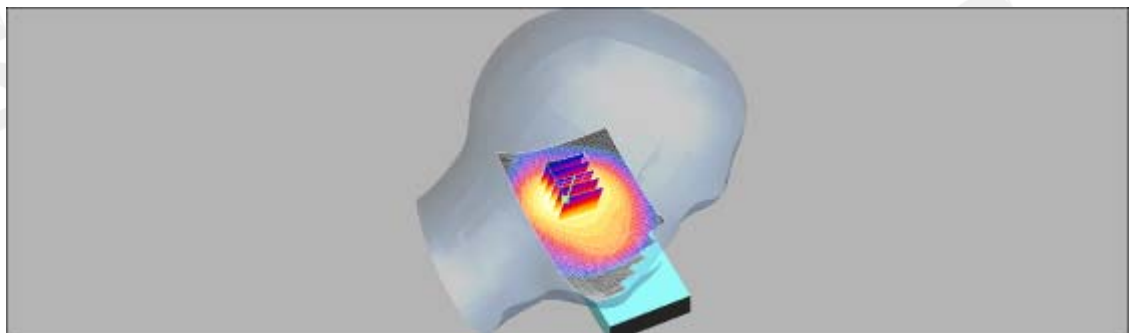
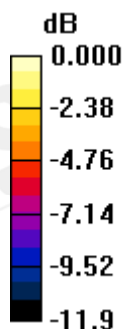
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.418 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.9 V/m; Power Drift = -0.036 dB  
 Peak SAR (extrapolated) = 0.561 W/kg

**SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.256 mW/g**  
 Maximum value of SAR (measured) = 0.398 mW/g



0 dB = 0.398mW/g

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## LE Cheek\_CH251

DUT: H-21;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.906 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

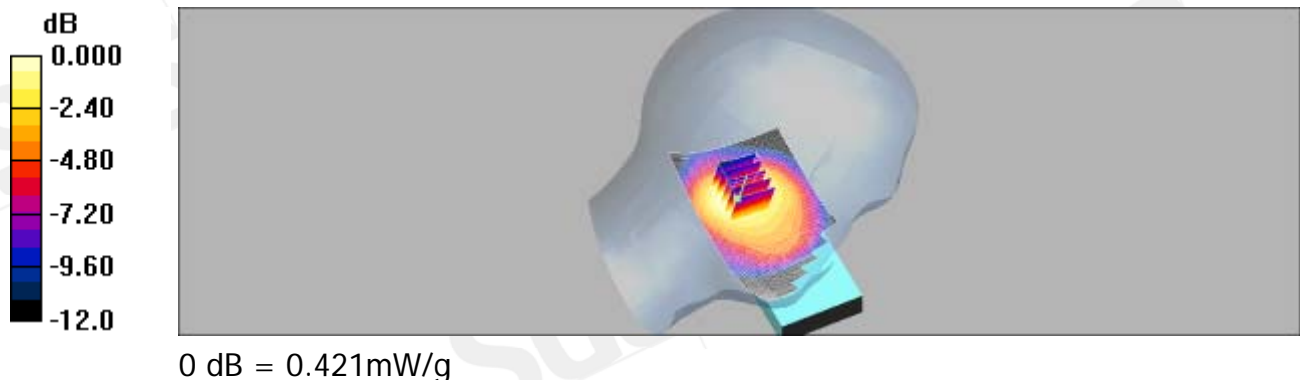
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.436 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.9 V/m; Power Drift = -0.046 dB  
 Peak SAR (extrapolated) = 0.578 W/kg

**SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.266 mW/g**  
 Maximum value of SAR (measured) = 0.421 mW/g



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## RE Tilt\_CH128

DUT: H-21;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.879 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

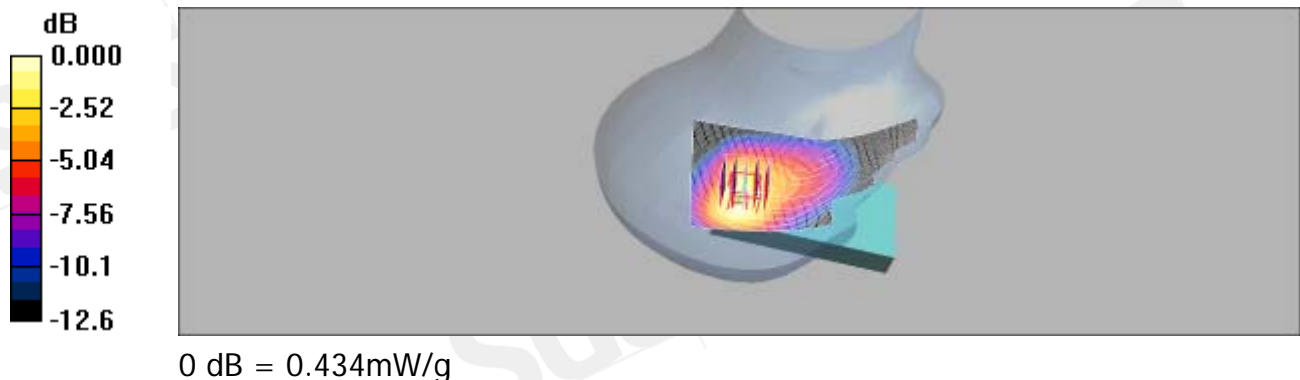
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.444 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 17.8 V/m; Power Drift = -0.093 dB  
 Peak SAR (extrapolated) = 0.664 W/kg

**SAR(1 g) = 0.405 mW/g; SAR(10 g) = 0.250 mW/g**  
 Maximum value of SAR (measured) = 0.434 mW/g



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## RE Tilt\_CH190

DUT: H-21;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

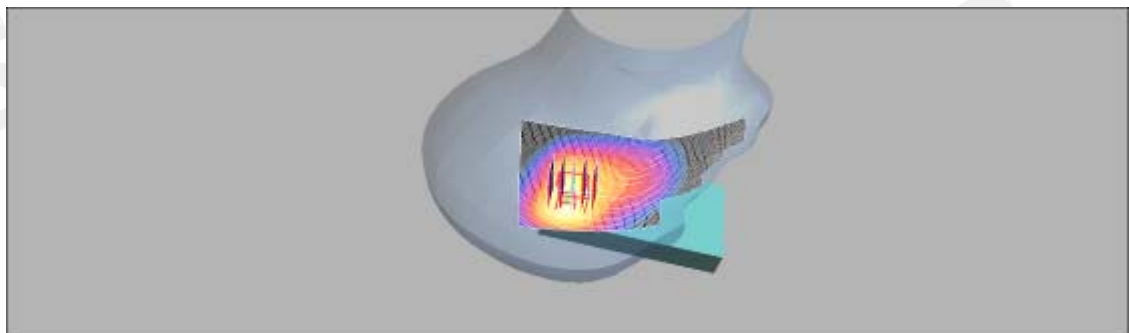
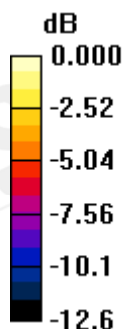
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.439 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.7 V/m; Power Drift = -0.002 dB  
 Peak SAR (extrapolated) = 0.669 W/kg

**SAR(1 g) = 0.409 mW/g; SAR(10 g) = 0.252 mW/g**  
 Maximum value of SAR (measured) = 0.440 mW/g



0 dB = 0.440mW/g

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## RE Tilt\_CH251

DUT: H-21;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.906 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

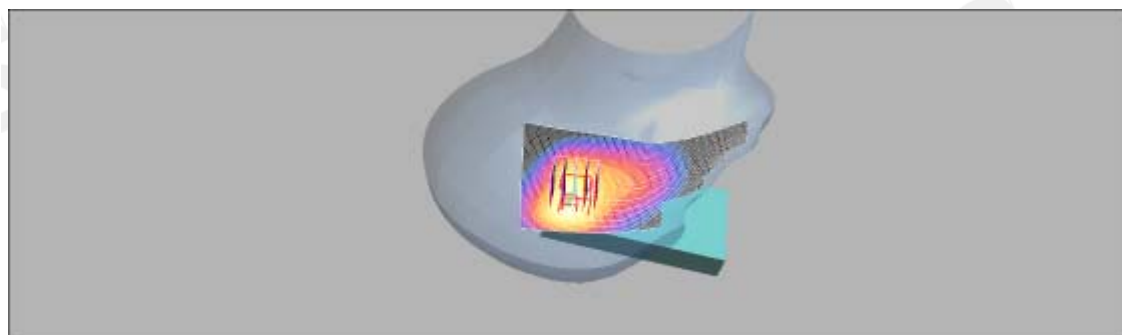
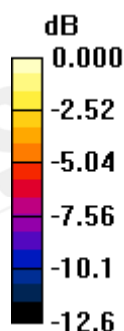
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.448 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.8 V/m; Power Drift = -0.072 dB  
 Peak SAR (extrapolated) = 0.678 W/kg

**SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.255 mW/g**  
 Maximum value of SAR (measured) = 0.443 mW/g



0 dB = 0.443mW/g

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## LE Tilt\_CH128

DUT: H-21;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.879 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

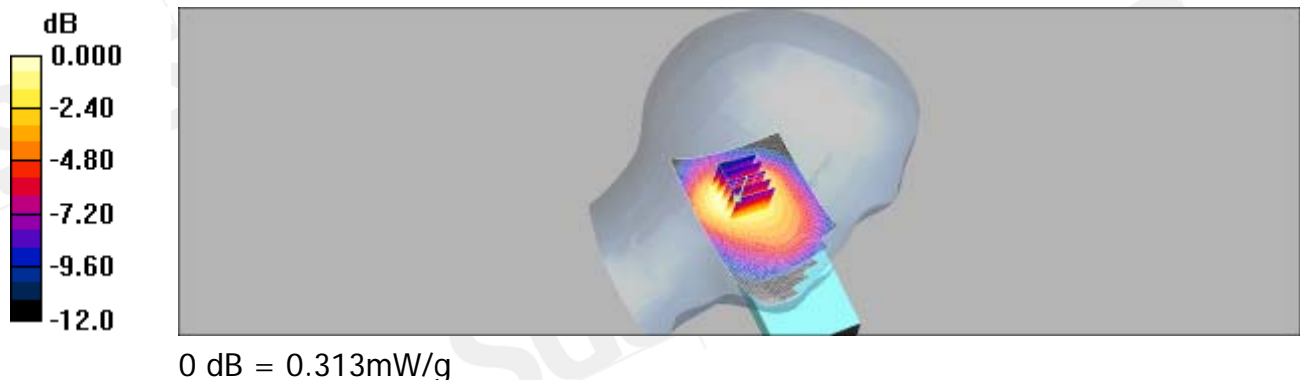
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.319 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 17.0 V/m; Power Drift = -0.014 dB  
 Peak SAR (extrapolated) = 0.439 W/kg

**SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.197 mW/g**  
 Maximum value of SAR (measured) = 0.313 mW/g



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## LE Tilt\_CH190

DUT: H-21;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

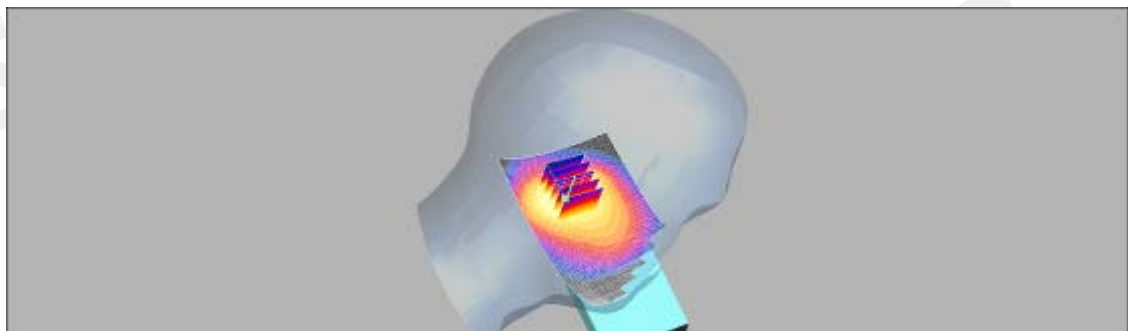
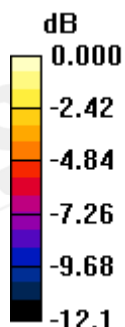
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.312 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.6 V/m; Power Drift = -0.078 dB  
 Peak SAR (extrapolated) = 0.429 W/kg

**SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.194 mW/g**  
 Maximum value of SAR (measured) = 0.310 mW/g



0 dB = 0.310mW/g

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## LE Tilt\_CH251

DUT: H-21;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 900 MHz Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.906 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

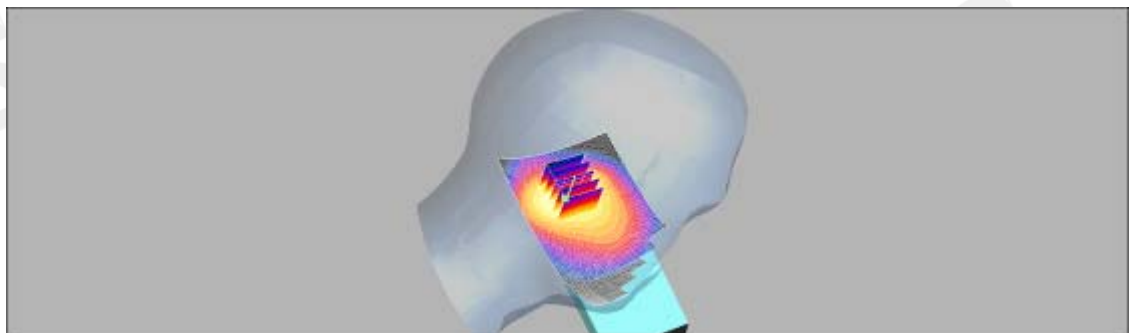
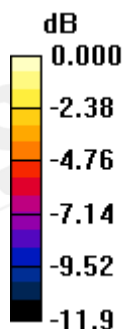
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.320 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.9 V/m; Power Drift = -0.120 dB  
 Peak SAR (extrapolated) = 0.441 W/kg

**SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.197 mW/g**  
 Maximum value of SAR (measured) = 0.314 mW/g



0 dB = 0.314mW/g

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## BODY\_CH128

DUT: H-21 ;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used (interpolated):  $f = 824.2 \text{ MHz}$ ;  $\sigma = 0.981 \text{ mho/m}$ ;  $\epsilon_r = 55.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

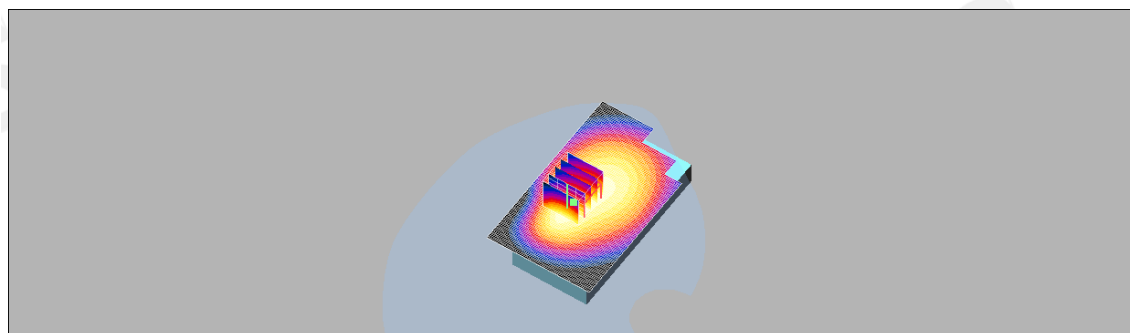
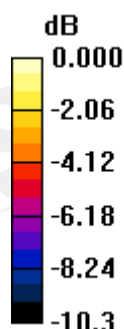
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.08 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.2 V/m; Power Drift = -0.104 dB  
 Peak SAR (extrapolated) = 1.28 W/kg

**SAR(1 g) = 0.982 mW/g; SAR(10 g) = 0.721 mW/g**  
 Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.04mW/g

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## BODY\_CH190

DUT: H-21 ;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

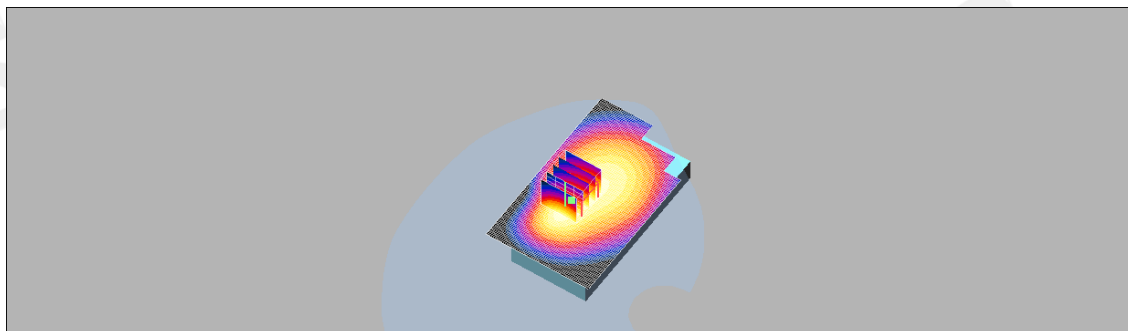
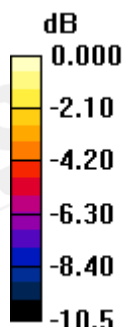
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.12 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.7 V/m; Power Drift = -0.012 dB  
 Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.735 mW/g**  
 Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

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## BODY\_CH251

DUT: H-21 ;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 1.01 \text{ mho/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

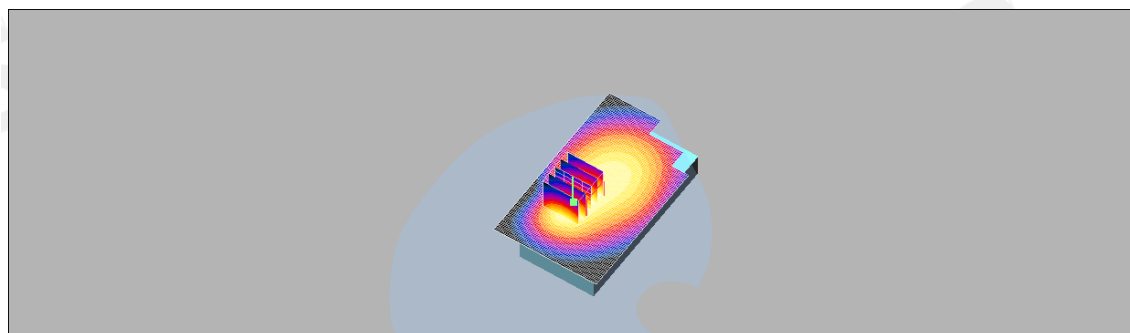
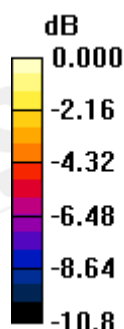
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.09 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.7 V/m; Power Drift = 0.005 dB  
 Peak SAR (extrapolated) = 1.30 W/kg

**SAR(1 g) = 0.983 mW/g; SAR(10 g) = 0.702 mW/g**  
 Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

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## BODY\_CH190\_repeated for EUT front to phantom

DUT: H-21 ;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

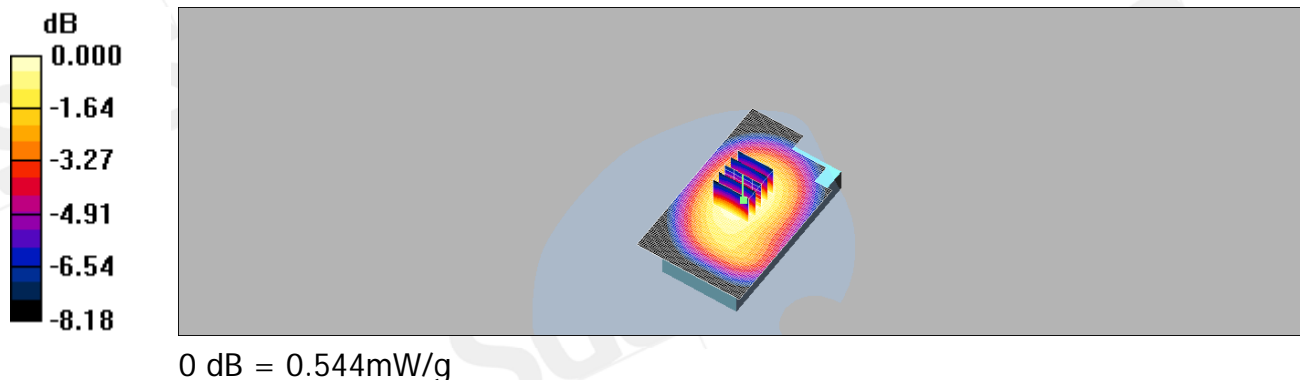
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.539 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 12.2 V/m; Power Drift = 0.002 dB  
 Peak SAR (extrapolated) = 0.671 W/kg

**SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.383 mW/g**  
 Maximum value of SAR (measured) = 0.544 mW/g



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## BODY\_CH190\_repeated with Memory card

DUT: H-21 ;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

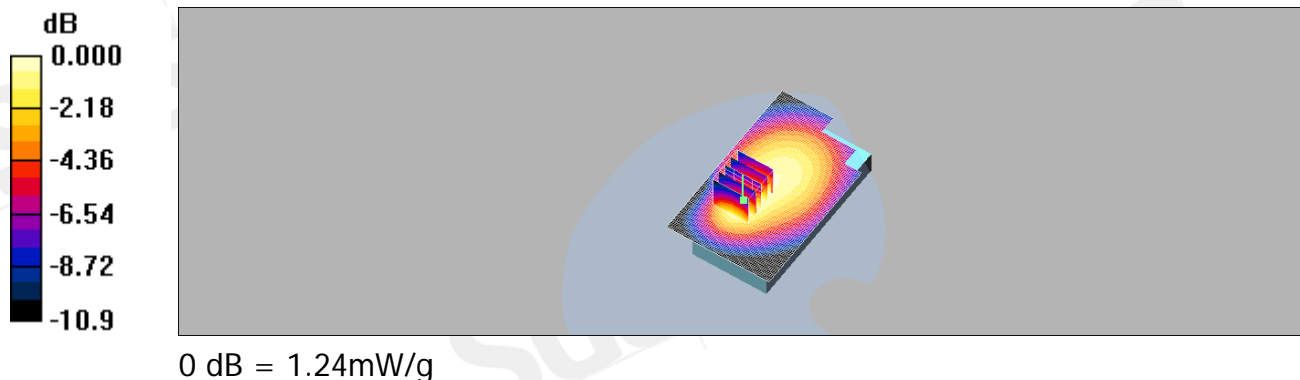
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.29 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.7 V/m; Power Drift = 0.031 dB  
 Peak SAR (extrapolated) = 1.62 W/kg

**SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.830 mW/g**  
 Maximum value of SAR (measured) = 1.24 mW/g



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## BODY\_CH190\_repeated with headset

DUT: H-21 ;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

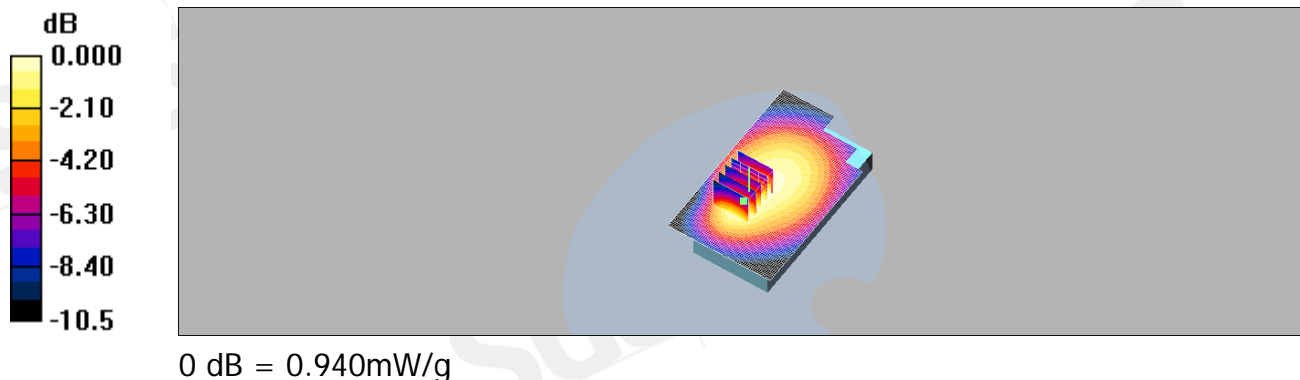
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.977 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.5 V/m; Power Drift = 0.019 dB  
 Peak SAR (extrapolated) = 1.20 W/kg

**SAR(1 g) = 0.897 mW/g; SAR(10 g) = 0.652 mW/g**  
 Maximum value of SAR (measured) = 0.940 mW/g



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## BODY\_CH190\_repeated with EGPRS mode

DUT: H-21 ;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:4  
 Medium: Muscle 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.993 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

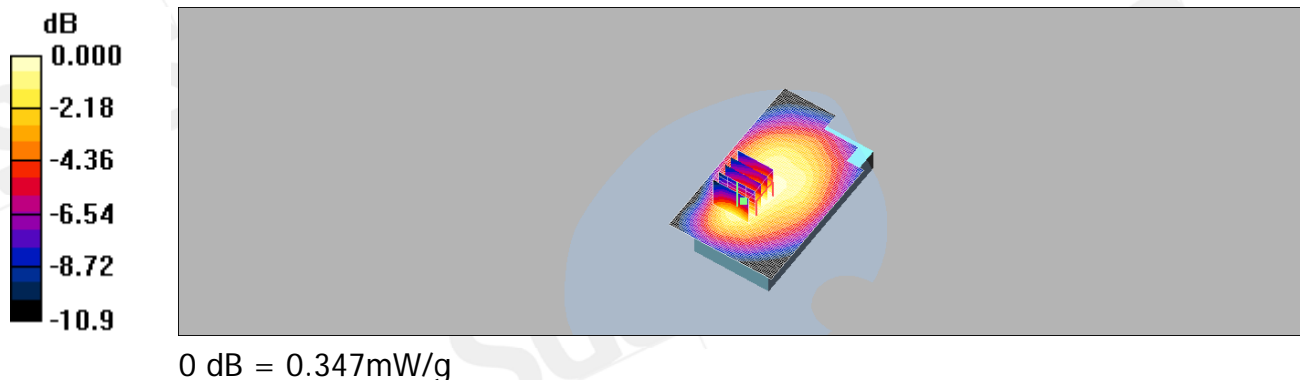
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.375 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 11.3 V/m; Power Drift = -0.103 dB  
 Peak SAR (extrapolated) = 0.449 W/kg

**SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.234 mW/g**  
 Maximum value of SAR (measured) = 0.347 mW/g



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## RE Cheek\_CH512

DUT: H-21;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.580 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 16.3 V/m; Power Drift = -0.178 dB  
 Peak SAR (extrapolated) = 0.963 W/kg

**SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.281 mW/g**  
 Maximum value of SAR (measured) = 0.573 mW/g



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## RE Cheek\_CH661

DUT: H-21;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.578 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 15.5 V/m; Power Drift = -0.060 dB  
 Peak SAR (extrapolated) = 0.988 W/kg

**SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.278 mW/g**  
 Maximum value of SAR (measured) = 0.577 mW/g



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## RE Cheek\_CH810

DUT: H-21;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.636 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.7 V/m; Power Drift = -0.047 dB  
 Peak SAR (extrapolated) = 1.13 W/kg

**SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.306 mW/g**  
 Maximum value of SAR (measured) = 0.643 mW/g



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## LE Cheek\_CH512

DUT: H-21;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

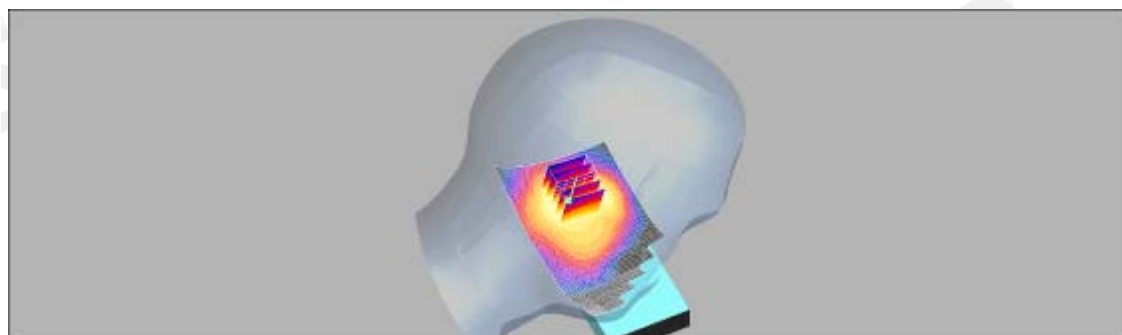
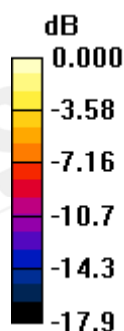
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.449 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.6 V/m; Power Drift = 0.121 dB  
 Peak SAR (extrapolated) = 0.624 W/kg

**SAR(1 g) = 0.412 mW/g; SAR(10 g) = 0.251 mW/g**  
 Maximum value of SAR (measured) = 0.455 mW/g



0 dB = 0.455mW/g

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## LE Cheek\_CH661

DUT: H-21;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

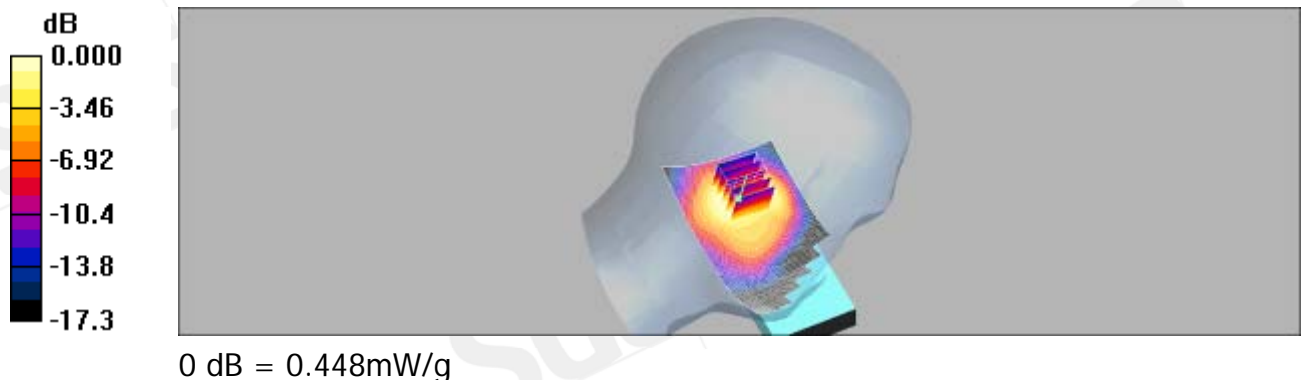
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.443 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.7 V/m; Power Drift = -0.001 dB  
 Peak SAR (extrapolated) = 0.629 W/kg

**SAR(1 g) = 0.408 mW/g; SAR(10 g) = 0.247 mW/g**  
 Maximum value of SAR (measured) = 0.448 mW/g



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## LE Cheek\_CH810

DUT: H-21;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

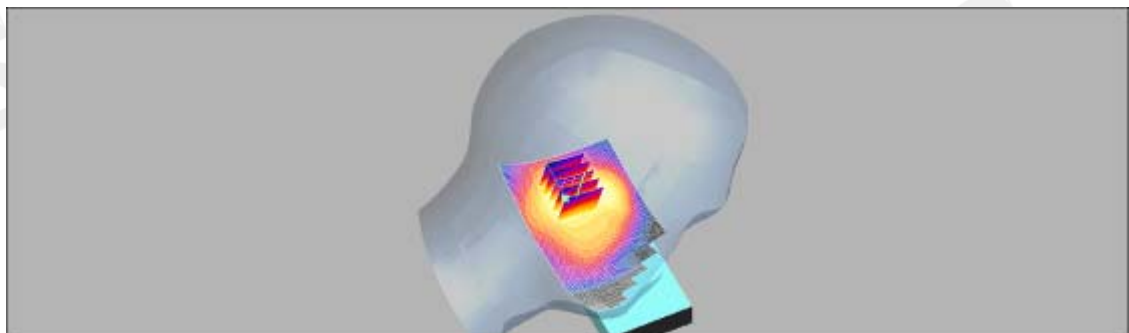
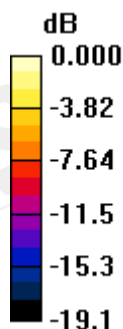
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.486 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.1 V/m; Power Drift = 0.030 dB  
 Peak SAR (extrapolated) = 0.694 W/kg

**SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.265 mW/g**  
 Maximum value of SAR (measured) = 0.485 mW/g



0 dB = 0.485mW/g

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## RE Tilt\_CH512

DUT: H-21;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

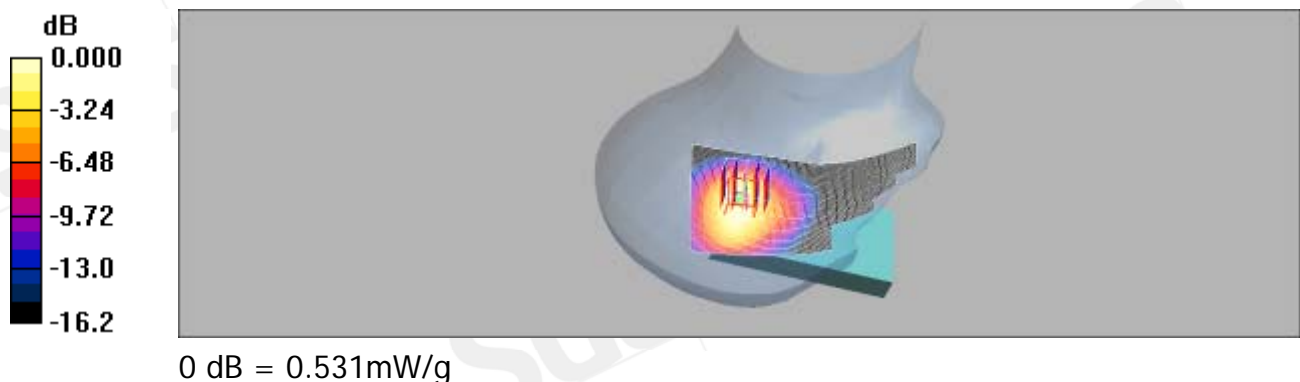
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.539 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 19.7 V/m; Power Drift = -0.043 dB  
 Peak SAR (extrapolated) = 0.726 W/kg

**SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.290 mW/g**  
 Maximum value of SAR (measured) = 0.531 mW/g



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## RE Tilt\_CH661

DUT: H-21;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

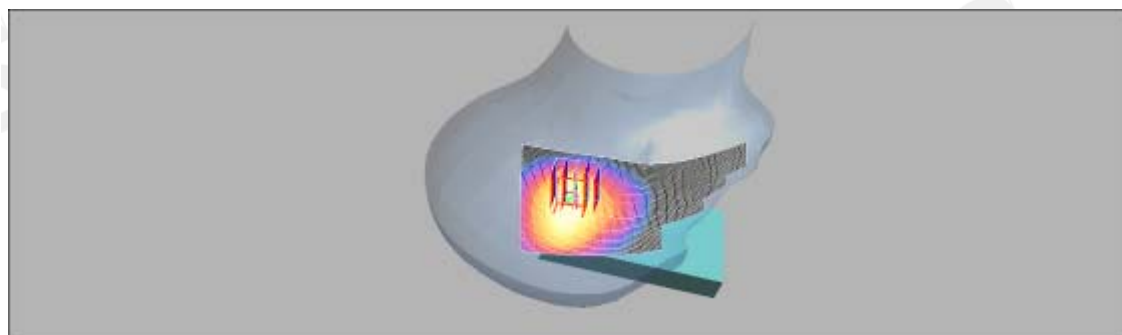
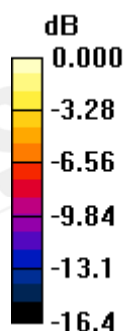
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.484 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 18.9 V/m; Power Drift = -0.098 dB  
 Peak SAR (extrapolated) = 0.666 W/kg

**SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.260 mW/g**  
 Maximum value of SAR (measured) = 0.481 mW/g



0 dB = 0.481mW/g

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## RE Tilt\_CH810

DUT: H-21;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

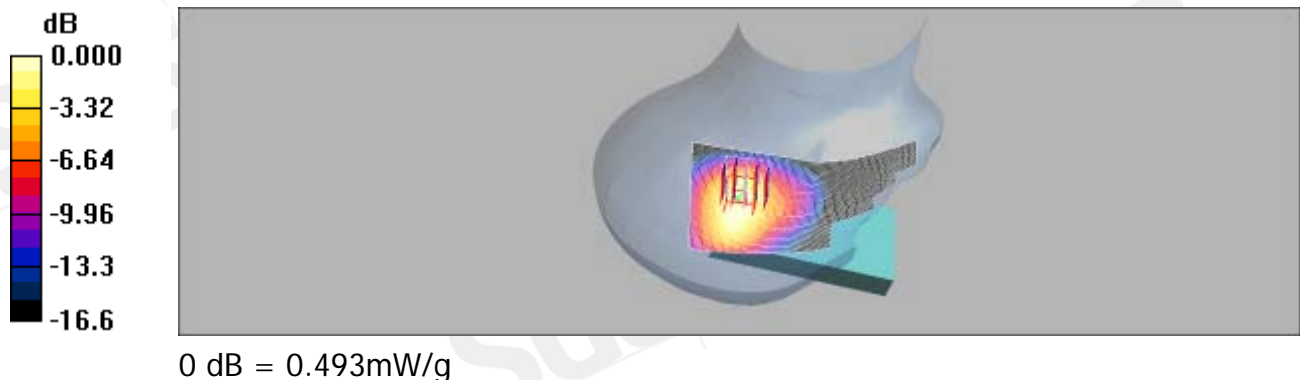
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.498 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.4 V/m; Power Drift = 0.068 dB  
 Peak SAR (extrapolated) = 0.695 W/kg

**SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.266 mW/g**  
 Maximum value of SAR (measured) = 0.493 mW/g



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## LE Tilt\_CH512

DUT: H-21;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

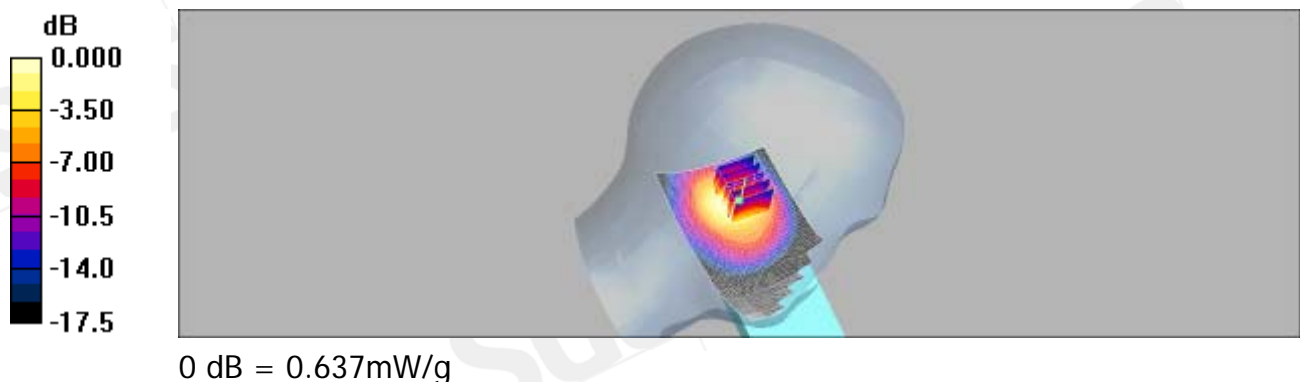
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.667 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 22.1 V/m; Power Drift = -0.061 dB  
 Peak SAR (extrapolated) = 0.877 W/kg

**SAR(1 g) = 0.581 mW/g; SAR(10 g) = 0.342 mW/g**  
 Maximum value of SAR (measured) = 0.637 mW/g



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## LE Tilt\_CH661

DUT: H-21;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

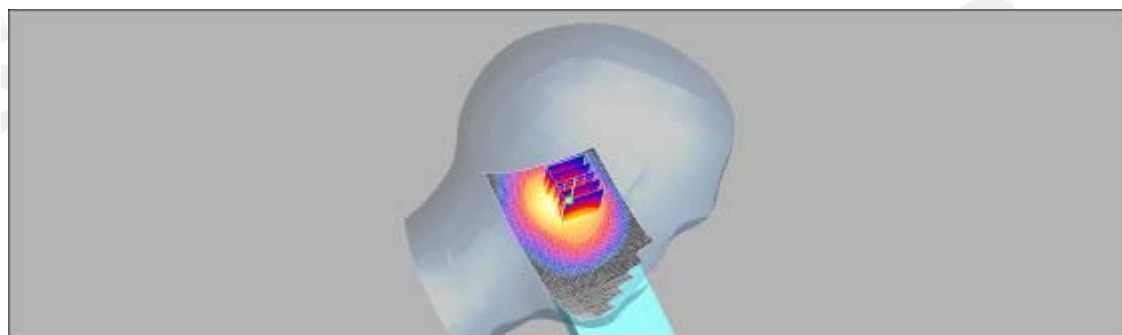
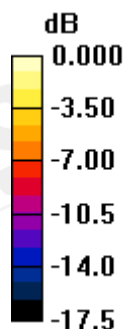
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.616 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 21.0 V/m; Power Drift = 0.081 dB  
 Peak SAR (extrapolated) = 0.838 W/kg

**SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.316 mW/g**  
 Maximum value of SAR (measured) = 0.595 mW/g



0 dB = 0.595mW/g

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## LE Tilt\_CH810

DUT: H-21;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

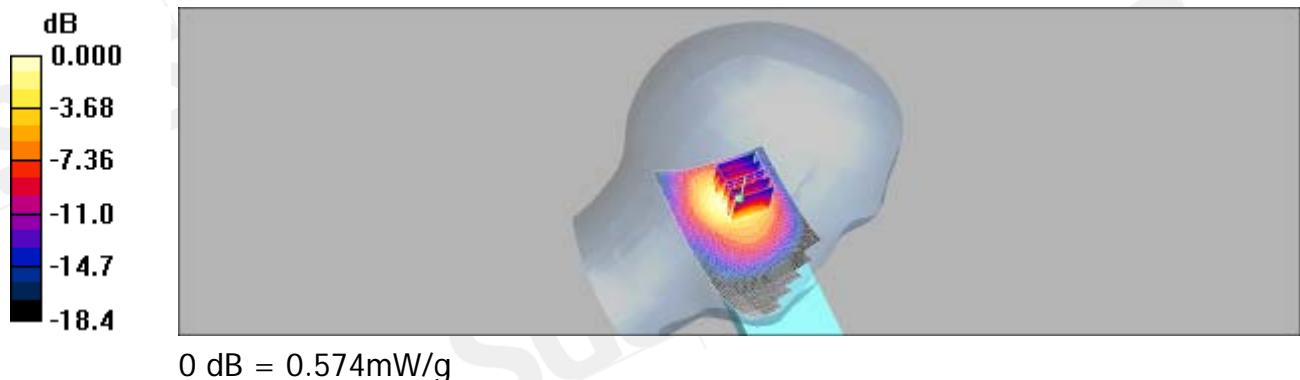
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.598 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 20.3 V/m; Power Drift = 0.046 dB  
 Peak SAR (extrapolated) = 0.823 W/kg

**SAR(1 g) = 0.524 mW/g; SAR(10 g) = 0.303 mW/g**  
 Maximum value of SAR (measured) = 0.574 mW/g



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## BODY\_CH512

DUT: H-21 ;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 1850.2 \text{ MHz}$ ;  $\sigma = 1.55 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

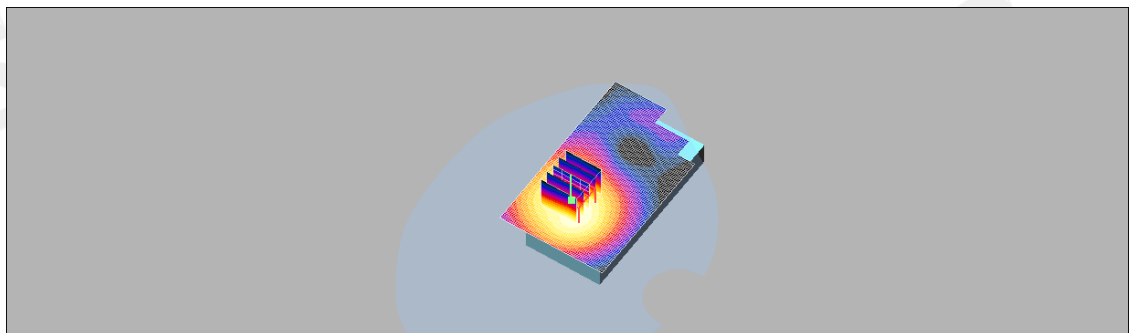
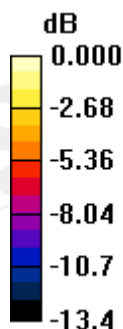
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.635 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.1 V/m; Power Drift = -0.075 dB  
 Peak SAR (extrapolated) = 0.828 W/kg

**SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.380 mW/g**  
 Maximum value of SAR (measured) = 0.631 mW/g



0 dB = 0.631mW/g

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## BODY\_CH661

DUT: H-21 ;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

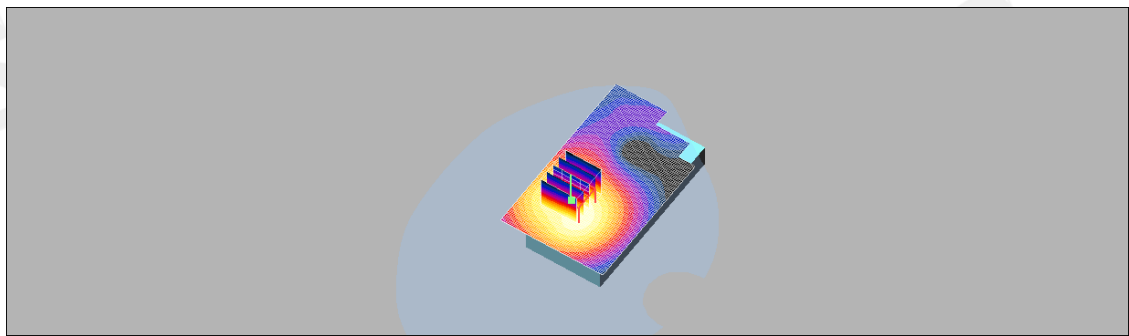
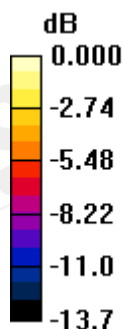
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.554 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.7 V/m; Power Drift = 0.025 dB  
 Peak SAR (extrapolated) = 0.744 W/kg

**SAR(1 g) = 0.510 mW/g; SAR(10 g) = 0.331 mW/g**  
 Maximum value of SAR (measured) = 0.552 mW/g



0 dB = 0.552mW/g

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## BODY\_CH810

DUT: H-21 ;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1910 \text{ MHz}$ ;  $\sigma = 1.58 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

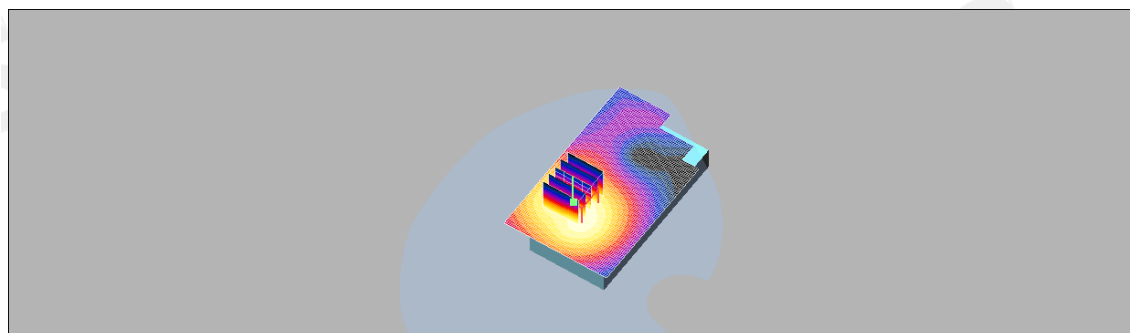
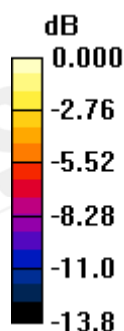
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.507 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.8 V/m; Power Drift = 0.026 dB  
 Peak SAR (extrapolated) = 0.701 W/kg

**SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.296 mW/g**  
 Maximum value of SAR (measured) = 0.501 mW/g



0 dB = 0.501mW/g

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## RE Cheek\_CH9262

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.38 mW/g

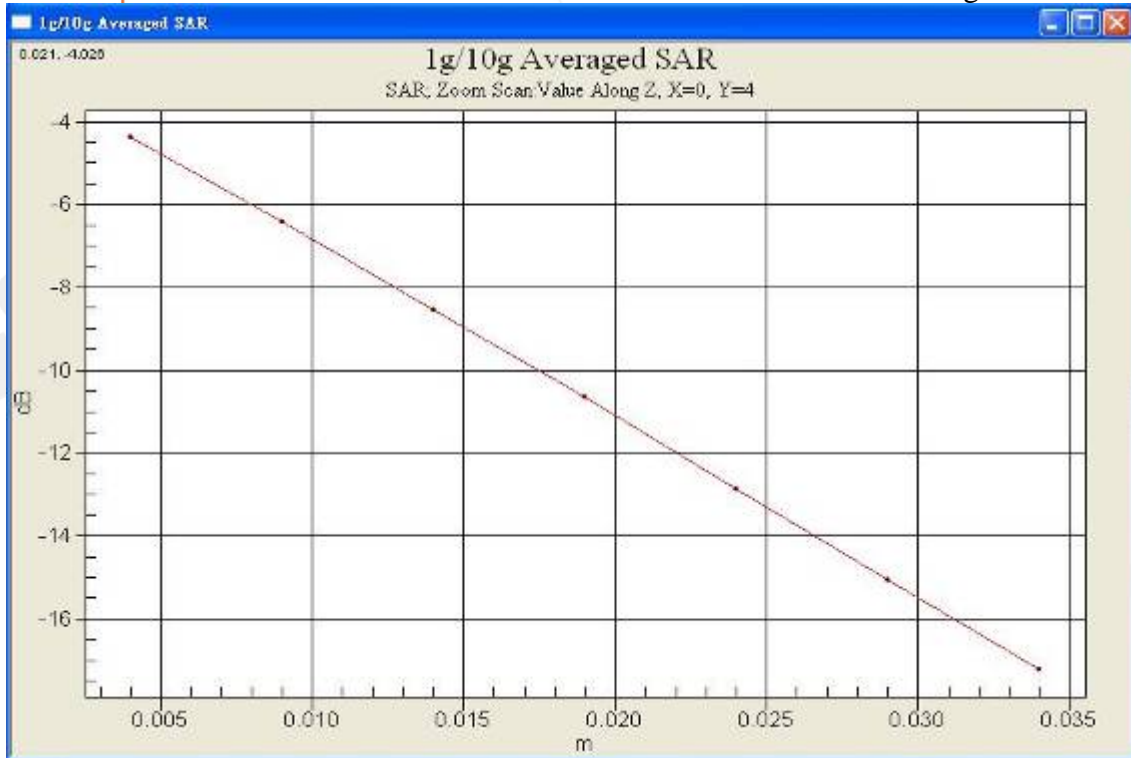
**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 25.3 V/m; Power Drift = -0.155 dB  
 Peak SAR (extrapolated) = 2.40 W/kg

**SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.662 mW/g**  
 Maximum value of SAR (measured) = 1.40 mW/g



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## RE Cheek\_CH9400

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

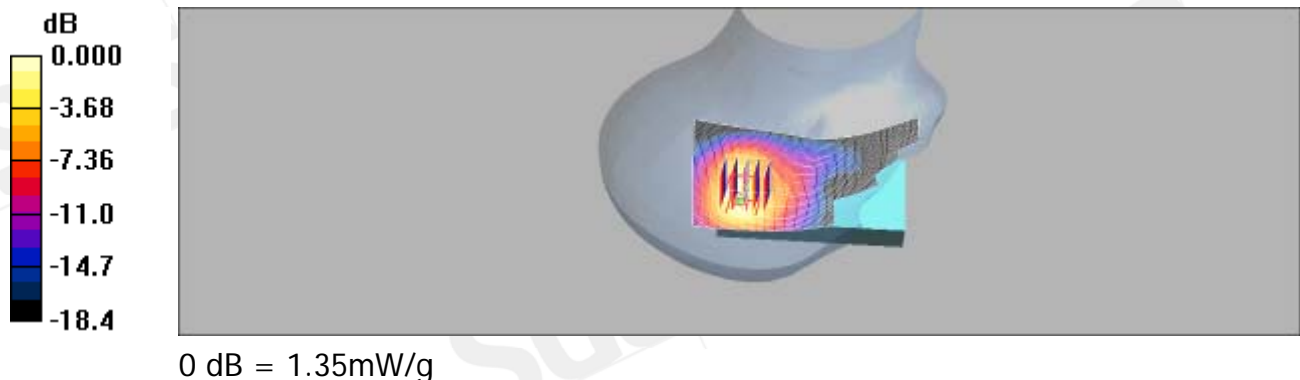
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.33 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 24.2 V/m; Power Drift = -0.025 dB  
 Peak SAR (extrapolated) = 2.35 W/kg

**SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.633 mW/g**  
 Maximum value of SAR (measured) = 1.35 mW/g



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## RE Cheek\_CH9538

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.28 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 23.1 V/m; Power Drift = -0.103 dB  
 Peak SAR (extrapolated) = 2.22 W/kg

**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.592 mW/g**  
 Maximum value of SAR (measured) = 1.27 mW/g



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## LE Cheek\_CH9262

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.37 \text{ mho/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

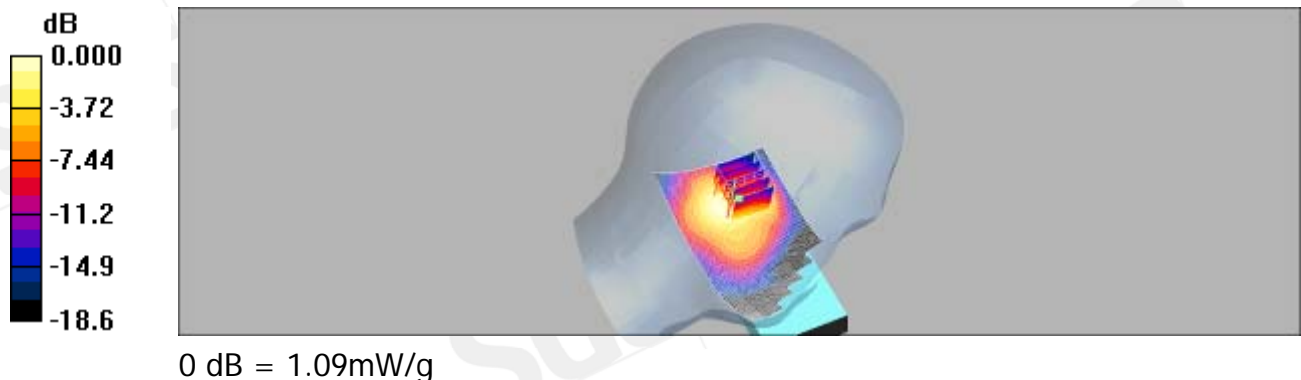
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.08 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 28.9 V/m; Power Drift = 0.082 dB  
 Peak SAR (extrapolated) = 1.51 W/kg

**SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.573 mW/g**  
 Maximum value of SAR (measured) = 1.09 mW/g



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## LE Cheek\_CH9400

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

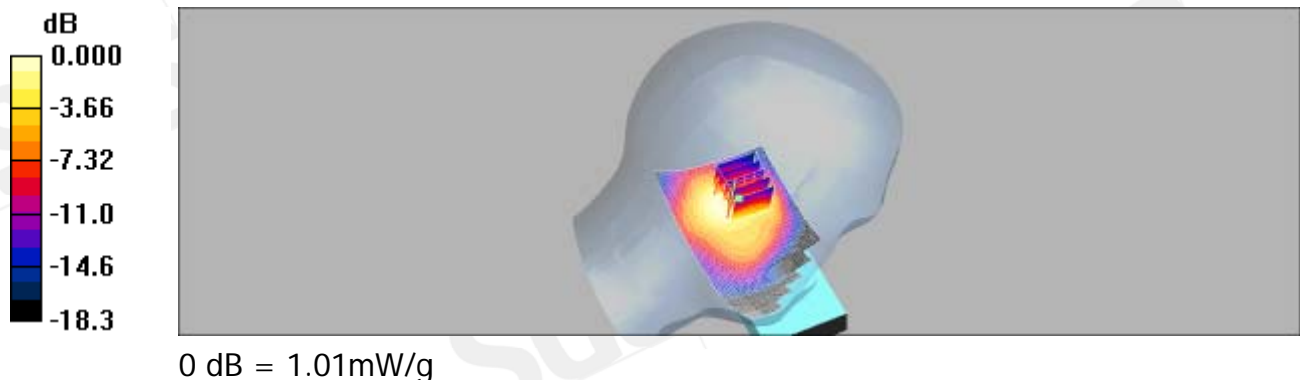
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.00 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 26.6 V/m; Power Drift = 0.145 dB  
 Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.537 mW/g**  
 Maximum value of SAR (measured) = 1.01 mW/g



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## LE Cheek\_CH9538

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

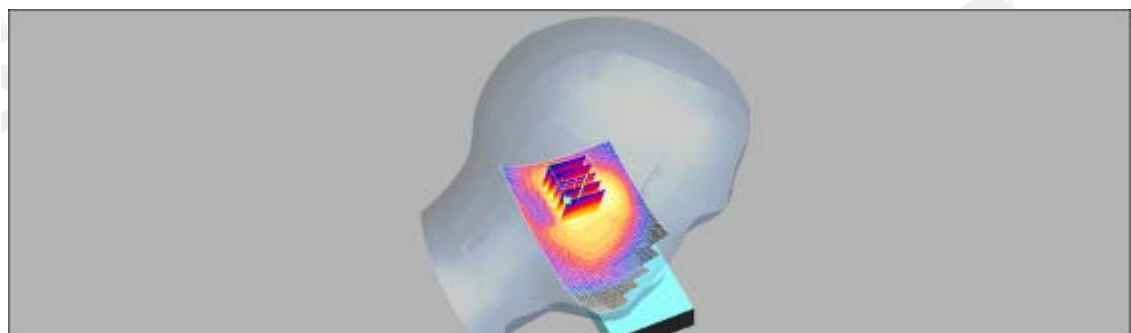
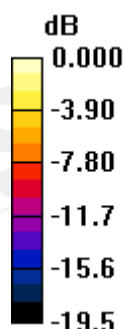
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.09 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 26.0 V/m; Power Drift = -0.038 dB  
 Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 0.853 mW/g; SAR(10 g) = 0.495 mW/g**  
 Maximum value of SAR (measured) = 0.931 mW/g



0 dB = 0.931mW/g

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## RE Tilt\_CH9262

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

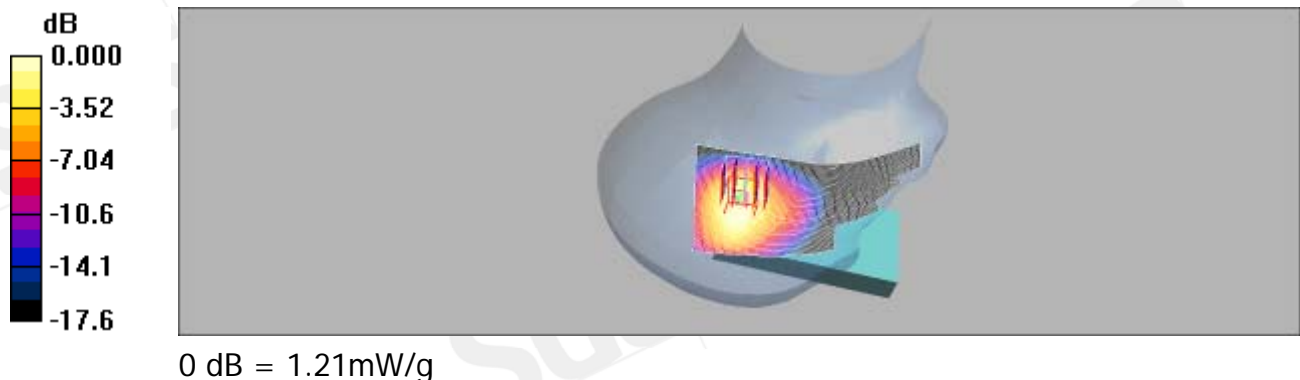
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 1.25 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 30.2 V/m; Power Drift = 0.105 dB  
 Peak SAR (extrapolated) = 1.68 W/kg

**SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.638 mW/g**  
 Maximum value of SAR (measured) = 1.21 mW/g



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## RE Tilt\_CH9400

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

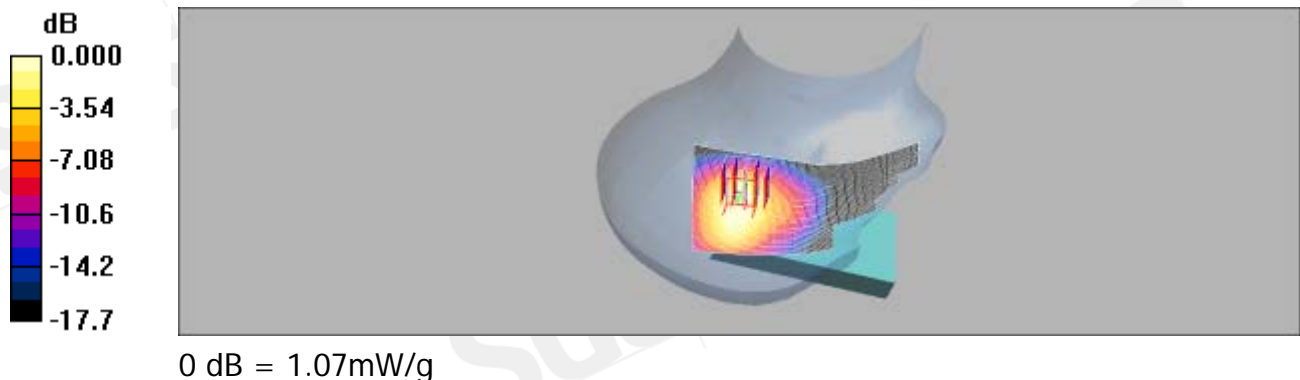
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.10 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 28.8 V/m; Power Drift = -0.046 dB  
 Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 0.987 mW/g; SAR(10 g) = 0.577 mW/g**  
 Maximum value of SAR (measured) = 1.07 mW/g



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## RE Tilt\_CH9538

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

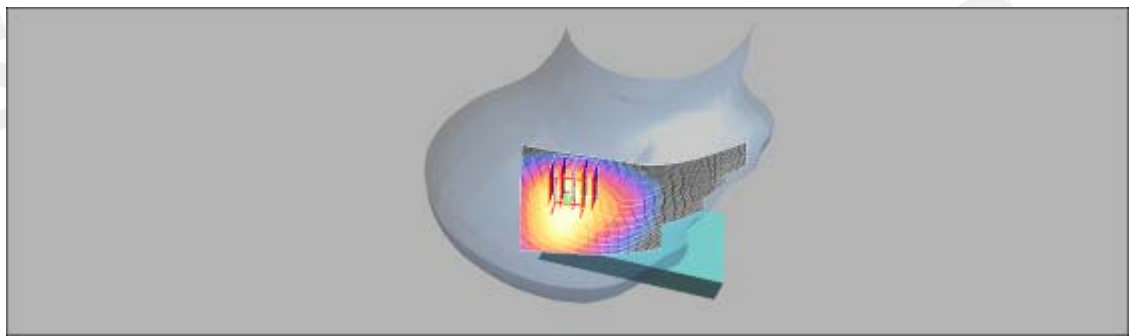
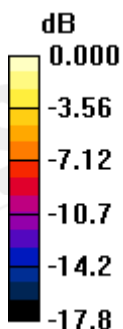
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.969 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 26.4 V/m; Power Drift = 0.004 dB  
 Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 0.863 mW/g; SAR(10 g) = 0.502 mW/g**  
 Maximum value of SAR (measured) = 0.935 mW/g



0 dB = 0.935mW/g

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## LE Tilt\_CH9262

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

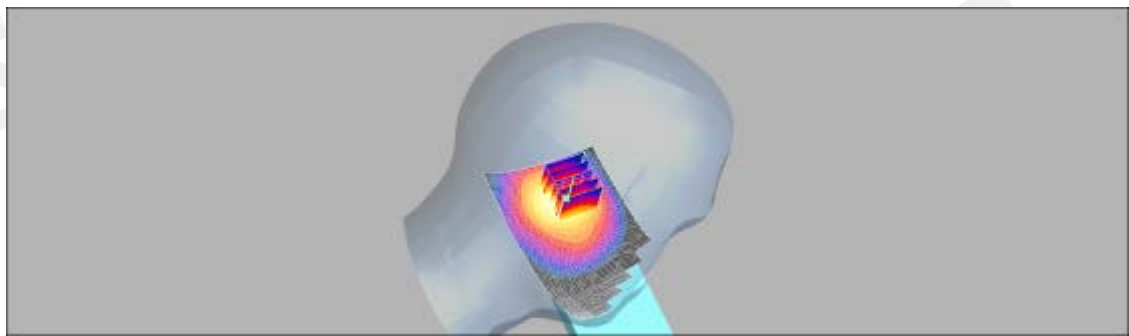
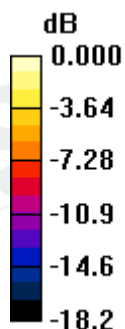
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.39 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 31.6 V/m; Power Drift = 0.161 dB  
 Peak SAR (extrapolated) = 1.89 W/kg

**SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.705 mW/g**  
 Maximum value of SAR (measured) = 1.34 mW/g



0 dB = 1.34mW/g

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## LE Tilt\_CH9400

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

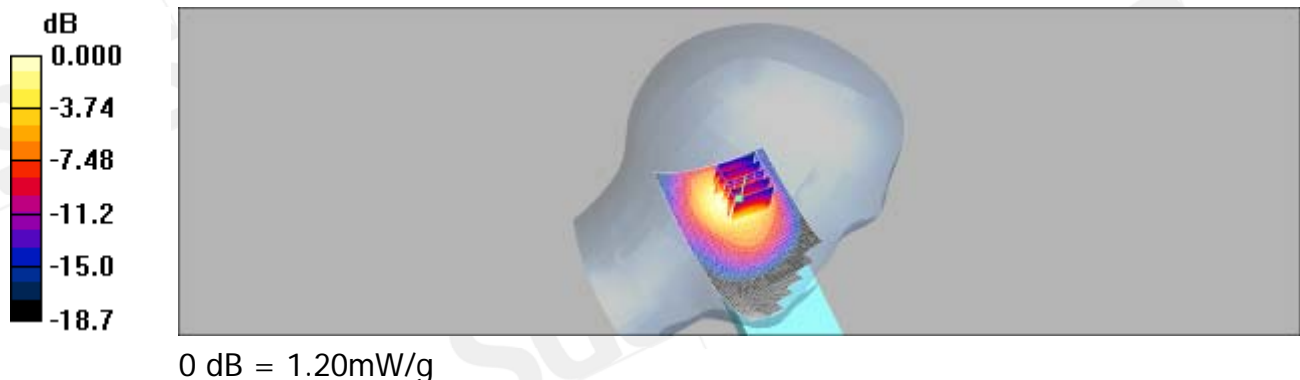
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.27 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 30.3 V/m; Power Drift = 0.043 dB  
 Peak SAR (extrapolated) = 1.74 W/kg

**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.633 mW/g**  
 Maximum value of SAR (measured) = 1.20 mW/g



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## LE Tilt\_CH9538

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.47 \text{ mho/m}$ ;  $\epsilon_r = 38.8$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

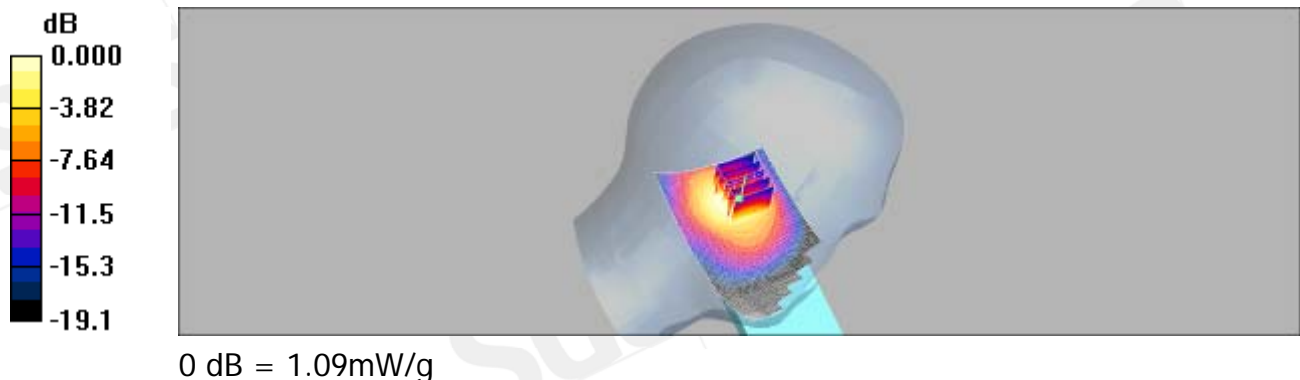
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.14 mW/g

**LE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 28.8 V/m; Power Drift = -0.096 dB  
 Peak SAR (extrapolated) = 1.59 W/kg

**SAR(1 g) = 1 mW/g; SAR(10 g) = 0.574 mW/g**  
 Maximum value of SAR (measured) = 1.09 mW/g



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## RE Cheek\_CH9262\_repeated with Memory card

DUT: H-21;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: Head 1900 MHz Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.42 \text{ mho/m}$ ;  $\epsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 1.33 mW/g

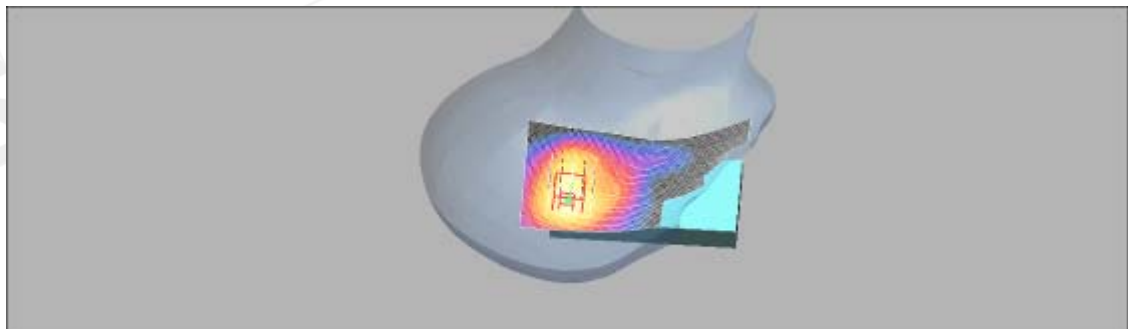
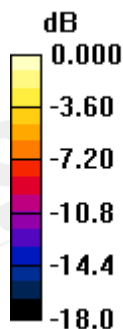
**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.7 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 2.25 W/kg

**SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.625 mW/g**

Maximum value of SAR (measured) = 1.33 mW/g



0 dB = 1.33mW/g

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## BODY\_CH9262

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.56 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

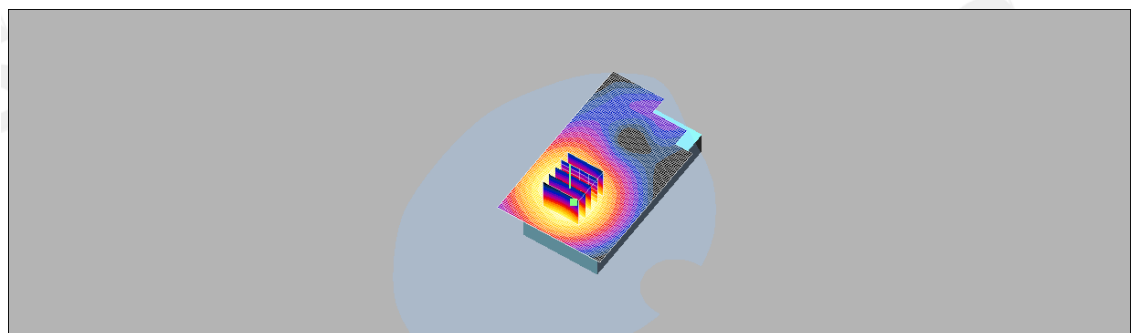
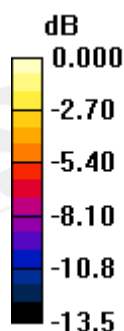
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89, 8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.671 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.1 V/m; Power Drift = 0.014 dB  
 Peak SAR (extrapolated) = 0.865 W/kg

**SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.397 mW/g**  
 Maximum value of SAR (measured) = 0.659 mW/g



0 dB = 0.659mW/g

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## BODY\_CH9400

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

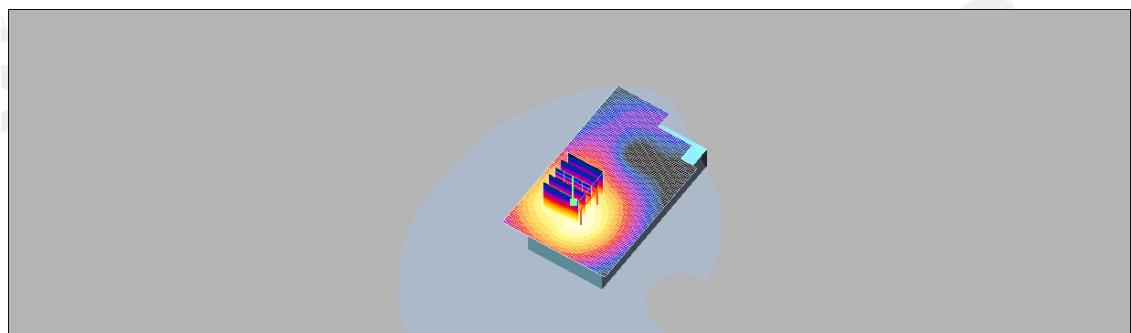
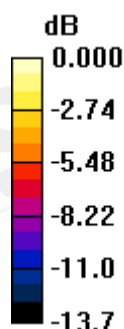
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.577 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 16.9 V/m; Power Drift = -0.033 dB  
 Peak SAR (extrapolated) = 0.774 W/kg

**SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.341 mW/g**  
 Maximum value of SAR (measured) = 0.571 mW/g



0 dB = 0.571mW/g

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## BODY\_CH9538

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1908$  MHz;  $\sigma = 1.6$  mho/m;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

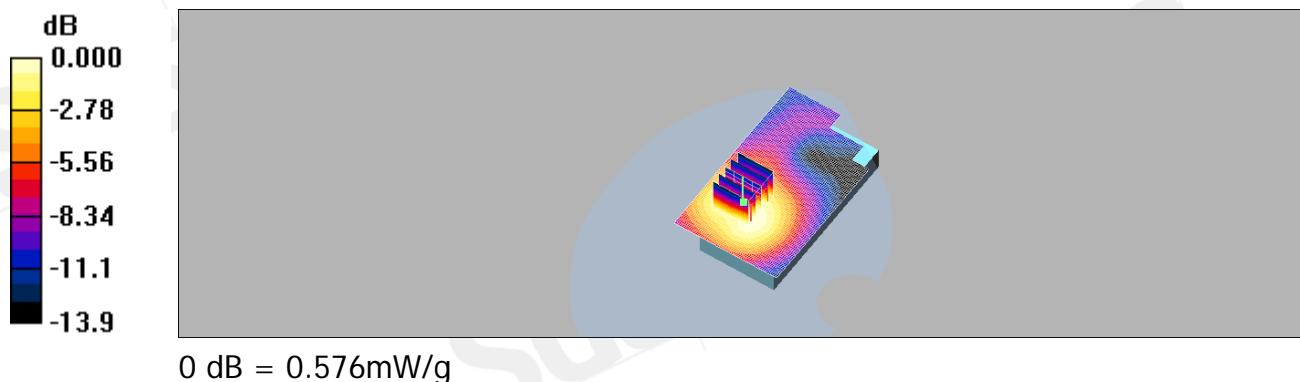
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.592 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 16.7 V/m; Power Drift = -0.062 dB  
 Peak SAR (extrapolated) = 0.807 W/kg

**SAR(1 g) = 0.536 mW/g; SAR(10 g) = 0.340 mW/g**  
 Maximum value of SAR (measured) = 0.576 mW/g



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## BODY \_CH9262\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.56 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

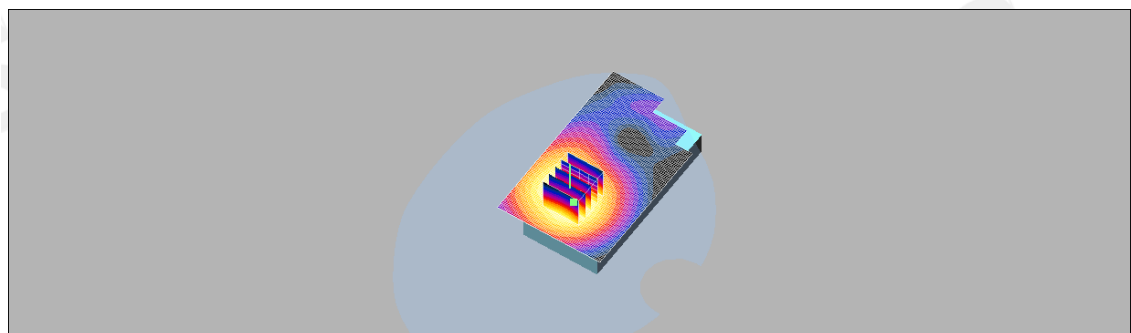
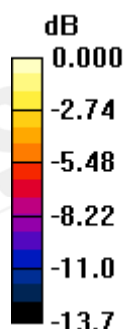
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.599 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.3 V/m; Power Drift = 0.009 dB  
 Peak SAR (extrapolated) = 0.789 W/kg

**SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.356 mW/g**  
 Maximum value of SAR (measured) = 0.594 mW/g



0 dB = 0.594mW/g

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## BODY \_CH9400\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

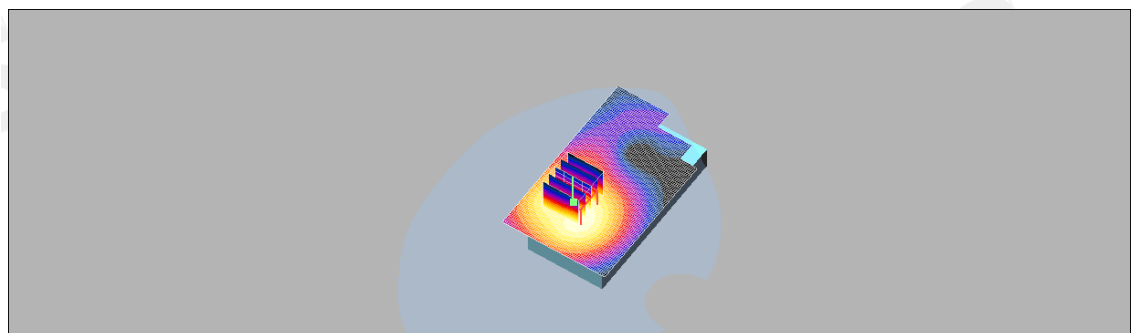
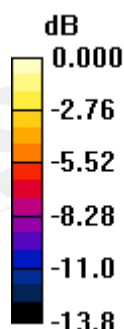
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.505 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.8 V/m; Power Drift = -0.010 dB  
 Peak SAR (extrapolated) = 0.672 W/kg

**SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.297 mW/g**  
 Maximum value of SAR (measured) = 0.498 mW/g



0 dB = 0.498mW/g

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## BODY \_CH9538\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.6 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

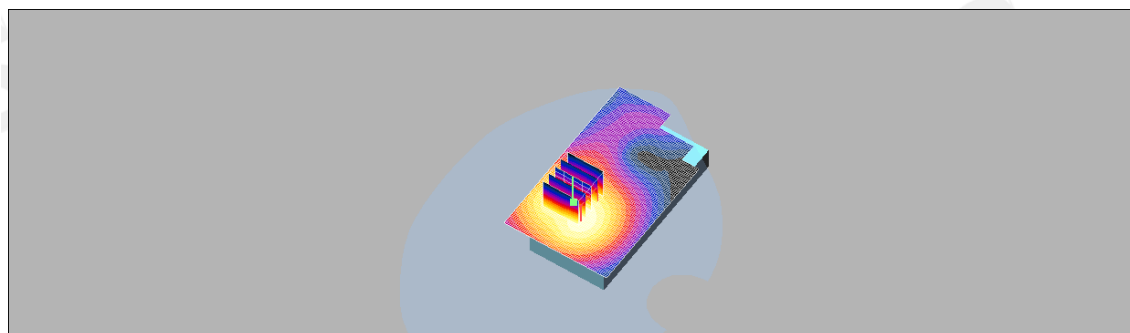
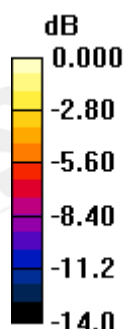
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.512 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.6 V/m; Power Drift = -0.039 dB  
 Peak SAR (extrapolated) = 0.704 W/kg

**SAR(1 g) = 0.467 mW/g; SAR(10 g) = 0.296 mW/g**  
 Maximum value of SAR (measured) = 0.503 mW/g



0 dB = 0.503mW/g

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**BODY \_CH9262\_HSUPA mode**

**DUT: H-21 ;**

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.56 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

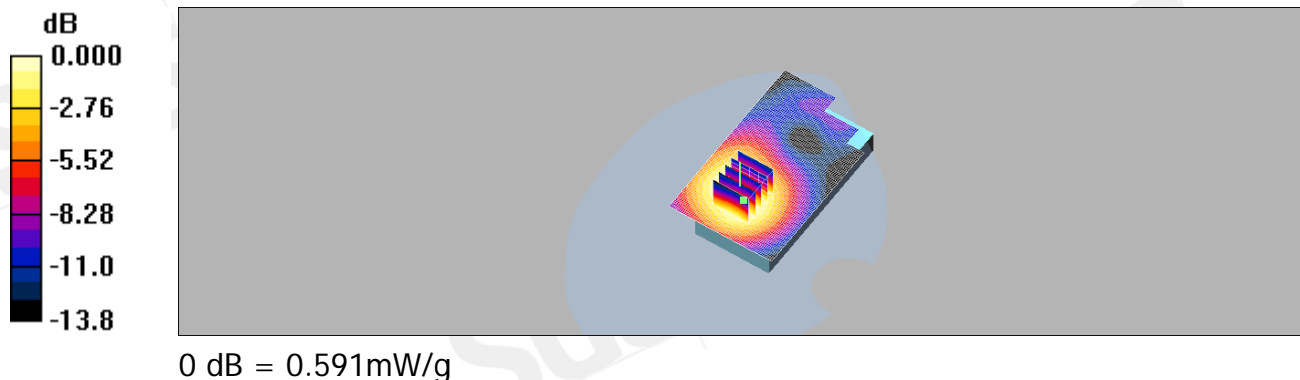
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.601 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.3 V/m; Power Drift = 0.000 dB  
 Peak SAR (extrapolated) = 0.790 W/kg

**SAR(1 g) = 0.547 mW/g; SAR(10 g) = 0.357 mW/g**  
 Maximum value of SAR (measured) = 0.591 mW/g



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## BODY \_CH9400\_HSUPA mode

DUT: H-21 ;

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.59 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

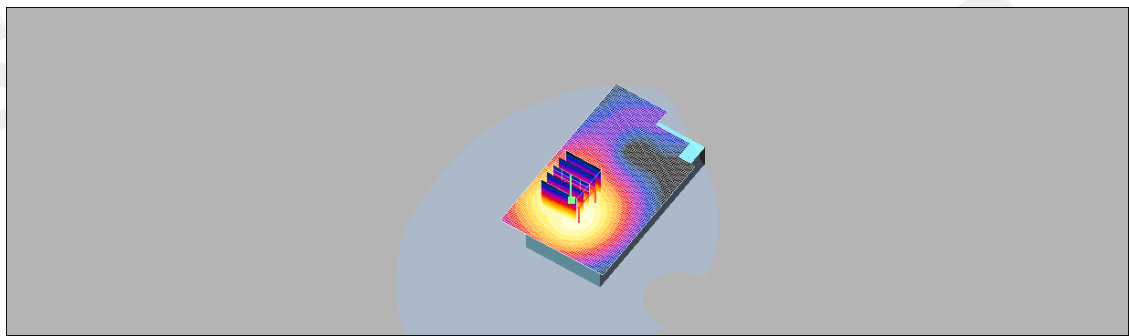
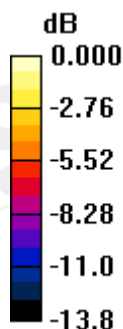
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.508 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.8 V/m; Power Drift = -0.048 dB  
 Peak SAR (extrapolated) = 0.668 W/kg

**SAR(1 g) = 0.455 mW/g; SAR(10 g) = 0.294 mW/g**  
 Maximum value of SAR (measured) = 0.492 mW/g



0 dB = 0.492mW/g

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**BODY \_CH9538\_HSUPA mode**

**DUT: H-21 ;**

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1908 \text{ MHz}$ ;  $\sigma = 1.6 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

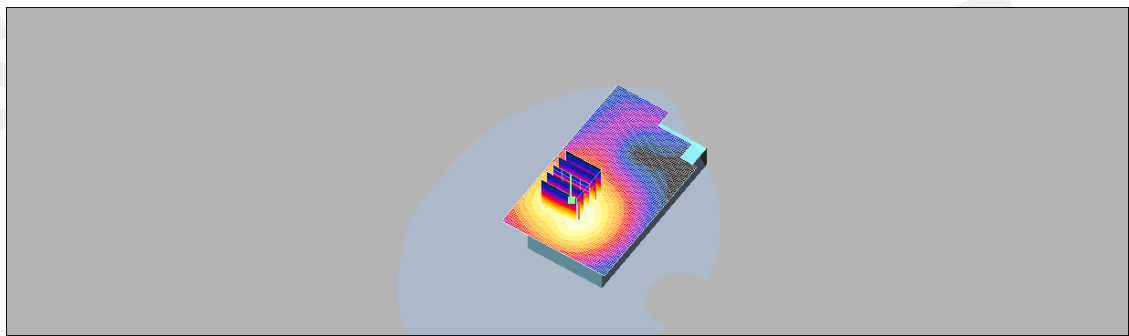
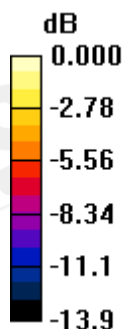
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.498 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 15.4 V/m; Power Drift = -0.097 dB  
 Peak SAR (extrapolated) = 0.689 W/kg

**SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.288 mW/g**  
 Maximum value of SAR (measured) = 0.491 mW/g



0 dB = 0.491mW/g

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## RE Cheek\_CH4132

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.881 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

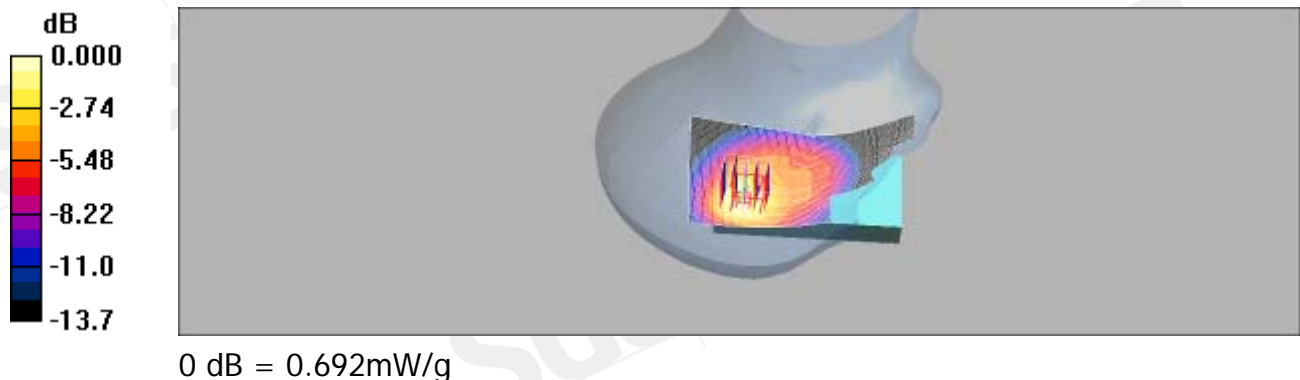
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.693 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.2 V/m; Power Drift = -0.169 dB  
 Peak SAR (extrapolated) = 1.09 W/kg

**SAR(1 g) = 0.640 mW/g; SAR(10 g) = 0.378 mW/g**  
 Maximum value of SAR (measured) = 0.692 mW/g



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## RE Cheek\_CH4183

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

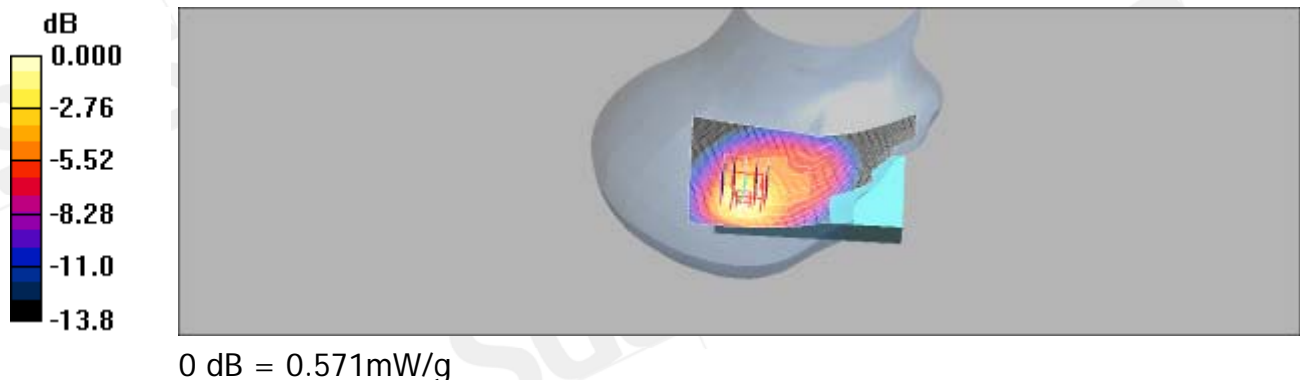
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.539 mW/g

**RE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 16.3 V/m; Power Drift = -0.085 dB  
 Peak SAR (extrapolated) = 0.885 W/kg

**SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.306 mW/g**  
 Maximum value of SAR (measured) = 0.571 mW/g



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## RE Cheek\_CH4233

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 0.904 \text{ mho/m}$ ;  $\epsilon_r = 42.3$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

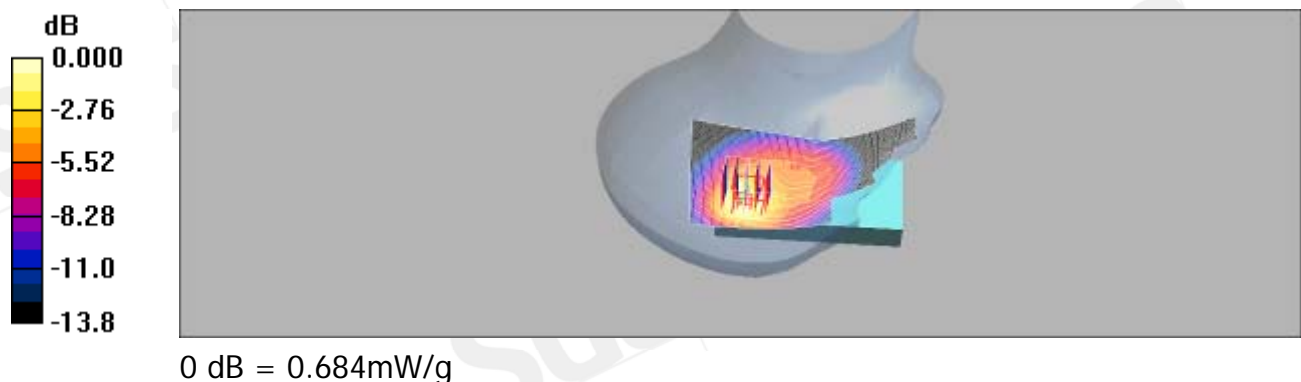
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.650 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 = -0.017 dB  
 Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.627 mW/g; SAR(10 g) = 0.371 mW/g**  
 Maximum value of SAR (measured) = 0.684 mW/g



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## LE Cheek\_CH4132

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.881 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.371 mW/g

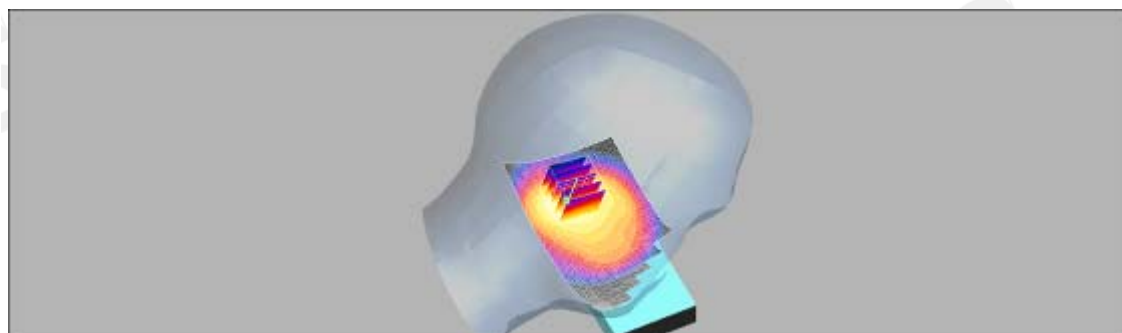
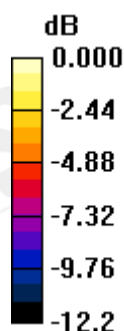
**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.9 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.500 W/kg

**SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.228 mW/g**

Maximum value of SAR (measured) = 0.361 mW/g



0 dB = 0.361mW/g

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## LE Cheek\_CH4183

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.265 mW/g

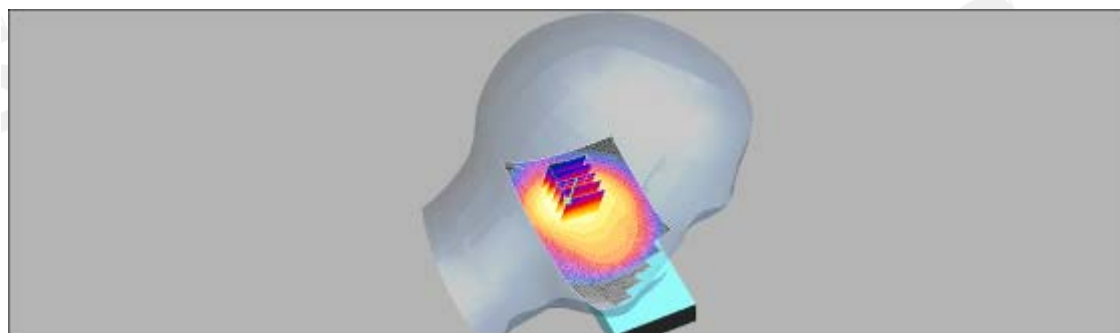
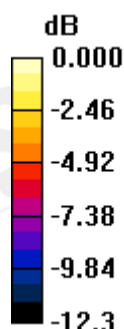
**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,  
 dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.031 dB

Peak SAR (extrapolated) = 0.363 W/kg

**SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.163 mW/g**

Maximum value of SAR (measured) = 0.259 mW/g



0 dB = 0.259mW/g

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## LE Cheek\_CH4233

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 0.904 \text{ mho/m}$ ;  $\epsilon_r = 42.3$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

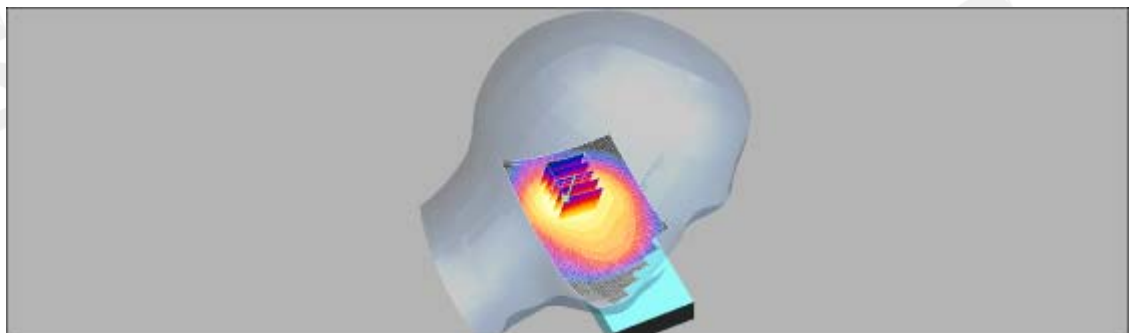
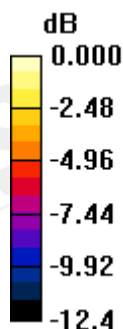
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LE\_Cheek/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.429 mW/g

**LE\_Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 19.0 V/m; Power Drift = 0.041 dB  
 Peak SAR (extrapolated) = 0.592 W/kg

**SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.265 mW/g**  
 Maximum value of SAR (measured) = 0.425 mW/g



0 dB = 0.425mW/g

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## RE Tilt\_CH4132

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.881 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

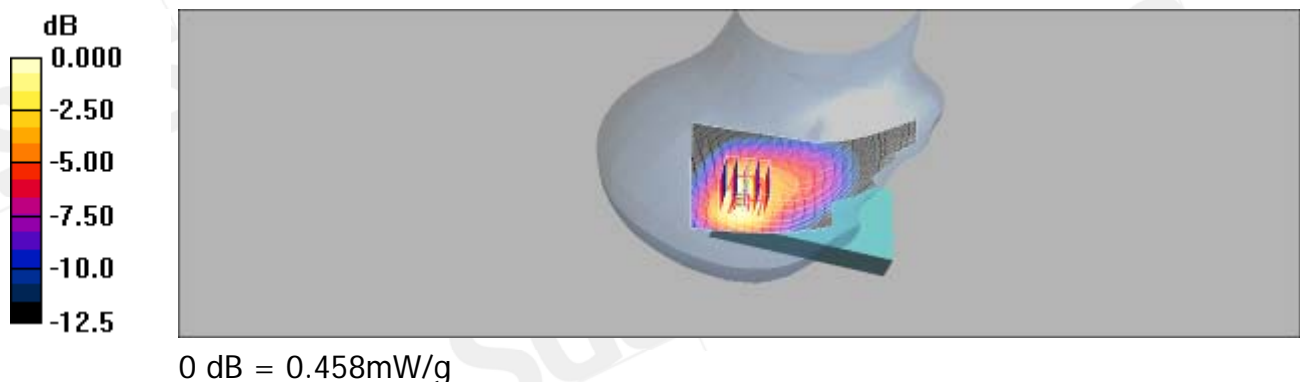
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.456 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.7 V/m; Power Drift = 0.012 dB  
 Peak SAR (extrapolated) = 0.695 W/kg

**SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.263 mW/g**  
 Maximum value of SAR (measured) = 0.458 mW/g



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## RE Tilt\_CH4183

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

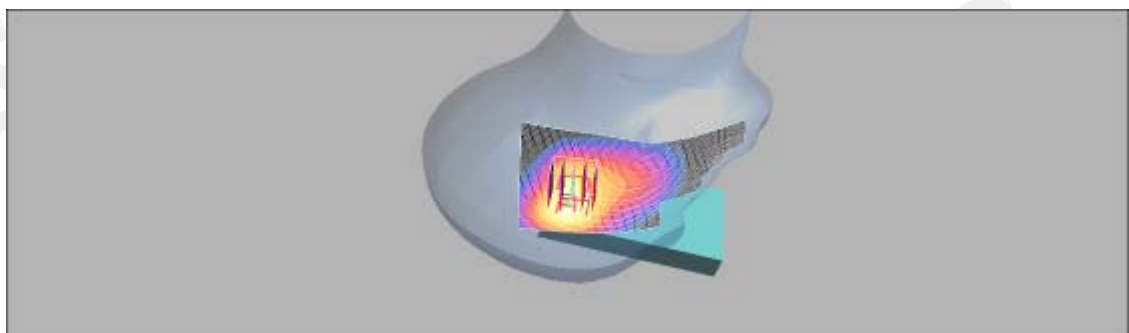
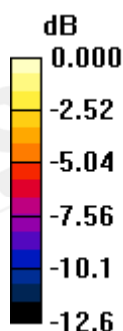
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.388 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 16.5 V/m; Power Drift = -0.085 dB  
 Peak SAR (extrapolated) = 0.594 W/kg

**SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.225 mW/g**  
 Maximum value of SAR (measured) = 0.390 mW/g



0 dB = 0.390mW/g

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## RE Tilt\_CH4233

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 0.904 \text{ mho/m}$ ;  $\epsilon_r = 42.3$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

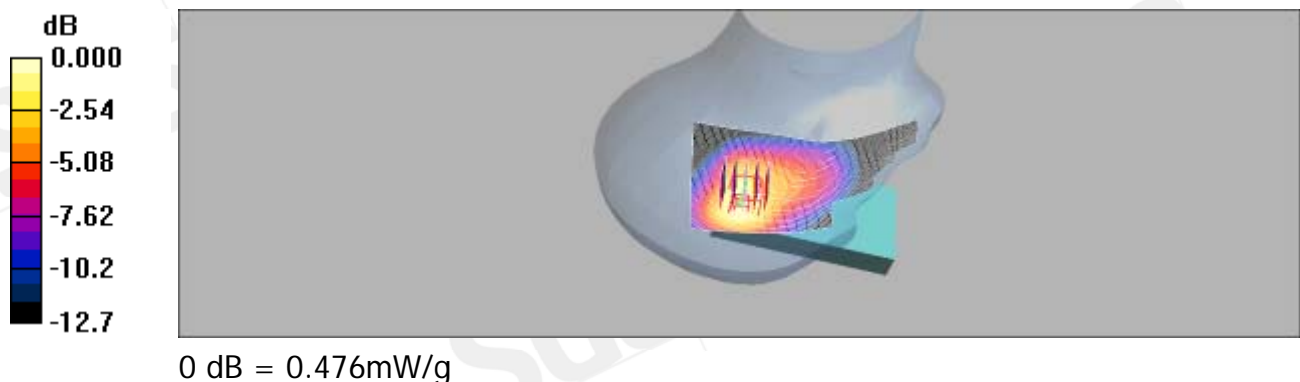
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.476 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  
 $dz=5\text{mm}$   
 Reference Value = 17.9 V/m; Power Drift = -0.015 dB  
 Peak SAR (extrapolated) = 0.727 W/kg

**SAR(1 g) = 0.446 mW/g; SAR(10 g) = 0.275 mW/g**  
 Maximum value of SAR (measured) = 0.476 mW/g



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## LE Tilt\_CH4132

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.881 \text{ mho/m}$ ;  $\epsilon_r = 42.6$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

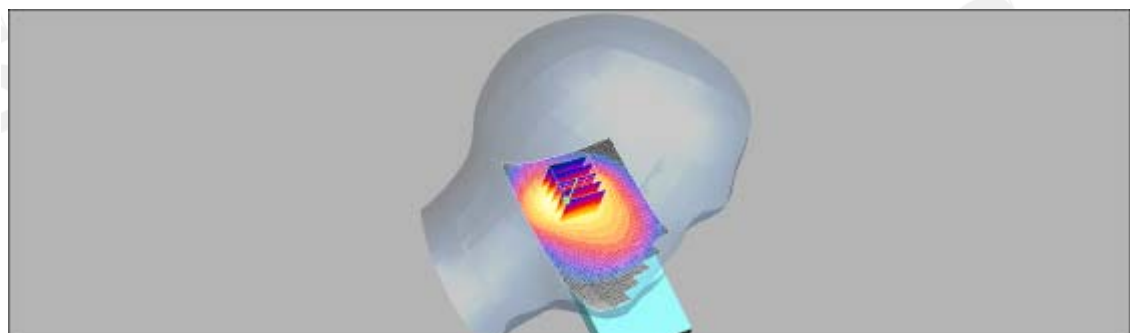
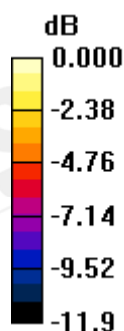
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.287 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 16.5 V/m; Power Drift = 0.014 dB  
 Peak SAR (extrapolated) = 0.388 W/kg

**SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.174 mW/g**  
 Maximum value of SAR (measured) = 0.278 mW/g



0 dB = 0.278mW/g

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## LE Tilt\_CH4183

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.892 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

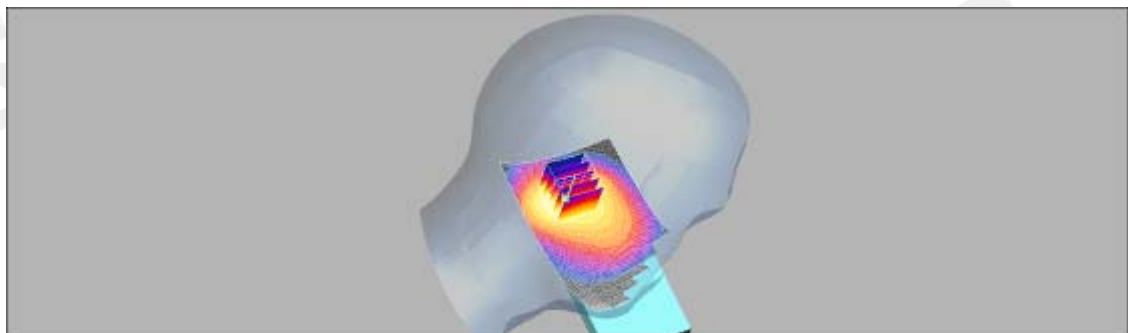
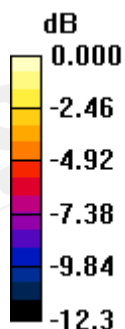
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.204 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 13.9 V/m; Power Drift = -0.010 dB  
 Peak SAR (extrapolated) = 0.272 W/kg

**SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.123 mW/g**  
 Maximum value of SAR (measured) = 0.198 mW/g



0 dB = 0.198mW/g

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## LE Tilt\_CH4233

DUT: H-21;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: Head 900 MHz Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 0.904 \text{ mho/m}$ ;  $\epsilon_r = 42.3$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

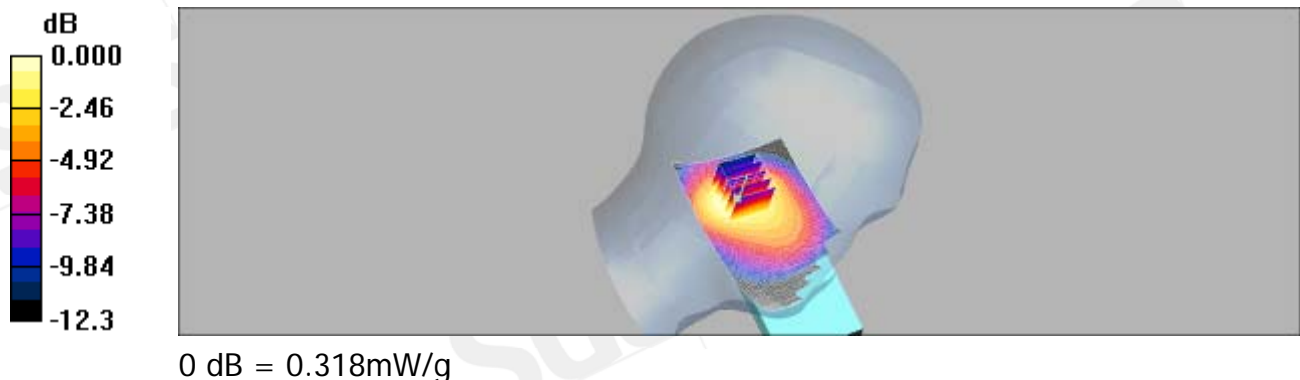
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE\_Tilt/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.328 mW/g

**RE\_Tilt/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 17.4 V/m; Power Drift = 0.030 dB  
 Peak SAR (extrapolated) = 0.438 W/kg

**SAR(1 g) = 0.297 mW/g; SAR(10 g) = 0.198 mW/g**  
 Maximum value of SAR (measured) = 0.318 mW/g



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## BODY\_CH4132

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.981 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

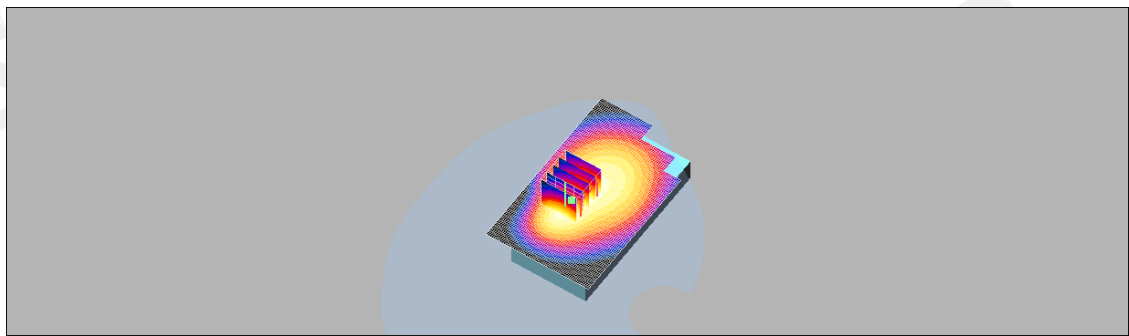
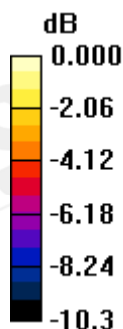
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.574 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 11.8 V/m; Power Drift = -0.152 dB  
 Peak SAR (extrapolated) = 0.687 W/kg

**SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.382 mW/g**  
 Maximum value of SAR (measured) = 0.557 mW/g



0 dB = 0.557mW/g

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## BODY\_CH4183

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.992 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

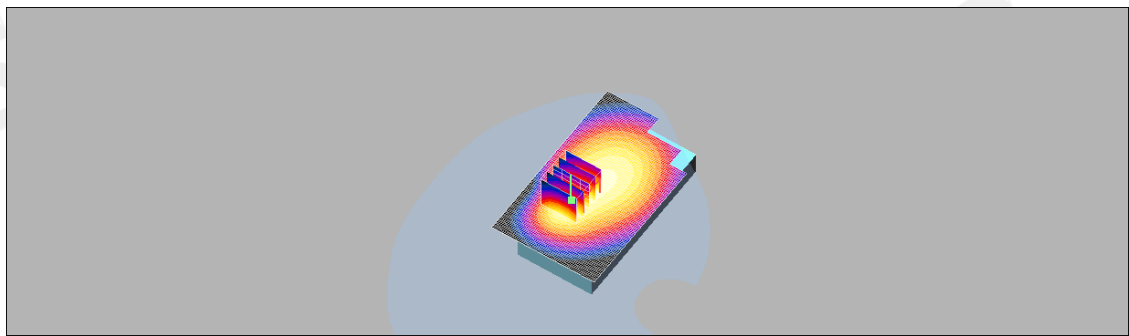
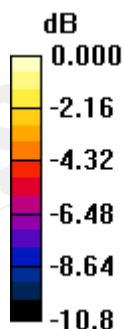
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.326 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 9.04 V/m; Power Drift = -0.139 dB  
 Peak SAR (extrapolated) = 0.390 W/kg

**SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.210 mW/g**  
 Maximum value of SAR (measured) = 0.310 mW/g



0 dB = 0.310mW/g

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## BODY\_CH4233

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 1 \text{ mho/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

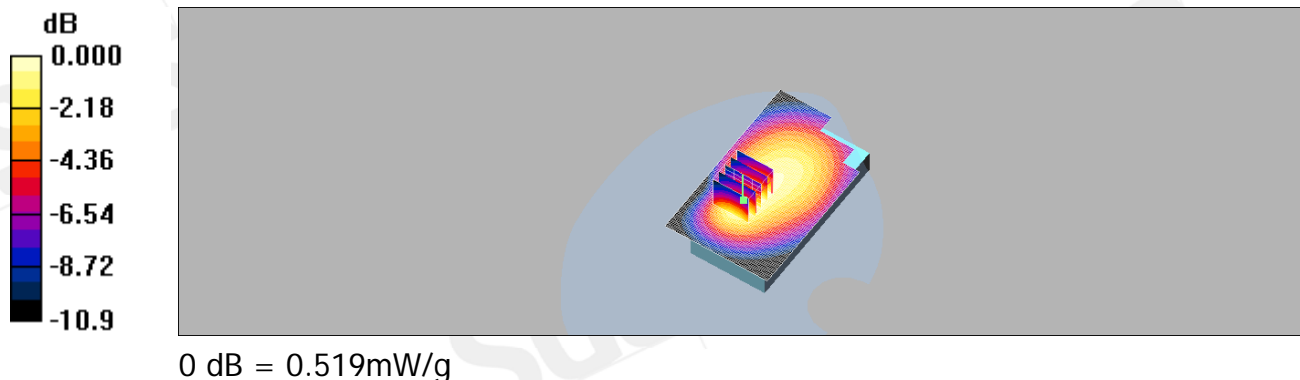
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.538 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 11.8 V/m; Power Drift = -0.177 dB  
 Peak SAR (extrapolated) = 0.659 W/kg

**SAR(1 g) = 0.491 mW/g; SAR(10 g) = 0.348 mW/g**  
 Maximum value of SAR (measured) = 0.519 mW/g



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## BODY\_CH4132\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.981 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

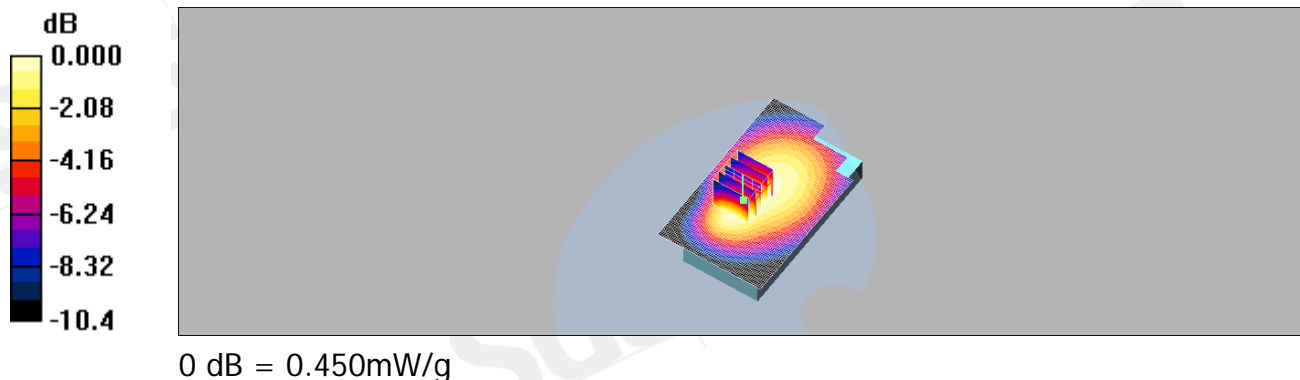
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.464 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 10.5 V/m; Power Drift = 0.016 dB  
 Peak SAR (extrapolated) = 0.563 W/kg

**SAR(1 g) = 0.425 mW/g; SAR(10 g) = 0.309 mW/g**  
 Maximum value of SAR (measured) = 0.450 mW/g



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## BODY\_CH4183\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.992 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

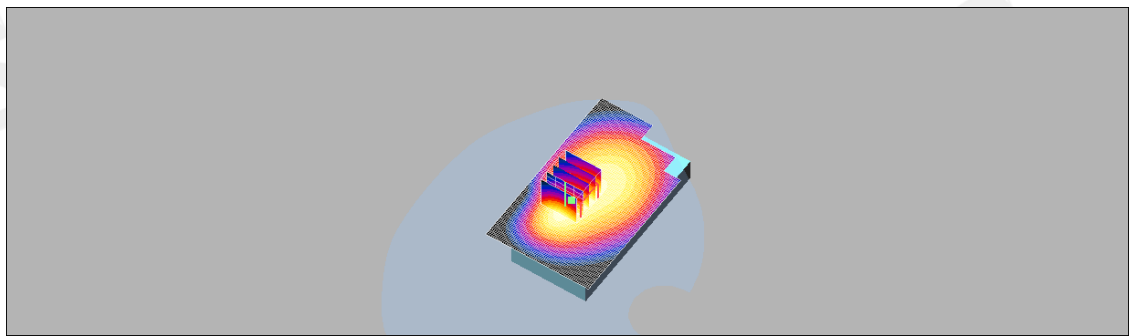
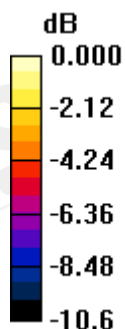
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.270 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 8.18 V/m; Power Drift = -0.090 dB  
 Peak SAR (extrapolated) = 0.330 W/kg

**SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.176 mW/g**  
 Maximum value of SAR (measured) = 0.264 mW/g



0 dB = 0.264mW/g

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## BODY\_CH4233\_HSDPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 1 \text{ mho/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

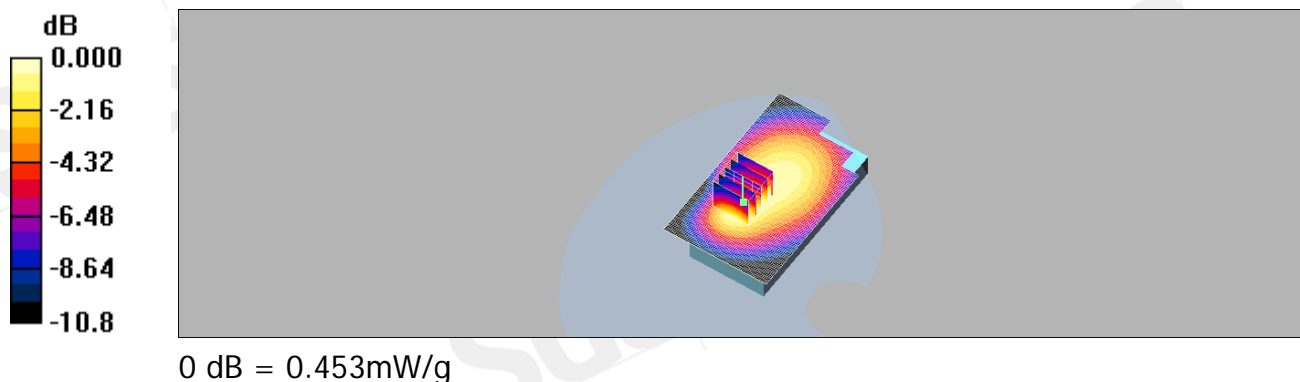
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.467 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 10.9 V/m; Power Drift = -0.001 dB  
 Peak SAR (extrapolated) = 0.571 W/kg

**SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.303 mW/g**  
 Maximum value of SAR (measured) = 0.453 mW/g



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## BODY\_CH4132\_HSUPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 826.4 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used (interpolated):  $f = 826.4 \text{ MHz}$ ;  $\sigma = 0.981 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

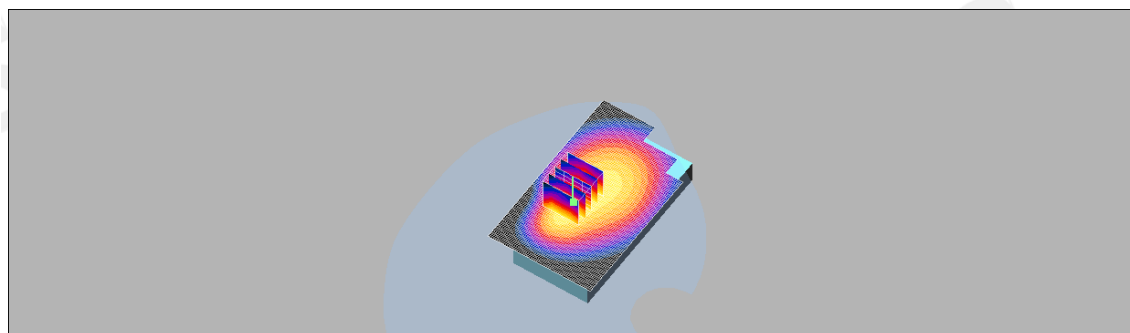
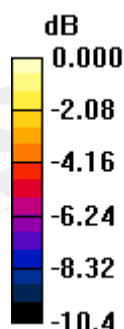
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.377 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 9.44 V/m; Power Drift = 0.10 dB  
 Peak SAR (extrapolated) = 0.589 W/kg

**SAR(1 g) = 0.432 mW/g; SAR(10 g) = 0.291 mW/g**  
 Maximum value of SAR (measured) = 0.466 mW/g



0 dB = 0.466mW/g

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## BODY\_CH4183\_HSUPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.992 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

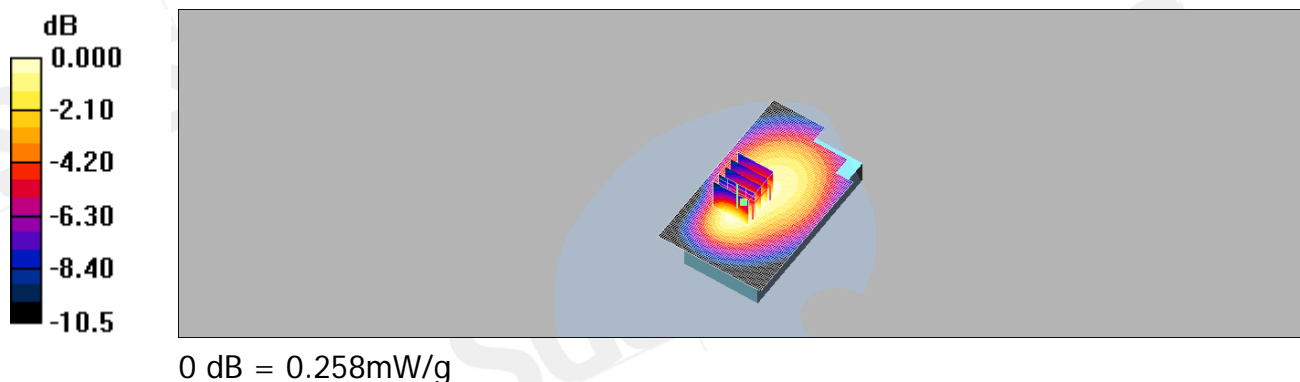
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.269 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 8.14 V/m; Power Drift = 0.035 dB  
 Peak SAR (extrapolated) = 0.322 W/kg

**SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.176 mW/g**  
 Maximum value of SAR (measured) = 0.258 mW/g



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## BODY\_CH4233\_HSUPA mode

DUT: H-21 ;

Communication System: WCDMA BAND5; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 847 \text{ MHz}$ ;  $\sigma = 1 \text{ mho/m}$ ;  $\epsilon_r = 55.5$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

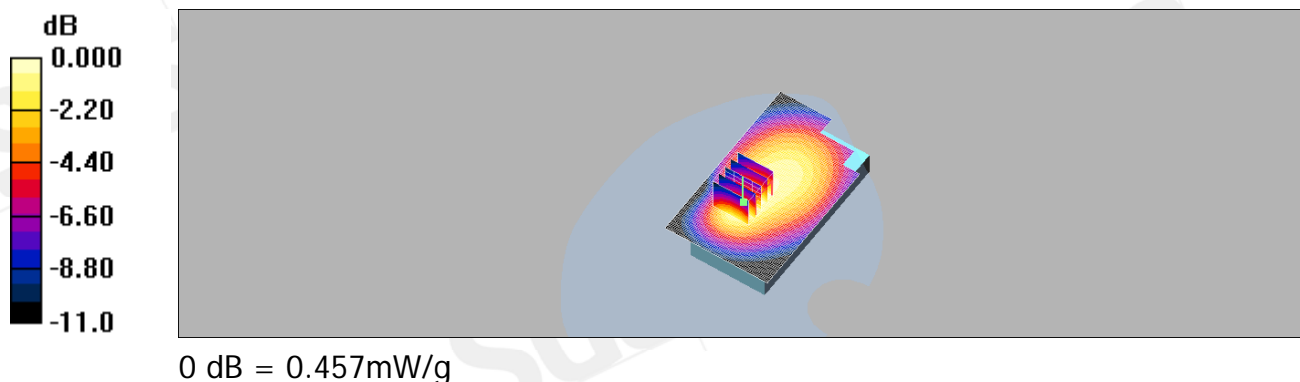
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.473 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 10.9 V/m; Power Drift = 0.021 dB  
 Peak SAR (extrapolated) = 0.577 W/kg

**SAR(1 g) = 0.429 mW/g; SAR(10 g) = 0.304 mW/g**  
 Maximum value of SAR (measured) = 0.457 mW/g



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## BODY\_WLAN802.11 b\_CH1

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

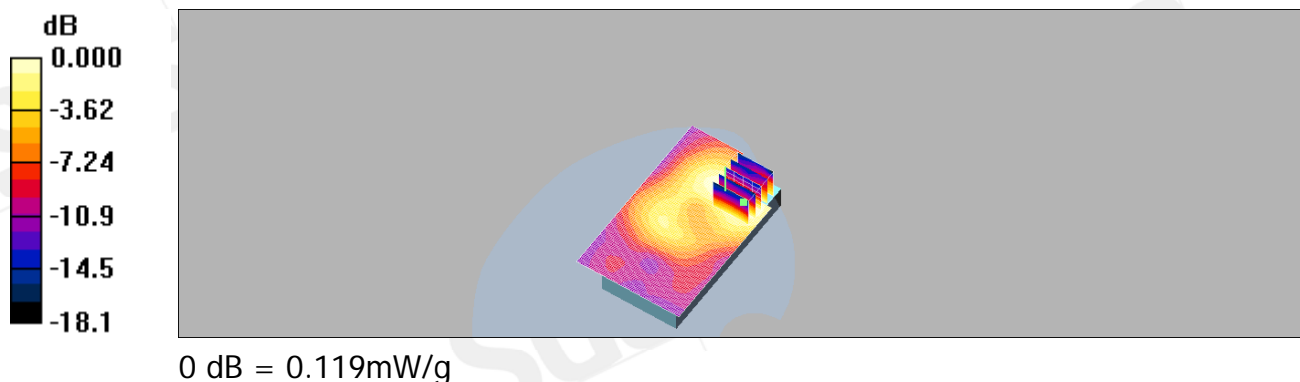
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.123 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 2.52 V/m; Power Drift = -0.146 dB  
 Peak SAR (extrapolated) = 0.193 W/kg

**SAR(1 g) = 0.111 mW/g; SAR(10 g) = 0.066 mW/g**  
 Maximum value of SAR (measured) = 0.119 mW/g



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## BODY\_WLAN802.11 b\_CH6

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2437 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 2 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

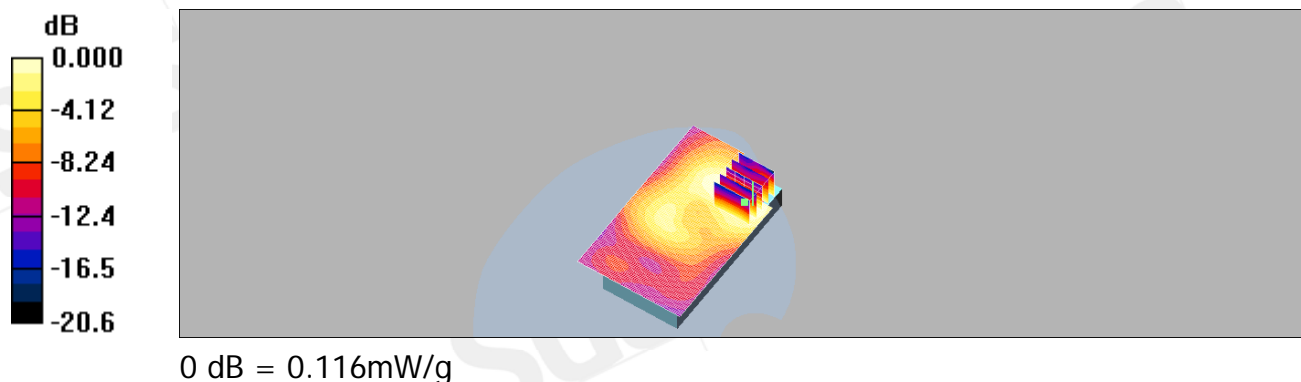
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 0.123 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 2.13 V/m; Power Drift = -0.085 dB  
 Peak SAR (extrapolated) = 0.192 W/kg

**SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.064 mW/g**  
 Maximum value of SAR (measured) = 0.116 mW/g



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## BODY\_WLAN802.11 b\_CH11

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.04 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

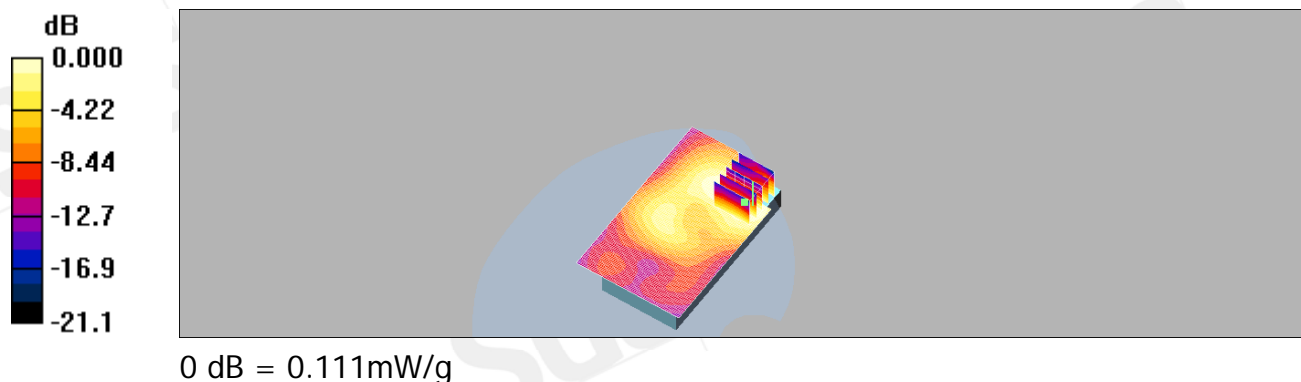
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.117 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 2.04 V/m; Power Drift = 0.166 dB  
 Peak SAR (extrapolated) = 0.181 W/kg

**SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.061 mW/g**  
 Maximum value of SAR (measured) = 0.111 mW/g



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## BODY\_WLAN802.11 b\_CH1\_repeated for EUT front to phantom

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

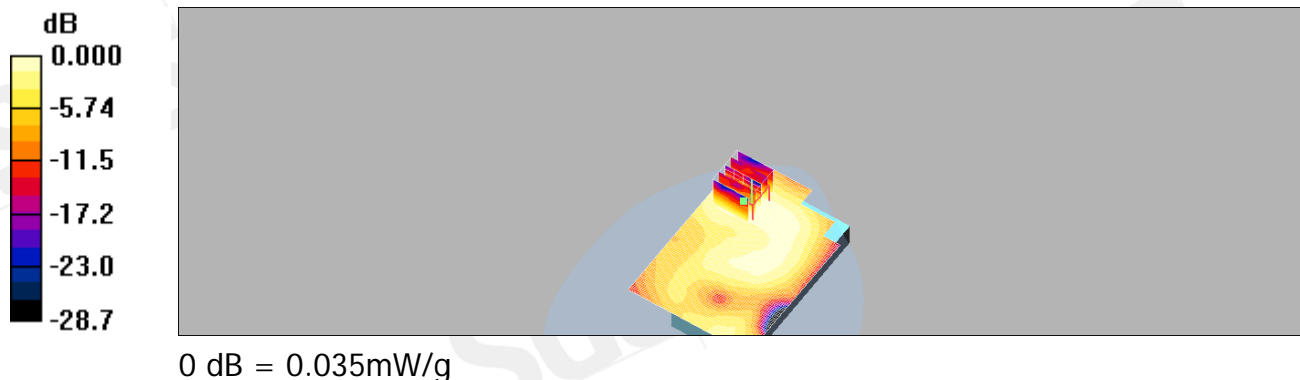
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (71x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.033 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 2.11 V/m; Power Drift = 0.051 dB  
 Peak SAR (extrapolated) = 0.062 W/kg

**SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.018 mW/g**  
 Maximum value of SAR (measured) = 0.035 mW/g



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## BODY\_WLAN802.11 b\_CH1\_repeated with Memory card

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

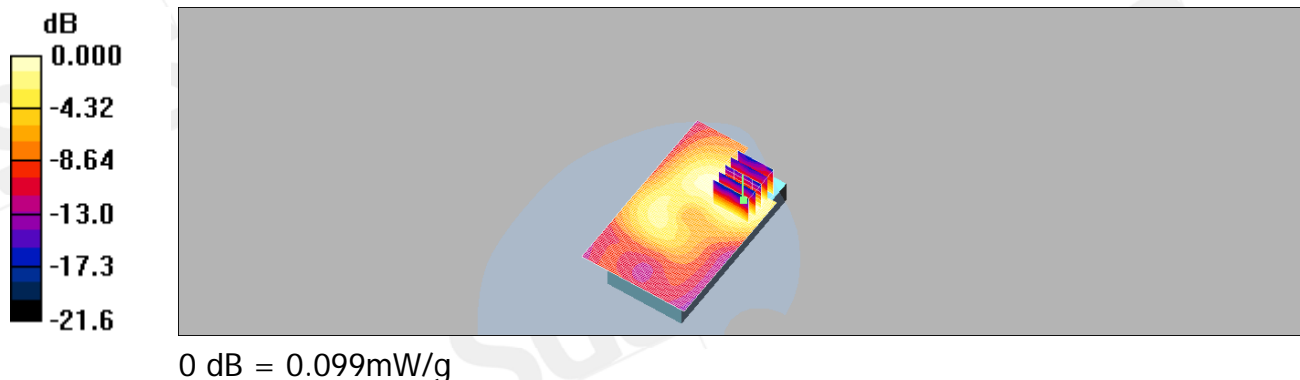
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.100 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 1.75 V/m; Power Drift = 0.064 dB  
 Peak SAR (extrapolated) = 0.162 W/kg

**SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.053 mW/g**  
 Maximum value of SAR (measured) = 0.099 mW/g



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**BODY\_WLAN802.11 b\_CH1\_repeated with Bluetooth active**

**DUT: H-21 ;**

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

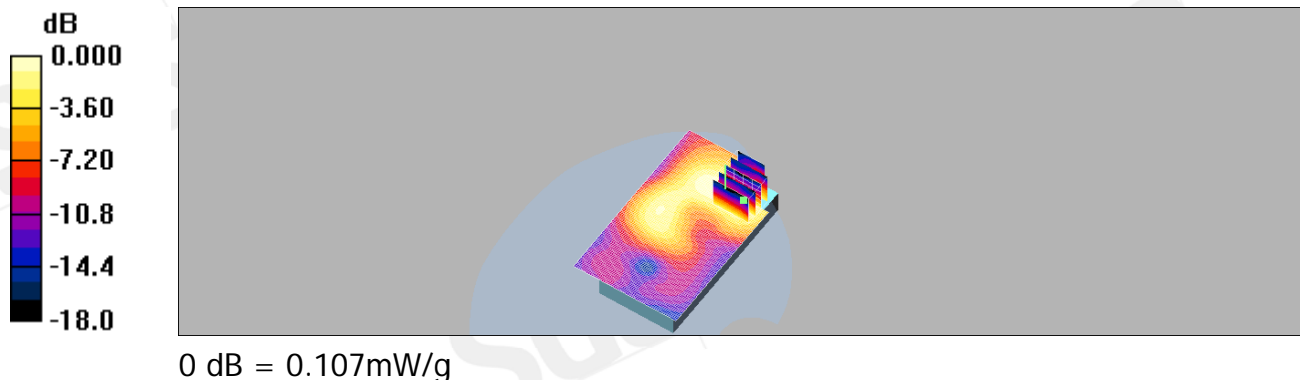
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.112 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 1.65 V/m; Power Drift = 0.187 dB  
 Peak SAR (extrapolated) = 0.183 W/kg

**SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.058 mW/g**  
 Maximum value of SAR (measured) = 0.107 mW/g



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## BODY\_WLAN802.11 b\_CH1\_repeated with headset

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

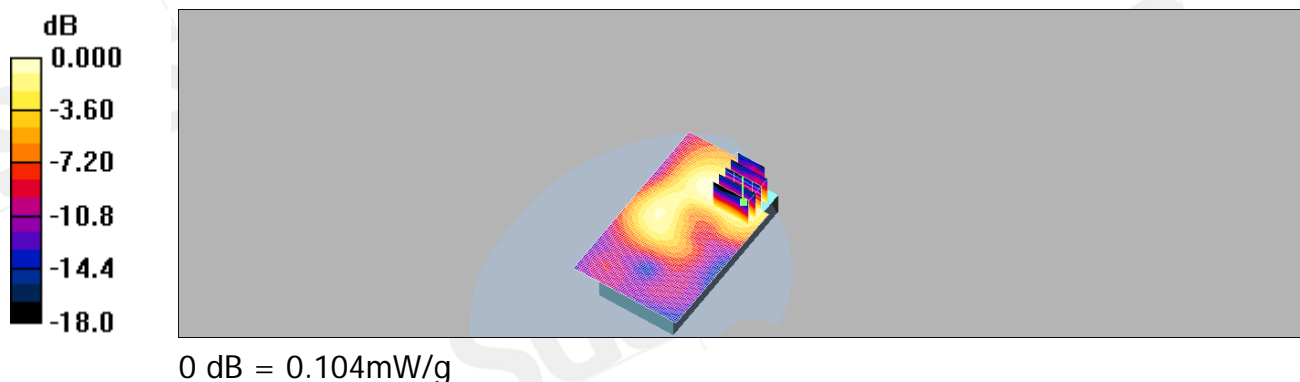
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.106 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 1.91 V/m; Power Drift = 0.197 dB  
 Peak SAR (extrapolated) = 0.175 W/kg

**SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.055 mW/g**  
 Maximum value of SAR (measured) = 0.104 mW/g



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## BODY\_WLAN802.11 g\_CH1

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.96 \text{ mho/m}$ ;  $\epsilon_r = 54.5$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

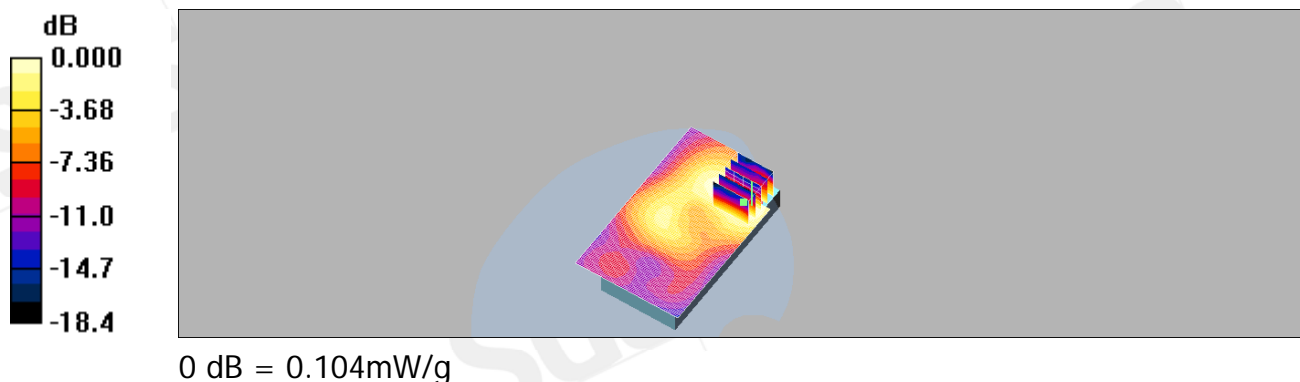
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.110 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 2.14 V/m; Power Drift = -0.153 dB  
 Peak SAR (extrapolated) = 0.167 W/kg

**SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.057 mW/g**  
 Maximum value of SAR (measured) = 0.104 mW/g



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## BODY\_WLAN802.11 g\_CH6

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2437 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 2$  mho/m;  $\epsilon_r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

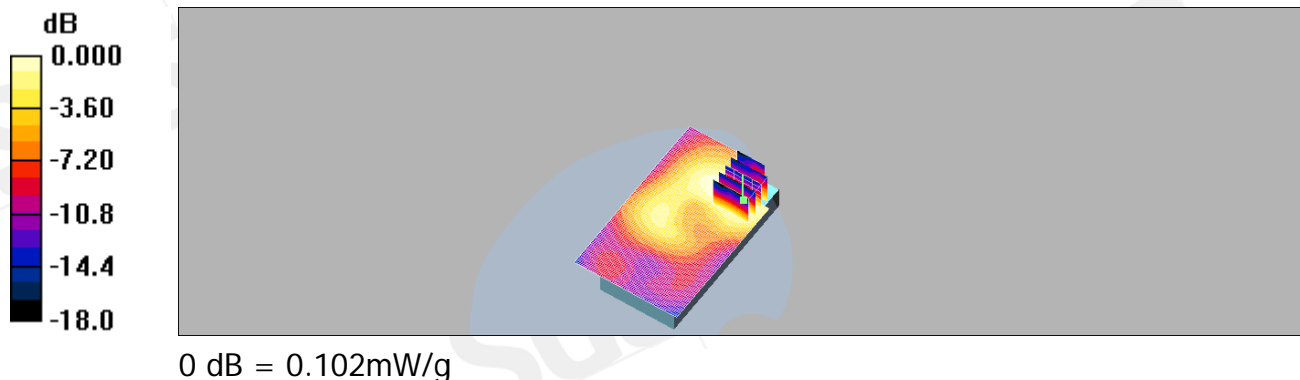
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.109 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 2.00 V/m; Power Drift = 0.184 dB  
 Peak SAR (extrapolated) = 0.168 W/kg

**SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.056 mW/g**  
 Maximum value of SAR (measured) = 0.102 mW/g



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## BODY\_WLAN802.11 g\_CH11

DUT: H-21 ;

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2462 \text{ MHz}$ ;  $\sigma = 2.04 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

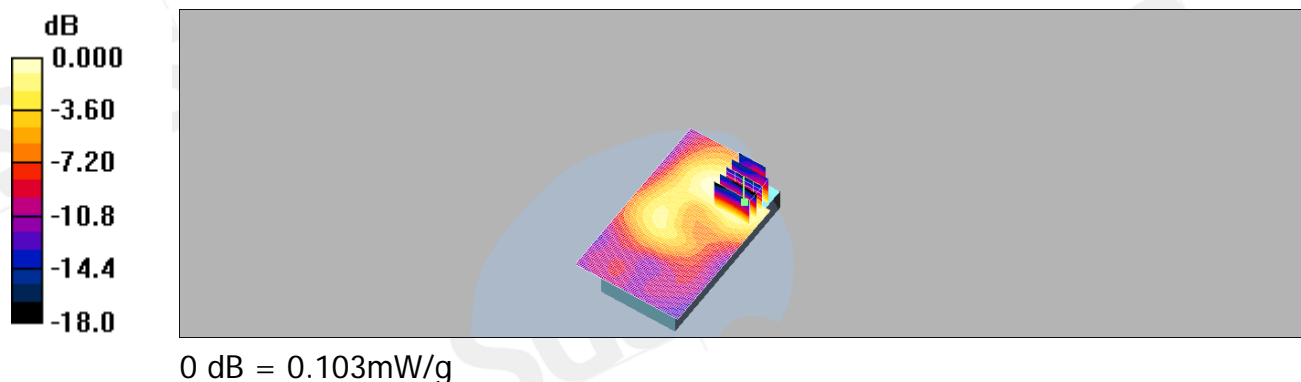
DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (61x111x1):** Measurement grid: dx=15mm, dy=15mm  
 Maximum value of SAR (interpolated) = 0.109 mW/g

**BODY/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 1.95 V/m; Power Drift = 0.125 dB  
 Peak SAR (extrapolated) = 0.171 W/kg

**SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.056 mW/g**  
 Maximum value of SAR (measured) = 0.103 mW/g



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## 5. System Verification

Date/Time: 2009/12/8 00:19:39

### DUT: Dipole 835 MHz;

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

Medium: Head 900 MHz Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.891 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### DASY4 Configuration:

- Probe: EX3DV3 - SN3526; ConvF(11.06, 11.06, 11.06); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (interpolated) = 2.56 mW/g

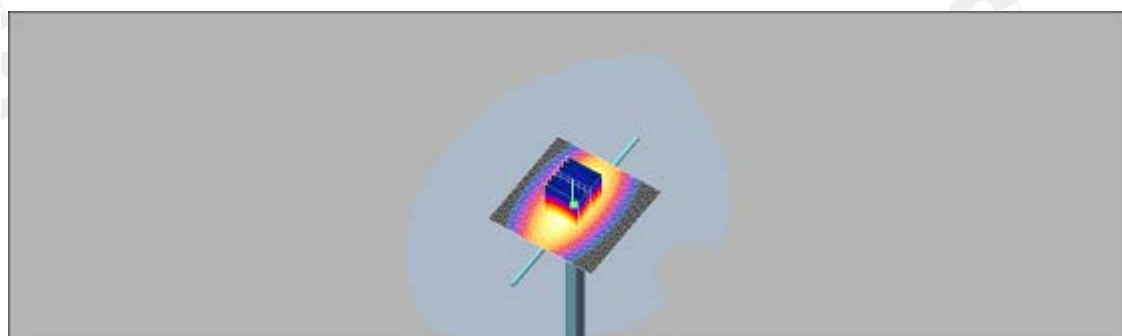
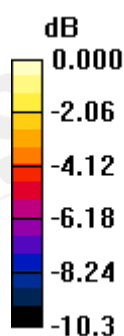
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  
 $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 53.5 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 3.55 W/kg

**SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.56 mW/g**

Maximum value of SAR (measured) = 2.56 mW/g



0 dB = 2.56mW/g

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**DUT: Dipole 835 MHz;**

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

Medium: Muscle 900 MHz Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.991 \text{ mho/m}$ ;  $\epsilon_r = 55.6$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

**DASY4 Configuration:**

- Probe: EX3DV3 - SN3526; ConvF(10.88, 10.88, 10.88); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Pin=250mW/Area Scan (61x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.66 mW/g

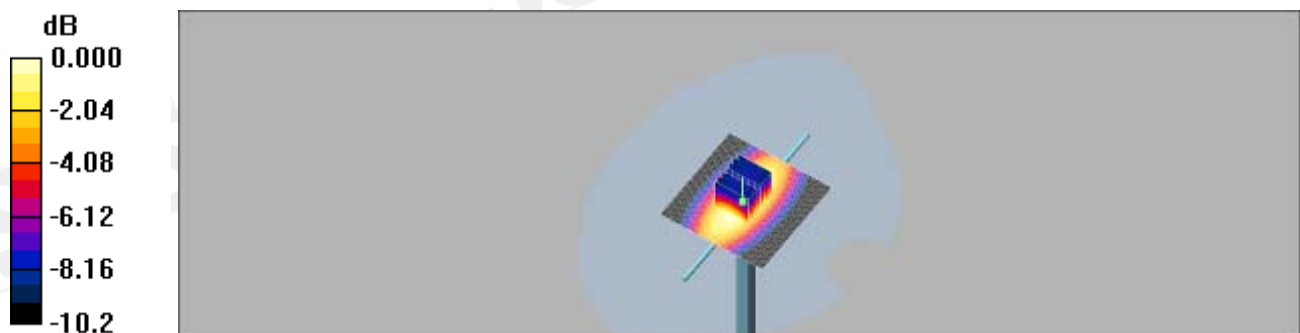
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 52.3 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 3.66 W/kg

**SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.61 mW/g**

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



0 dB = 2.67mW/g

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**DUT: Dipole 1900 MHz;**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
 Medium: Head 1900MHz Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.46 \text{ mho/m}$ ;  $\epsilon_r = 38.9$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

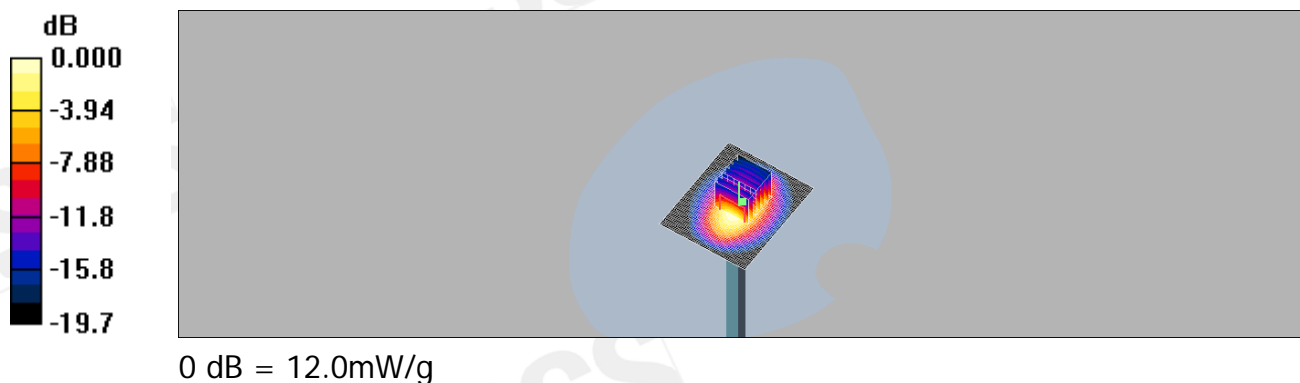
**DASY4 Configuration:**

- Probe: EX3DV3 - SN3526; ConvF(9.38, 9.38, 9.38); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Pin=250mw/Area Scan (51x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 13.5 mW/g

**Pin=250mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 89.5 V/m; Power Drift = -0.089 dB  
 Peak SAR (extrapolated) = 20.3 W/kg

**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.38 mW/g**  
 Maximum value of SAR (measured) = 12.0 mW/g



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**DUT: Dipole 1900 MHz;**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
 Medium: M1800 & 1900 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.61 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

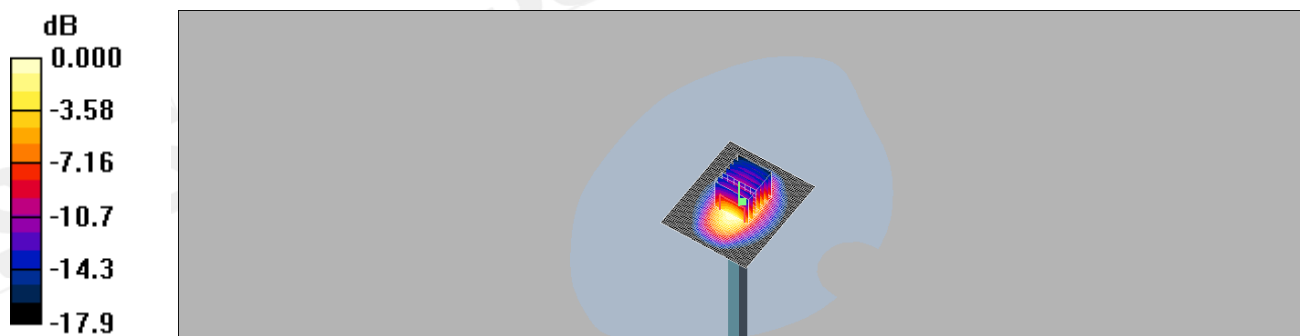
**DASY4 Configuration:**

- Probe: EX3DV3 - SN3526; ConvF(8.89, 8.89,8.89); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Pin=250mW/Area Scan (51x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 13.8 mW/g

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  
 $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 84.5 V/m; Power Drift = -0.077 dB  
 Peak SAR (extrapolated) = 19.3 W/kg

**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.54 mW/g**  
 Maximum value of SAR (measured) = 11.9 mW/g



0 dB = 11.9mW/g

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**DUT: Dipole 2450 MHz;**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1  
 Medium: Muscle 2450 Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 2.03 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  
 $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

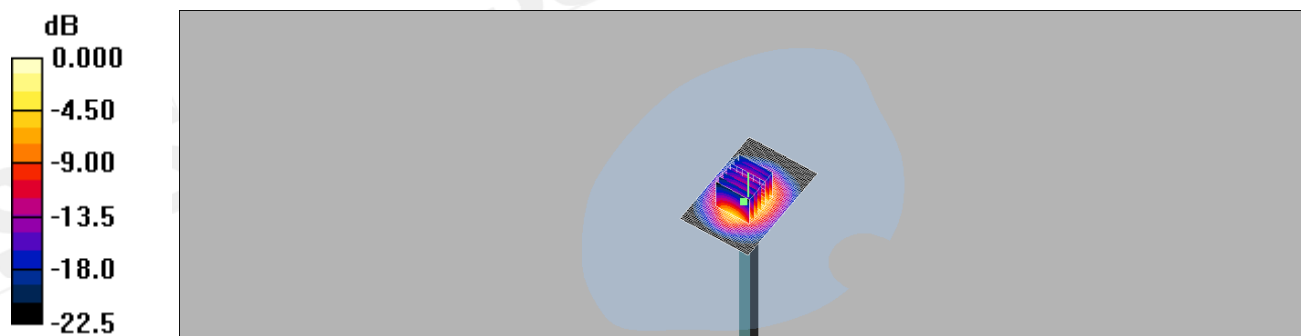
**DASY4 Configuration:**

- Probe: EX3DV3 - SN3526; ConvF(8.52, 8.52,8.52); Calibrated: 2009/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2009/1/20
- Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Pin=250mW /Area Scan (41x61x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
 Maximum value of SAR (interpolated) = 18.1 mW/g

**Pin=250mW /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  
 $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 90.8 V/m; Power Drift = -0.104 dB  
 Peak SAR (extrapolated) = 28.2 W/kg

**SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.42 mW/g**  
 Maximum value of SAR (measured) = 15.8 mW/g



0 dB = 15.8mW/g

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## 6. DAE & Probe Calibration certificate

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Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



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

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

Accreditation No.: SCS 108

Client **SGS (Auden)**

Certificate No: DAE4-547\_Jan09

### CALIBRATION CERTIFICATE

Object: DAE4 - SD 000 D04 BJ - SN: 547

Calibration procedure(s): QA CAL-06.v12  
Calibration procedure for the data acquisition electronics (DAE)

Calibration date: January 19, 2009

Condition of the calibrated item: In Tolerance

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Fluke Process Calibrator Type 702	SN: 6295803	30-Sep-08 (No: 7673)	Sep-09
Keithley Multimeter Type 2001	SN: 0810278	30-Sep-08 (No: 7670)	Sep-09
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 1004	06-Jun-08 (in house check)	In house check: Jun-09

	Name	Function	Signature
Calibrated by:	Daniel Hess	Technician	<i>D. Hess</i>
Approved by:	Fin Bornholt	R&D Director	<i>F. Bornholt</i>

Issued: January 20, 2009

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Certificate No: DAE4-547\_Jan09

Page 1 of 5

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **SGS (Auden)**

Certificate No: **EX3-3526\_Aug09**

## CALIBRATION CERTIFICATE

Object: **EX3DV3 - SN:3526**

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

Calibration date: **August 26, 2009**

Condition of the calibrated item: **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
D4E4	SN: 660	9-Sep-08 (No. D4E4-660_Sep08)	Sep-09

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

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

Issued: August 26, 2009

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Certificate No: EX3-3526\_Aug09

Page 1 of 9

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**Glossary:**

TSL tissue simulating liquid  
NORM<sub>x,y,z</sub> sensitivity in free space  
ConvF sensitivity in TSL / NORM<sub>x,y,z</sub>  
DCP diode compression point  
Polarization  $\varphi$   $\varphi$  rotation around probe axis  
Polarization  $\vartheta$   $\vartheta$  rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e.,  $\vartheta = 0$  is normal to probe axis

**Calibration is Performed According to the Following Standards:**

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

**Methods Applied and Interpretation of Parameters:**

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

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EX3DV3 SN:3526

August 26, 2009

# Probe EX3DV3

## SN:3526

Manufactured:	March 19, 2004
Last calibrated:	August 26, 2008
Recalibrated:	August 26, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

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EX3DV3 SN:3526

August 26, 2009

## DASY - Parameters of Probe: EX3DV3 SN:3526

### Sensitivity in Free Space<sup>A</sup>

### Diode Compression<sup>B</sup>

NormX	0.99 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	94 mV
NormY	0.82 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	97 mV
NormZ	0.91 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	95 mV

### Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

### Boundary Effect

TSL                      900 MHz      Typical SAR gradient: 5 % per mm

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR <sub>be</sub> [%]	Without Correction Algorithm	9.2	6.0
SAR <sub>be</sub> [%]	With Correction Algorithm	0.9	0.4

TSL                      1750 MHz      Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR <sub>be</sub> [%]	Without Correction Algorithm	3.6	1.3
SAR <sub>be</sub> [%]	With Correction Algorithm	0.8	0.3

### Sensor Offset

Probe Tip to Sensor Center                      1.0 mm

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

<sup>A</sup> The uncertainties of NormX,Y,Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Page 8).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

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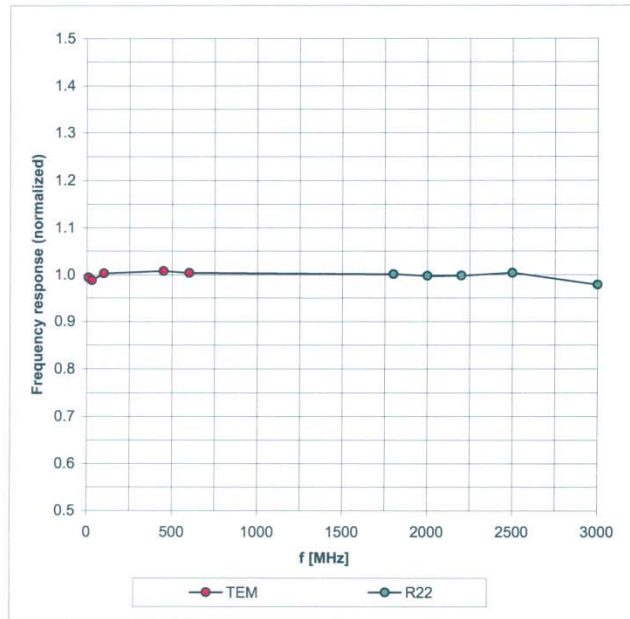
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EX3DV3 SN:3526

August 26, 2009

## Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

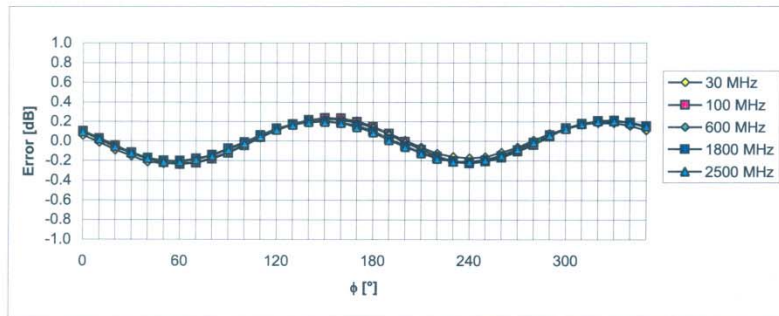
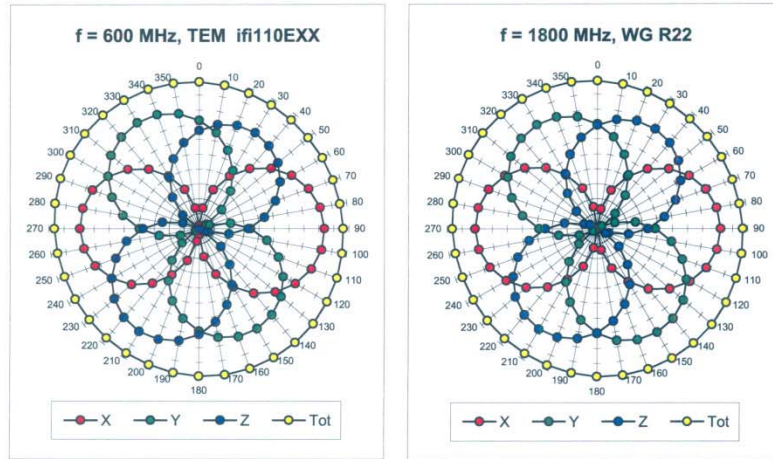
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EX3DV3 SN:3526

August 26, 2009

## Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

Certificate No: EX3-3526\_Aug09

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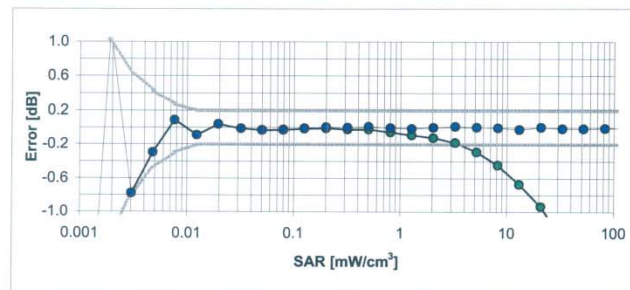
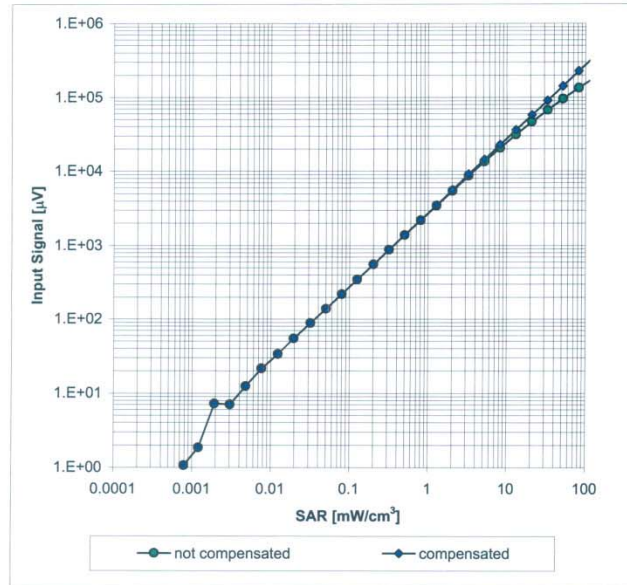
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EX3DV3 SN:3526

August 26, 2009

## Dynamic Range $f(SAR_{head})$ (Waveguide R22, $f = 1800$ MHz)



Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

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EX3DV3 SN:3526

August 26, 2009

### Conversion Factor Assessment

f [MHz]	Validity [MHz] <sup>c</sup>	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.48	0.74	11.06 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.46	0.74	10.70 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.33	0.75	9.75 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.43	0.68	9.38 ± 11.0% (k=2)
2000	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.42	0.67	9.19 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.22	1.01	8.43 ± 11.0% (k=2)
5200	± 50 / ± 100	Head	36.0 ± 5%	4.66 ± 5%	0.40	1.80	5.35 ± 13.1% (k=2)
5300	± 50 / ± 100	Head	35.9 ± 5%	4.76 ± 5%	0.40	1.80	5.06 ± 13.1% (k=2)
5600	± 50 / ± 100	Head	35.5 ± 5%	5.07 ± 5%	0.40	1.80	4.86 ± 13.1% (k=2)
5800	± 50 / ± 100	Head	35.3 ± 5%	5.27 ± 5%	0.50	1.80	4.61 ± 13.1% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.47	0.74	10.88 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.51	0.74	10.59 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.43	0.76	9.29 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.37	0.78	8.89 ± 11.0% (k=2)
2000	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.30	1.01	9.07 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.24	0.94	8.52 ± 11.0% (k=2)
2600	± 50 / ± 100	Body	52.5 ± 5%	2.16 ± 5%	0.51	0.62	8.42 ± 11.0% (k=2)
3500	± 50 / ± 100	Body	51.3 ± 5%	3.31 ± 5%	0.34	1.25	7.36 ± 13.1% (k=2)
5200	± 50 / ± 100	Body	49.0 ± 5%	5.30 ± 5%	0.55	1.90	4.29 ± 13.1% (k=2)
5300	± 50 / ± 100	Body	48.5 ± 5%	5.42 ± 5%	0.55	1.90	3.98 ± 13.1% (k=2)
5600	± 50 / ± 100	Body	48.5 ± 5%	5.77 ± 5%	0.60	1.90	3.69 ± 13.1% (k=2)
5800	± 50 / ± 100	Body	48.2 ± 5%	6.00 ± 5%	0.60	1.90	4.05 ± 13.1% (k=2)

<sup>c</sup> The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

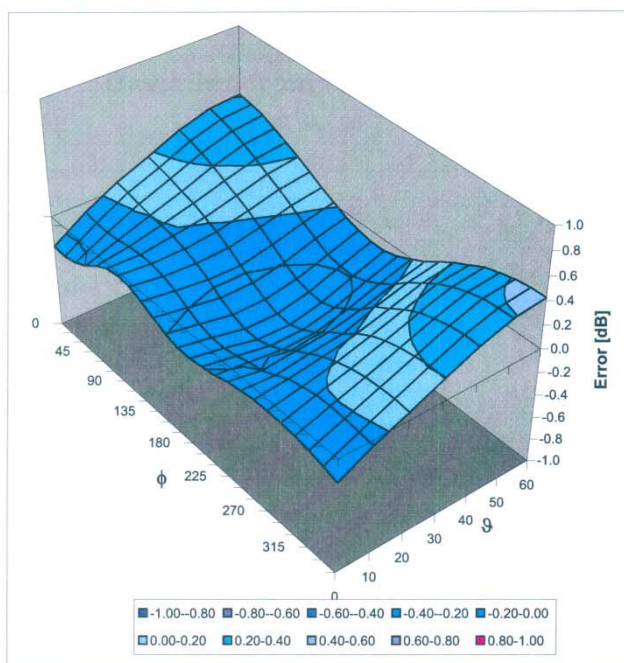
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EX3DV3 SN:3526

August 26, 2009

## Deviation from Isotropy in HSL Error ( $\phi$ , $\theta$ ), $f = 900$ MHz



Uncertainty of Spherical Isotropy Assessment:  $\pm 2.6\%$  ( $k=2$ )

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## 7. Uncertainty Analysis

**DASY4 Uncertainty Budget**  
According to IEEE P1528 [1]

Error Description	Uncertainty value	Prob. Dist.	Div.	( $c_i$ ) 1g	( $c_i$ ) 10g	Std. Unc. (1g)	Std. Unc. (10g)	( $v_i$ ) $v_{eff}$
<b>Measurement System</b>								
Probe Calibration	±4.8 %	N	1	1	1	±4.8 %	±4.8 %	∞
Axial Isotropy	±4.7 %	R	$\sqrt{3}$	0.7	0.7	±1.9 %	±1.9 %	∞
Hemispherical Isotropy	±9.6 %	R	$\sqrt{3}$	0.7	0.7	±3.9 %	±3.9 %	∞
Boundary Effects	±1.0 %	R	$\sqrt{3}$	1	1	±0.6 %	±0.6 %	∞
Linearity	±4.7 %	R	$\sqrt{3}$	1	1	±2.7 %	±2.7 %	∞
System Detection Limits	±1.0 %	R	$\sqrt{3}$	1	1	±0.6 %	±0.6 %	∞
Readout Electronics	±1.0 %	N	1	1	1	±1.0 %	±1.0 %	∞
Response Time	±0.8 %	R	$\sqrt{3}$	1	1	±0.5 %	±0.5 %	∞
Integration Time	±2.6 %	R	$\sqrt{3}$	1	1	±1.5 %	±1.5 %	∞
RF Ambient Conditions	±3.0 %	R	$\sqrt{3}$	1	1	±1.7 %	±1.7 %	∞
Probe Positioner	±0.4 %	R	$\sqrt{3}$	1	1	±0.2 %	±0.2 %	∞
Probe Positioning	±2.9 %	R	$\sqrt{3}$	1	1	±1.7 %	±1.7 %	∞
Max. SAR Eval.	±1.0 %	R	$\sqrt{3}$	1	1	±0.6 %	±0.6 %	∞
<b>Test Sample Related</b>								
Device Positioning	±2.9 %	N	1	1	1	±2.9 %	±2.9 %	875
Device Holder	±3.6 %	N	1	1	1	±3.6 %	±3.6 %	5
Power Drift	±5.0 %	R	$\sqrt{3}$	1	1	±2.9 %	±2.9 %	∞
<b>Phantom and Setup</b>								
Phantom Uncertainty	±4.0 %	R	$\sqrt{3}$	1	1	±2.3 %	±2.3 %	∞
Liquid Conductivity (target)	±5.0 %	R	$\sqrt{3}$	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	$\sqrt{3}$	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						±10.3 %	±10.0 %	331
Expanded STD Uncertainty						±20.6 %	±20.1 %	

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## 8. Phantom description

Schmid & Partner Engineering AG

**s p e a g**

Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 1 245 9700, Fax +41 1 245 9779  
info@speag.com, http://www.speag.com

### Certificate of Conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 C
Series No	TP-1150 and higher
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zurich Switzerland

#### Tests

The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series items (called samples) or are tested at each item.

Test	Requirement	Details	Units tested
Dimensions	Compliant with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness of shell	Compliant with the requirements according to the standards	2mm +/- 0.2mm in flat and specific areas of head section	First article, Samples, TP-1314 ff.
Material thickness at ERP	Compliant with the requirements according to the standards	6mm +/- 0.2mm at ERP	First article, All items
Material parameters	Dielectric parameters for required frequencies	300 MHz – 6 GHz: Relative permittivity < 5, Loss tangent < 0.05	Material samples
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions. Observe technical Note for material compatibility.	DEGMBE based simulating liquids	Pre-series, First article, Material samples
Sagging	Compliant with the requirements according to the standards. Sagging of the flat section when filled with tissue simulating liquid.	< 1% typical < 0.8% if filled with 155mm of HSL900 and without DUT below	Prototypes, Sample testing

#### Standards

- [1] CENELEC EN 50361
  - [2] IEEE Std 1528-2003
  - [3] IEC 62209 Part I
  - [4] FCC OET Bulletin 65, Supplement C, Edition 01-01
- (\*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of the other documents.

#### Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standards [1] to [4].

Date 07.07.2005

**s p e a g**

Signature / Stamp

Schmid & Partner Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 1 245 9700, Fax +41 1 245 9779  
info@speag.com, http://www.speag.com

Doc No 881 - QD 000 P40 C - F

Page 1 (1)

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## 9. System Validation from Original equipment supplier

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



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

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

Accreditation No.: **SCS 108**

Client **SGS (Auden)**

Certificate No: **D835V2-4d063\_May09**

CALIBRATION CERTIFICATE																																															
Object	D835V2 - SN: 4d063																																														
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits																																														
Calibration date:	May 25, 2009																																														
Condition of the calibrated item	In Tolerance																																														
<p>This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity &lt; 70%.</p> <p>Calibration Equipment used (M&amp;TE critical for calibration)</p> <table border="1"> <thead> <tr> <th>Primary Standards</th> <th>ID #</th> <th>Cal Date (Certificate No.)</th> <th>Scheduled Calibration</th> </tr> </thead> <tbody> <tr> <td>Power meter EPM-442A</td> <td>GB37480704</td> <td>08-Oct-08 (No. 217-00898)</td> <td>Oct-09</td> </tr> <tr> <td>Power sensor HP 8481A</td> <td>US37292783</td> <td>08-Oct-08 (No. 217-00898)</td> <td>Oct-09</td> </tr> <tr> <td>Reference 20 dB Attenuator</td> <td>SN: 5086 (20g)</td> <td>31-Mar-09 (No. 217-01025)</td> <td>Mar-10</td> </tr> <tr> <td>Type-N mismatch combination</td> <td>SN: 5047.2 / 06327</td> <td>31-Mar-09 (No. 217-01029)</td> <td>Mar-10</td> </tr> <tr> <td>Reference Probe ES3DV2</td> <td>SN: 3025</td> <td>30-Apr-09 (No. ES3-3025_Apr09)</td> <td>Apr-10</td> </tr> <tr> <td>DAE4</td> <td>SN: 601</td> <td>07-Mar-09 (No. DAE4-601_Mar09)</td> <td>Mar-10</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Secondary Standards</th> <th>ID #</th> <th>Check Date (in house)</th> <th>Scheduled Check</th> </tr> </thead> <tbody> <tr> <td>Power sensor HP 8481A</td> <td>MY41092317</td> <td>18-Oct-02 (in house check Oct-07)</td> <td>In house check: Oct-09</td> </tr> <tr> <td>RF generator R&amp;S SMT-06</td> <td>100005</td> <td>4-Aug-99 (in house check Oct-07)</td> <td>In house check: Oct-09</td> </tr> <tr> <td>Network Analyzer HP 8753E</td> <td>US37390585 S4206</td> <td>18-Oct-01 (in house check Oct-08)</td> <td>In house check: Oct-09</td> </tr> </tbody> </table>				Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration	Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09	Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09	Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10	Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10	Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10	DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10	Secondary Standards	ID #	Check Date (in house)	Scheduled Check	Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09	RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09	Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09
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Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature 																																												
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature 																																												
			Issued: May 25, 2009																																												
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.																																															

Certificate No: D835V2-4d063\_May09

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## DASY5 Validation Report for Head TSL

Date/Time: 25.05.2009 10:53:04

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1  
Medium: HSL 900 MHz  
Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 40.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC)

### DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

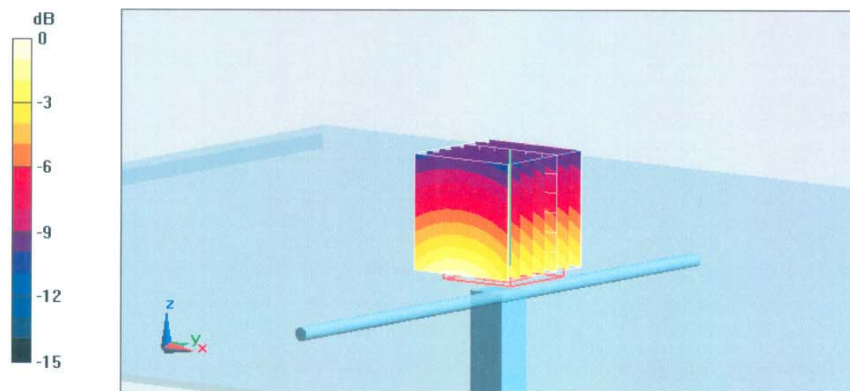
**Pin=250mW; dip=15mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 3.54 W/kg

**SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.56 mW/g**

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



0 dB = 2.77mW/g

## DASY5 Validation Report for Body TSL

Date/Time: 25.05.2009 14:01:33

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063**

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

Medium: MSL900

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 1.01 \text{ mho/m}$ ;  $\epsilon_r = 53.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.79, 5.79, 5.79); Calibrated: 30.04.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

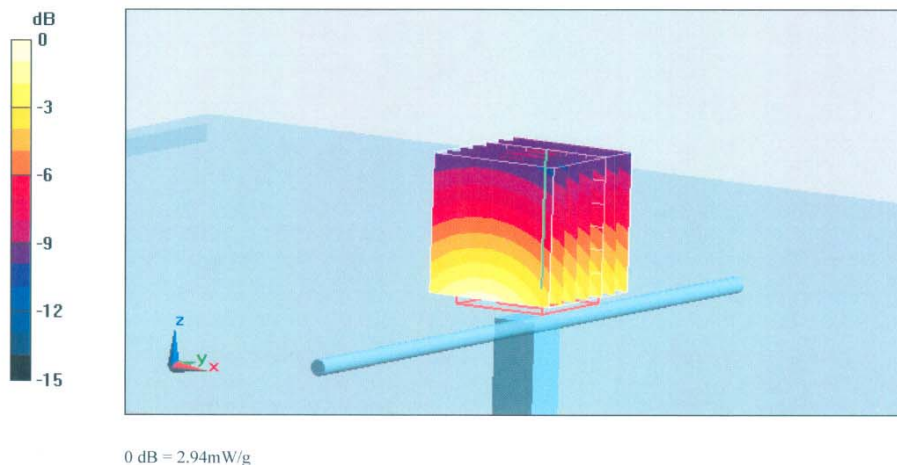
**Pin = 250mW, d = 15mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 55.6 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 3.74 W/kg

**SAR(1 g) = 2.55 mW/g; SAR(10 g) = 1.68 mW/g**

Maximum value of SAR (measured) = 2.94 mW/g



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **SGS (Auden)**

Certificate No: **D1900V2-5d027-Apr09**

## CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d027**

Calibration procedure(s) **QA CAL-05.v7  
Calibration procedure for dipole validation kits**

Calibration date: **April 27, 2009**

Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 28, 2009

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Certificate No: D1900V2-5d027\_Apr09

Page 1 of 9

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## DASY5 Validation Report for Head TSL

Date/Time: 27.04.2009 11:54:57

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027**

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

Medium: HSL U10 BB

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

### DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.9, 4.9, 4.9); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

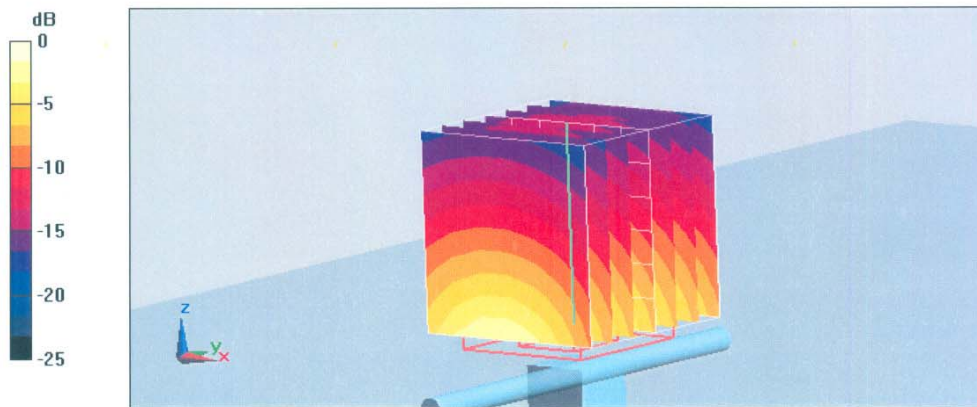
**Pin = 250 mW; dip = 10 mm /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 19.7 W/kg

**SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.38 mW/g**

Maximum value of SAR (measured) = 13 mW/g



0 dB = 13mW/g

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## DASY5 Validation Report for Body TSL

Date/Time: 21.04.2009 14:59:34

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027**

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

Medium: MSL U10 BB

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.56$  mho/m;  $\epsilon_r = 55$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.5, 4.5, 4.5); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

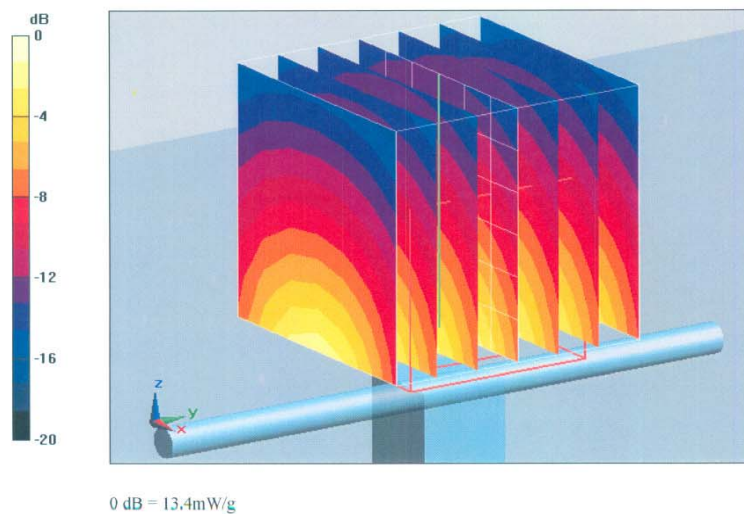
**Pin = 250 mW; dip = 10 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 18.5 W/kg

**SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.58 mW/g**

Maximum value of SAR (measured) = 13.4 mW/g



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **SGS (Auden)**

Certificate No: **D2450V2-727\_Apr09**

## CALIBRATION CERTIFICATE

Object: **D2450V2 - SN: 727**

Calibration procedure(s): **QA CAL-05.v7  
Calibration procedure for dipole validation kits**

Calibration date: **April 27, 2009**

Condition of the calibrated item: **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by:	Name <b>Jeton Kastrati</b>	Function <b>Laboratory Technician</b>	Signature 
Approved by:	Name <b>Katja Pokovic</b>	Function <b>Technical Manager</b>	Signature 

Issued: April 28, 2009

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## DASY5 Validation Report for Body TSL

Date/Time: 22.04.2009 13:12:14

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium: MSL U10 BB  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.98$  mho/m;  $\epsilon_r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC)

### DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.07, 4.07, 4.07); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

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

Reference Value = 96.9 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 26.5 W/kg

**SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.18 mW/g**

Maximum value of SAR (measured) = 17.3 mW/g



## End of 1<sup>st</sup> part of report

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