SAR TEST REPORT

Product Name	RQ5-J01
Company Name	Toshiba Information System(UK) Ltd
Company Address	Delta House, The crescent Southwood Business Park, Farnborough, GU14 0NL,UK
Date of Receipt	2010.02.03
Date of Test(s)	2010.02.10~2010.02.12
Date of Issue	2010.03.17

Standards:

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

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

Remarks:

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

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

Tested by : **Antony Wu** **Date** : **2010.03.17**
Engineer

Approved by : **Robert Chang** **Date** : **2010.03.17**
Tech Manager

Contents

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

Product Name	RQ5-J01		
Marketing Name	T-01B		
Model Name	RQ5-J01		
IMEI Code	358918030001532		
FCC ID	SP2-RQ5-J01		
Mode of Operation	GSM/GPRS//EDGEWCDMA/HSDPA/HSUPA /WLAN802.11b&g band		
Modulation mode	GMSK/8PSK/16QAM/CCK/OFDM		
Duty Cycle	GSM	GPRS(EDGE)	WLAN802.11b&g
	1/8	1/2	1

Maximum RF Conducted Power (Average)	GSM850	PCS 1900	WLAN802.11b&g
	33.04dBm	29.90dBm	14.66dBm
TX Frequency Range (MHz)	GSM850	PCS 1900	WLAN802.11b&g
	824.2 - 848.8MHz	1850.2 - 1909.8MHz	2412-2462MHz
Channel Number (ARFCN)	GSM850	PCS 1900	WLAN802.11b&g
	128 - 251	512 - 810	1-11
Battery Type	3.7 V Lithium-Ion		
Antenna Type	Internal Antenna		
VOIP Function	No		
Max. SAR Measured (1 g)	**GSM 850**		
	Head	Body	
	0.798 mW/g (At GSM 850 Band_Right Head Cheek Position 128 Channel_Slider on_repeated with Memory card	**0.483 mW/g** (At GSM 850 Band_Body Position 128 Channel_Slider off_repeated with headset)	
	GSM 1900		
	Head	Body	
	0.537 mW/g (At GSM 1900 Band_Right Head Cheek Position 810 Channel_Slider on	**0.363 mW/g** (At GSM 1900 Band_Body Position 512 Channel_Slider off)	
	WLAN 802.11b		
	Body		
	0.024 mW/g (At WLAN802.11b Band_Body Position 1 Channel)		
	WLAN 802.11g		
	Body		
	0.012 mW/g (At WLAN802.11g Band_Body Position 1 Channel)		

1.4 Test Environment

Ambient Temperature: 22±2° C
Tissue Simulating Liquid: 22±2° C

1.5 Operation description

General:

1. The EUT is controlled by using a Radio Communication Tester (Agilent 8960), and the communication between the EUT and the tester is established by air link. 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.
2. During the SAR testing, the DASY5 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.
3. Testing Head SAR at lowest, middle and highest channel for all bands with LET/LEC/RET/REC conditions.
4. Testing body-worn SAR by separating **1.5cm** between back side of EUT to flat phantom.
5. Use chipset specific software to control the EUT, and makes it transmit in maximum power. 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.

Additional configuration (Head) :

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

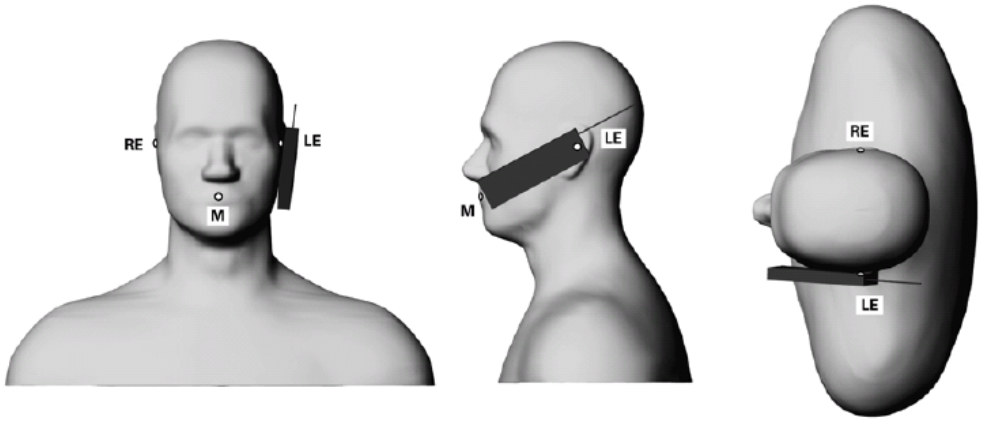
Additional configuration (Body) :

7. Testing body-worn SAR with Handset and Bluetooth transmitter OFF by separating **1.5cm** between front side of EUT to flat phantom.
8. For highest SAR configuration in this band repeated with external Memory card inside.
9. For highest SAR configuration in this band repeated with headset.

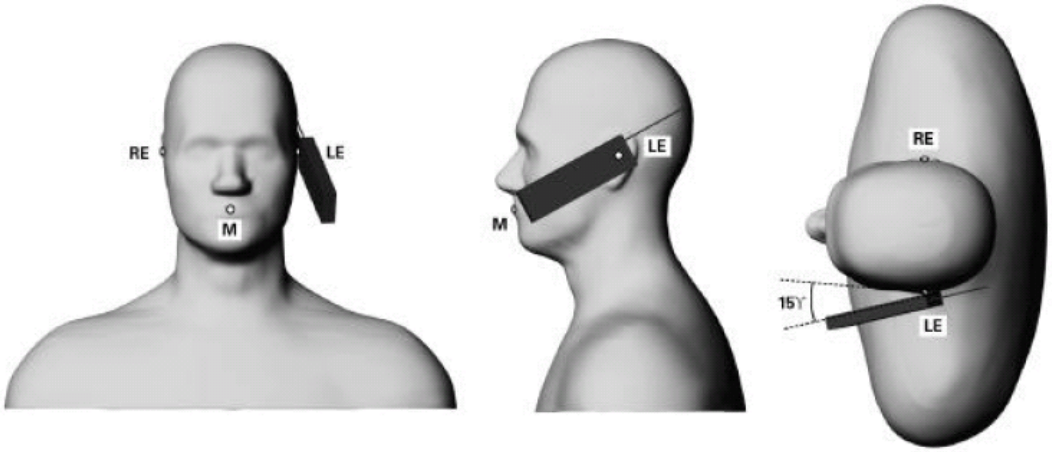
SAR evaluation considerations for handsets with multiple transmitters:

10. 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.
11. The maximum SAR value for licensed transmitter happens on GSM850 band, Head Right side(Cheek Position)_Slider on , channel 128 with Memory card. the value is **0.798W/kg(1g)**. And the max SAR value for un-licensed transmitter WLAN 802.11b happens on Body worn, channel 1 with headset The SAR value is **0.024W/kg (1g)** . The summation of the 1g SAR is 0.798+0.024 = **0.822 W/kg, which lower than the limit 1.6W/kg. No simultaneous transmission SAR evaluation is necessary.**
12. When the maximum transmitter and antenna output power are ≦ 60/f(GHz) (mW) SAR evaluation is typically not required for FCC or TCB approval (BT power= 2.43dBm)
13. For the SAR report, We follow FCC guidance **KDB 447498, 248227** and **648474**, etc.evaluated procedure for this product

1.6 Positioning Procedure



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



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

Cheek/Touch Position:

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

Ear/Tilt Position:

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

1.7 Evaluation Procedures

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

1. The extraction of the measured data (grid and values) from the Zoom Scan.
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. The generation of a high-resolution mesh within the measured volume
4. The interpolation of all measured values from the measurement grid to the high-resolution grid
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. The calculation of the averaged SAR within masses of 1g and 10g.The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the

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

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

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

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

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

1.8 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). A Model ES3DV3 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ ($|Ei|^2$)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement

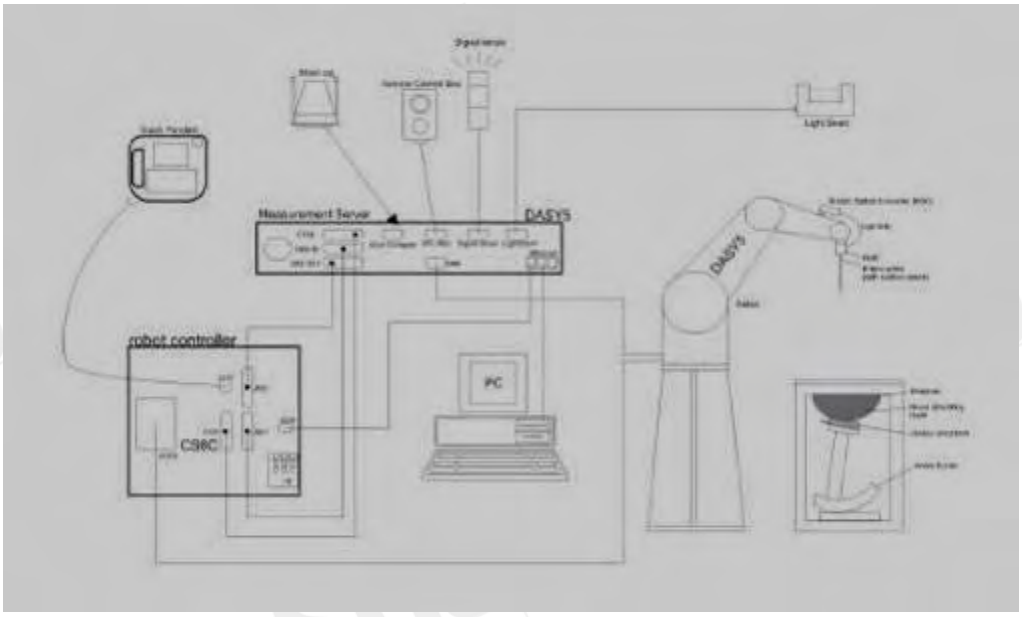


Fig.a The block diagram of SAR system

The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software.

  An arm extension is for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
  - A computer operating Windows 2000 or Windows XP.
  - DASY5 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

ES3DV3 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)	 ES3DV3 E-Field Probe
Calibration:	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL850 & HSL1900& HSL2450 Additional CF for other liquids and frequencies upon request	
Frequency:	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)	
Directivity:	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range:	10 µW/g to > 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	

Dimensions:	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application:	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

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

1.10 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 5% from the target SAR values. These tests were done at 850/1900/2450MHz. 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 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.

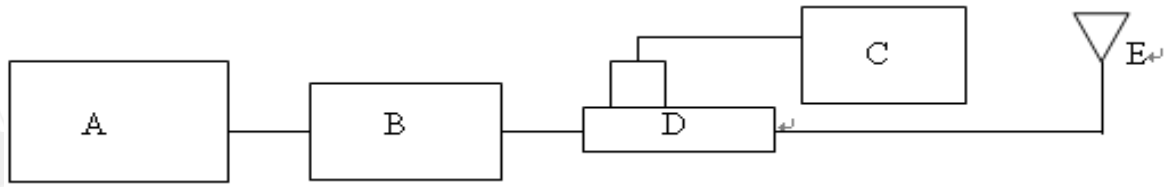
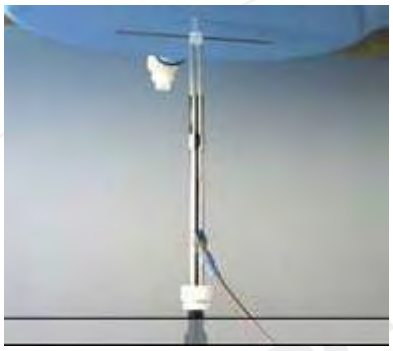


Fig.b The block diagram for SAR system verification

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)	Variation	Measured Date
D835V2 S/N: 4d063	835 MHz (Head)	2.38 mW/g	2.27 mW/g	0.4%	2010/02/10
D835V2 S/N: 4d063	835 MHz (Body)	2.55 mW/g	2.62 mW/g	2.7%	2010/02/12
D1900V2 S/N: 5d027	1900 MHz (Head)	10.5 mW/g	10.7 mW/g	1.9%	2010/02/10
D1900V2 S/N: 5d027	1900 MHz (Body)	10.6 mW/g	10.9 mW/g	2.8%	2010/02/12
D2450V2 S/N: 727	2450 MHz (Body)	13.2 mW/g	13.8 mW/g	4.5%	2010/02/12

Table 1. Result of System validation

1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjuncation 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		
			ρ	σ (S/m)	Simulated Tissue Temperature(° C)
850	Head	Measured, 2010.02.10	40.4	0.878	21.7
		Recommended Limits	38.76-42.84	0.85-0.93	20-24
850	Body	Measured, 2010.02.12	54.5	1.02	21.7
		Recommended Limits	51.11-56.49	0.96-1.06	20-24
1900	Head	Measured, 2010.02.10	38.2	1.46	21.7
		Recommended Limits	36.67-40.53	1.40-1.54	20-24

1900	Body	Measured, 2010.02.12	54.5	1.59	21.7
		Recommended Limits	52.16-57.65	1.48-1.64	20-24
2450	Body	Measured, 2010.02.12	54.4	2.08	21.7
		Recommended Limits	51.68-57.12	1.88-2.08	20-24

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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	300.67 g	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 power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

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

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .6)

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

Table 4. RF exposure limits

Notes:

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

2. Summary of Results

GSM 850 MHZ

Right Head (Cheek Position)_Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.549	22.1	21.7
	190	836.6	33.02dBm	0.387	22.1	21.7
	251	848.8	33.02dBm	0.262	22.1	21.7
Left Head (Cheek Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.638	22.1	21.7
	190	836.6	33.02dBm	0.445	22.1	21.7
	251	848.8	33.02dBm	0.302	22.1	21.7
Right Head (15° Tilt Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.492	22.1	21.7
	190	836.6	33.02dBm	0.336	22.1	21.7
	251	848.8	33.02dBm	0.224	22.1	21.7
Left Head (15° Tilt Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.597	22.1	21.7
	190	836.6	33.02dBm	0.42	22.1	21.7
	251	848.8	33.02dBm	0.283	22.1	21.7

Right Head (Cheek Position)_Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.783	22.1	21.7
	190	836.6	33.02dBm	0.558	22.1	21.7
	251	848.8	33.02dBm	0.413	22.1	21.7
Right Head (Cheek Position)_ Slider on _repeated with Memory card						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824..2	33.04dBm	**0.798**	22.1	21.7
Left Head (Cheek Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.479	22.1	21.7
	190	836.6	33.02dBm	0.349	22.1	21.7
	251	848.8	33.02dBm	0.291	22.1	21.7
Right Head (15° Tilt Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.645	22.1	21.7
	190	836.6	33.02dBm	0.447	22.1	21.7
	251	848.8	33.02dBm	0.352	22.1	21.7
Left Head (15° Tilt Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	33.04dBm	0.337	22.1	21.7
	190	836.6	33.02dBm	0.213	22.1	21.7
	251	848.8	33.02dBm	0.159	22.1	21.7

Body worn (testing in GPRS mode)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	26dBm	0.462	22.1	21.7
	190	836.6	25.95dBm	0.383	22.1	21.7
	251	848.8	25.94dBm	0.265	22.1	21.7
Body worn (testing in GPRS mode)_repeated for EUT front to phantom						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	26dBm	0.269	22.1	21.7
Body worn (testing in GPRS mode)_repeated with Memory card						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	26dBm	0.457	22.1	21.7
Body worn (testing in GPRS mode)_repeated with headset						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	26dBm	**0.483**	22.1	21.7
Body worn (testing in EGPRS mode)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
850 MHz	128	824.2	26dBm	0.441	22.1	21.7

PCS 1900 MHZ

Right Head (Cheek Position)_Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.089	22.1	21.7
	661	1880	29.76dBm	0.101	22.1	21.7
	810	1909.8	29.56dBm	0.174	22.1	21.7

Left Head (Cheek Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.074	22.1	21.7
	661	1880	29.76dBm	0.052	22.1	21.7
	810	1909.8	29.56dBm	0.083	22.1	21.7
Right Head (15° Tilt Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.096	22.1	21.7
	661	1880	29.76dBm	0.105	22.1	21.7
	810	1909.8	29.56dBm	0.206	22.1	21.7
Left Head (15° Tilt Position) _Slider off						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.069	22.1	21.7
	661	1880	29.76dBm	0.064	22.1	21.7
	810	1909.8	29.56dBm	0.112	22.1	21.7
Right Head (Cheek Position)_Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.379	22.1	21.7
	661	1880	29.76dBm	0.441	22.1	21.7
	810	1909.8	29.56dBm	0.537	22.1	21.7
Left Head (Cheek Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.202	22.1	21.7
	661	1880	29.76dBm	0.232	22.1	21.7
	810	1909.8	29.56dBm	0.287	22.1	21.7

Right Head (15° Tilt Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.369	22.1	21.7
	661	1880	29.76dBm	0.462	22.1	21.7
	810	1909.8	29.56dBm	0.481	22.1	21.7
Left Head (15° Tilt Position) _Slider on						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	29.90dBm	0.306	22.1	21.7
	661	1880	29.76dBm	0.357	22.1	21.7
	810	1909.8	29.56dBm	0.447	22.1	21.7
Body worn (testing in GPRS mode)						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
1900 MHz	512	1850.2	24.88dBm	0.363	22.1	21.7
	661	1880	24.75dBm	0.275	22.1	21.7
	810	1909.8	24.55dBm	0.262	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	14.23dBm	0.024	22.1	21.7
	6	2437	14.39dBm	0.015	22.1	21.7
	11	2462	14.66dBm	0.018	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	11	2462	14.66dBm	0.005	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	11	2462	14.66dBm	0.020	22.1	21.7
Body worn (testing in GPRS mode)_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	11	2462	14.66dBm	0.018	22.1	21.7
Body worn (testing in GPRS mode)_repeated with headset						
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[˚C]	Liquid Temp[˚C]
WLAN 802.11 b	11	2462	14.66dBm	0.016	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	12.86dBm	0.012	22.1	21.7
	6	2437	12.81dBm	0.009	22.1	21.7
	11	2462	12.68dBm	0.009	22.1	21.7

Note: SAR measurement results for the Mobile Phone at maximum output power.

3. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-FieldProbe	ESDV3	3172	May.27.2009
Schmid & Partner Engineering AG	850/1900/2450MHz System Validation Dipole	D835V2	4d063	May.25.2009
		D1900V2	5d027	Apr.27.2009
		D2450V2	727	Apr.27.2009
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	856	May.26.2009
Schmid & Partner Engineering AG	Software	DASY 5 V5.0 Build125	N/A	Calibration not required
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration not required
Agilent	Network Analyzer	8753D	3410A05547	Mar.31.2009
Agilent	Dielectric Probe Kit	85070D	US01440168	Calibration not required
Agilent	Dual-directional coupler	778D	50313	Aug.26.2009
		777D	50114	Aug.26.2009
Agilent	RF Signal Generator	8648D	3847M00432	May.25.2009
Agilent	Power Sensor	U2001B	MY48100169	Apr.23.2009
Agilent	Radio Communication Test	E5515c	GB44051912	Nov.05 .2008

4. Measurements

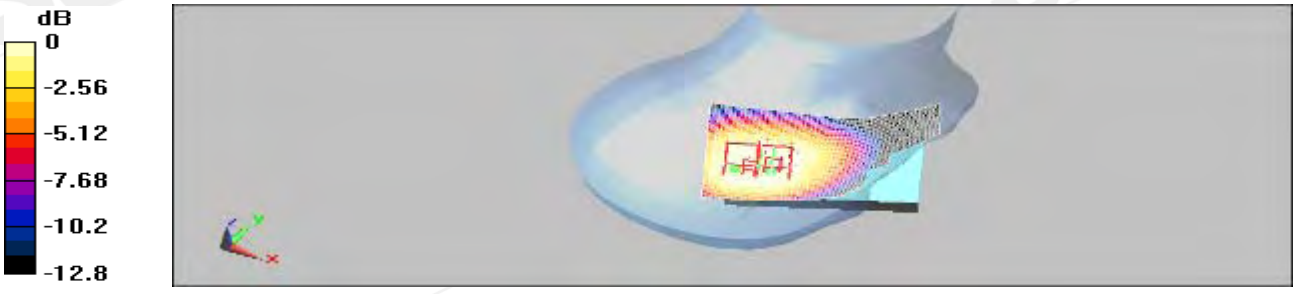
Date/Time: 2/10/2010 1:56:42

RE Cheek_CH128_Slider off

DUT: RQ5-J01;
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.595 mW/g
RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = -0.197 dB
Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.413 mW/g
Maximum value of SAR (measured) = 0.576 mW/g
RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = -0.197 dB
Peak SAR (extrapolated) = 0.826 W/kg
SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.368 mW/g
Maximum value of SAR (measured) = 0.560 mW/g



0 dB = 0.560mW/g

Date/Time: 2/10/2010 2:20:22

RE Cheek_CH190_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

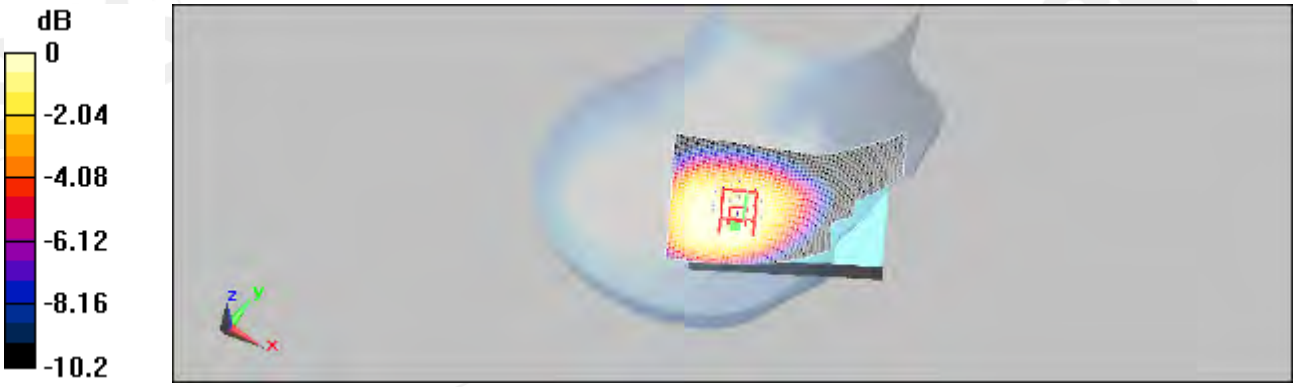
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.402 mW/g

RE Cheek/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.6 V/m; Power Drift = 0.180 dB
Peak SAR (extrapolated) = 0.491 W/kg

SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.291 mW/g
Maximum value of SAR (measured) = 0.405 mW/g



0 dB = 0.405mW/g

Date/Time: 2/10/2010 2:42:29

RE Cheek_CH251_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Right Section

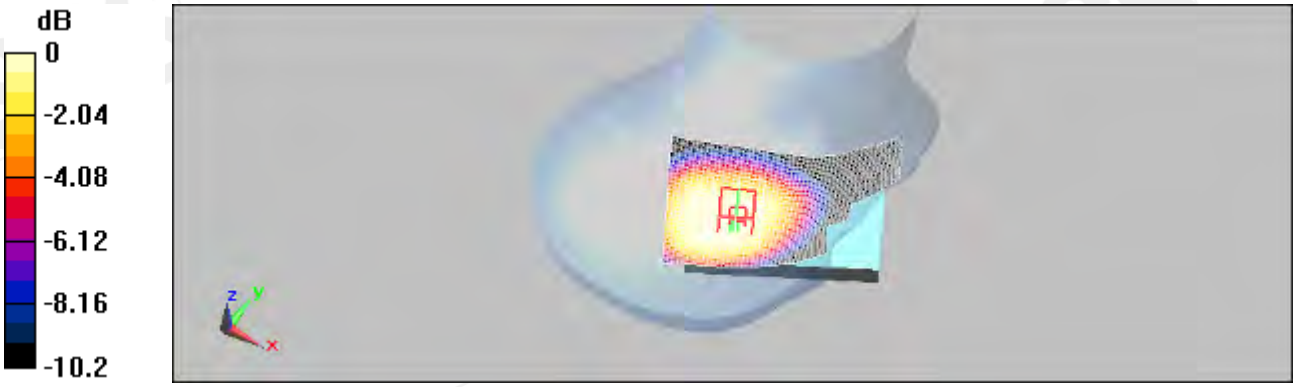
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.275 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.329 W/kg

SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.199 mW/g
Maximum value of SAR (measured) = 0.272 mW/g



0 dB = 0.272mW/g

Date/Time: 2/10/2010 4:23:39

LE Cheek_CH128_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Left Section

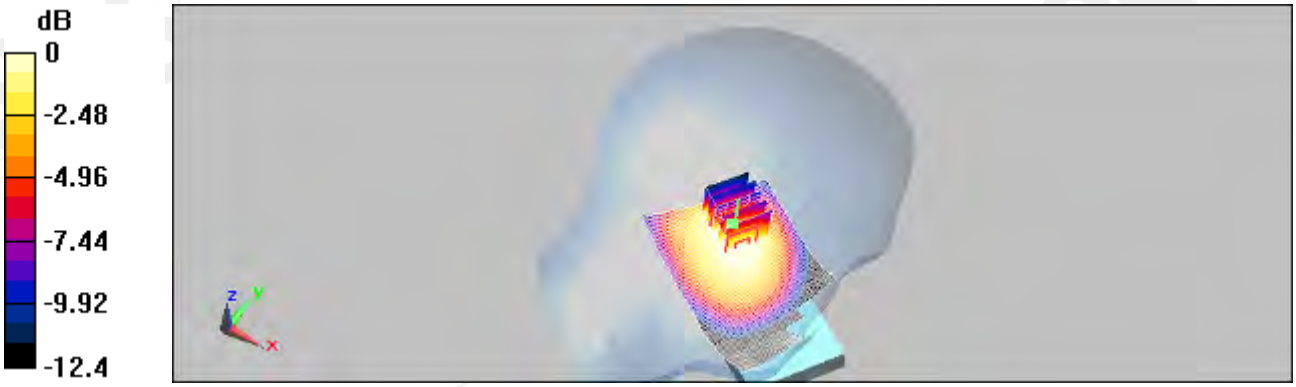
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.722 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.2 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 0.985 W/kg

SAR(1 g) = 0.638 mW/g; SAR(10 g) = 0.459 mW/g
Maximum value of SAR (measured) = 0.673 mW/g



0 dB = 0.673mW/g

Date/Time: 2/10/2010 4:46:54

LE Cheek_CH190_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

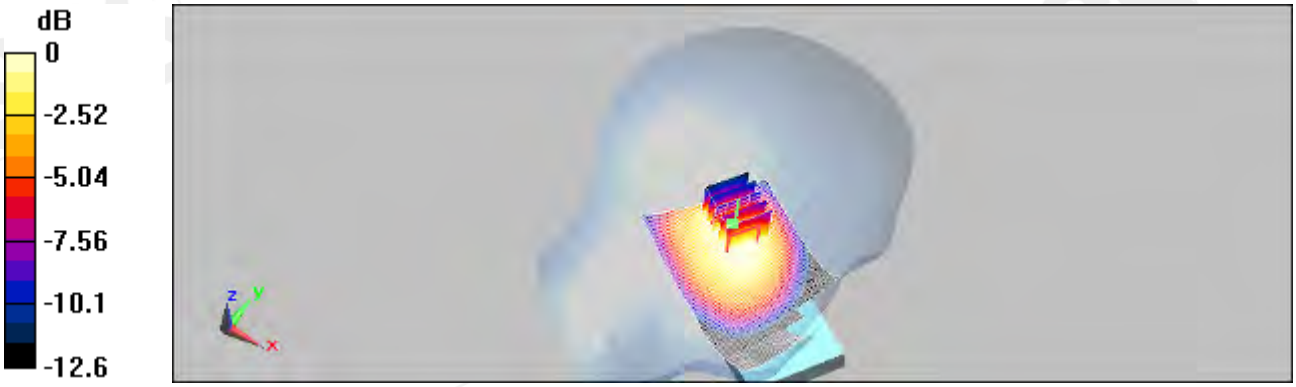
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.496 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.5 V/m; Power Drift = 0.161 dB
Peak SAR (extrapolated) = 0.682 W/kg

SAR(1 g) = 0.445 mW/g; SAR(10 g) = 0.318 mW/g
Maximum value of SAR (measured) = 0.470 mW/g



0 dB = 0.470mW/g

Date/Time: 2/10/2010 5:11:36

LE Cheek_CH251_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Left Section

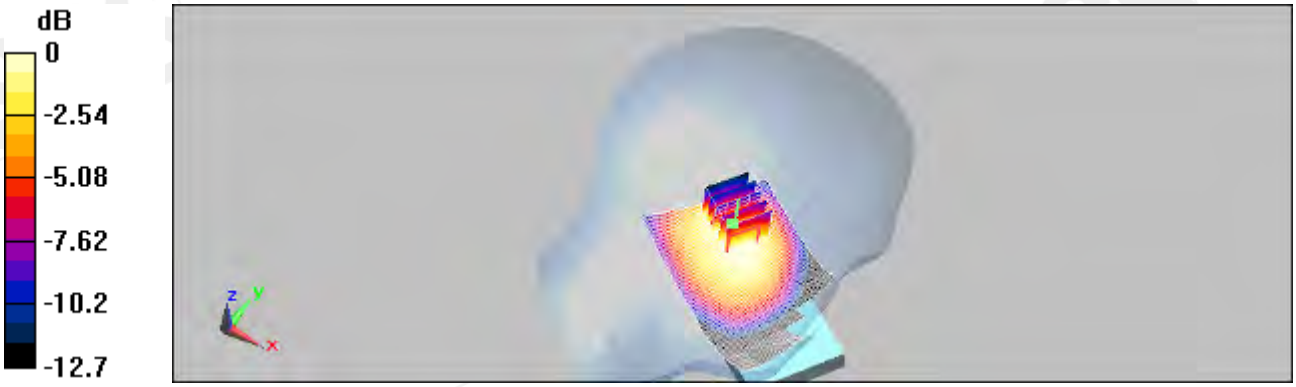
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.336 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.6 V/m; Power Drift = 0.069 dB
Peak SAR (extrapolated) = 0.468 W/kg

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.214 mW/g
Maximum value of SAR (measured) = 0.321 mW/g



0 dB = 0.321mW/g

Date/Time: 2/10/2010 03:10:48

RE Tilt_CH128_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section

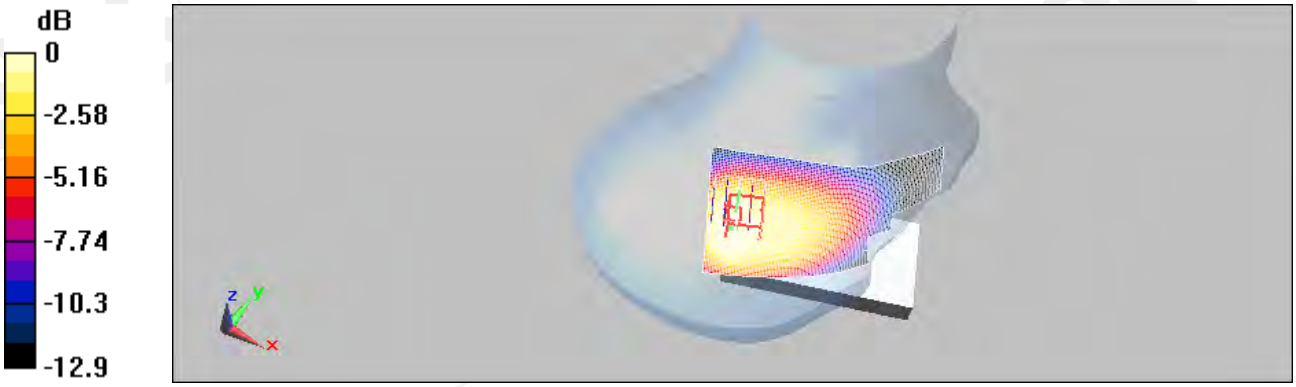
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.558 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.3 V/m; Power Drift = 0.071 dB
Peak SAR (extrapolated) = 0.840 W/kg

SAR(1 g) = 0.492 mW/g; SAR(10 g) = 0.331 mW/g
Maximum value of SAR (measured) = 0.522 mW/g



0 dB = 0.522mW/g

Date/Time: 2/10/2010 03:35:45

RE Tilt_CH190_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

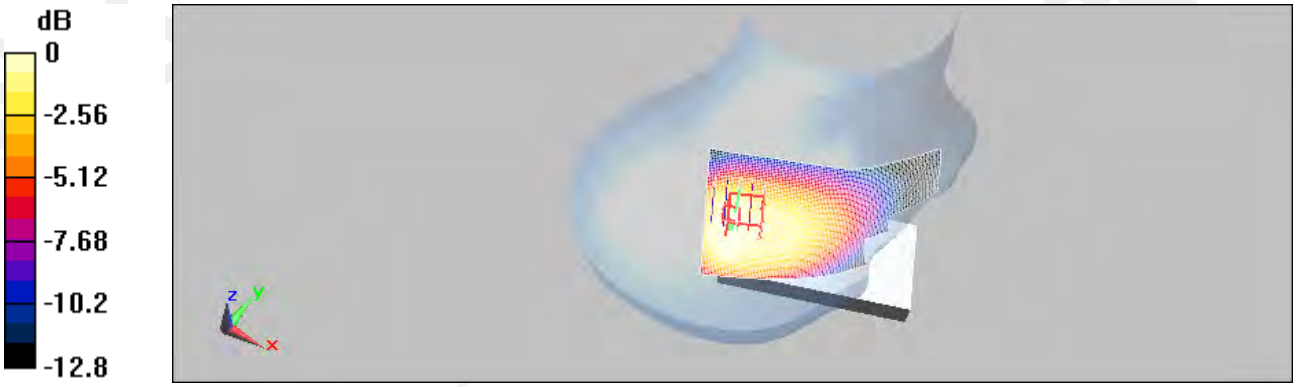
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.371 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = -0.062 dB
Peak SAR (extrapolated) = 0.560 W/kg

SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.225 mW/g
Maximum value of SAR (measured) = 0.355 mW/g



0 dB = 0.355mW/g

Date/Time: 2/10/2010 3:58:30

RE Tilt_CH251_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Right Section

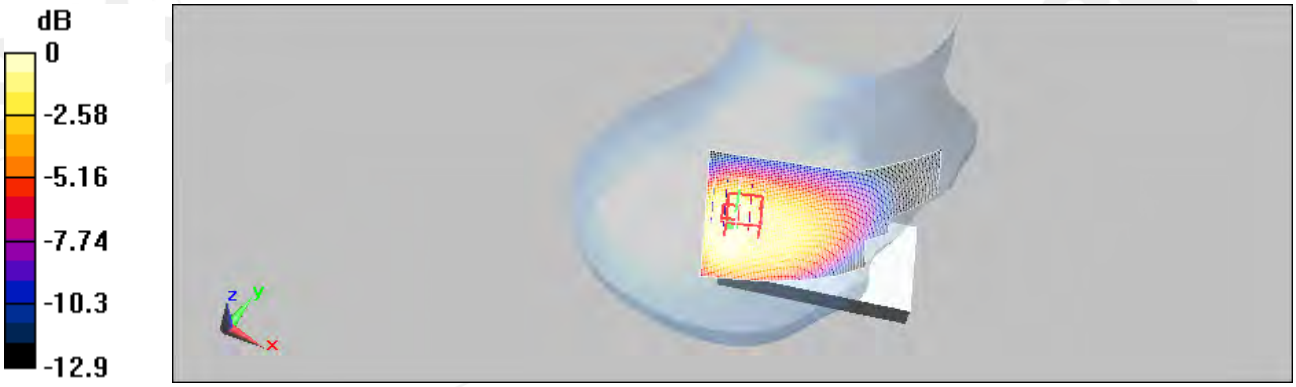
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.236 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.224 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.233 mW/g



0 dB = 0.233mW/g

Date/Time: 2/10/2010 5:37:49

LE Tilt_CH128_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Left Section

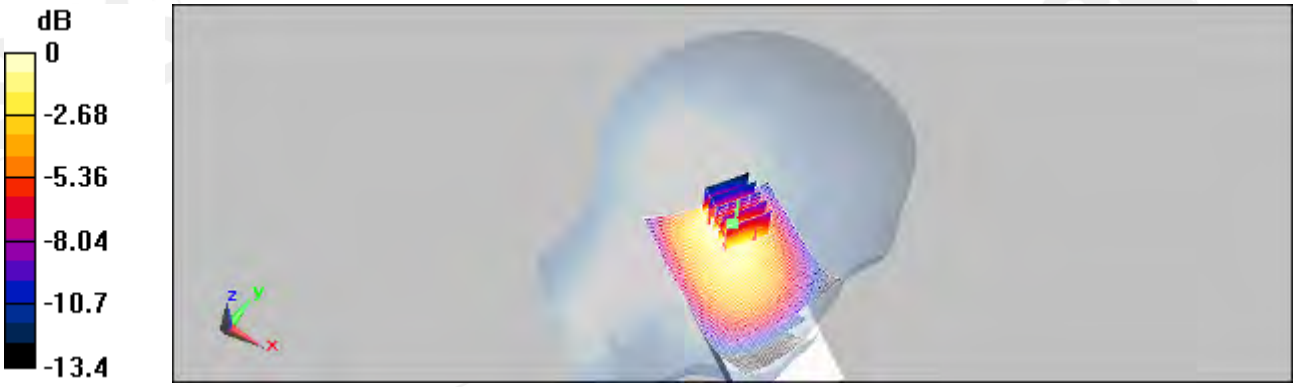
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.689 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.1 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.380 mW/g
Maximum value of SAR (measured) = 0.627 mW/g



0 dB = 0.627mW/g

Date/Time: 2/10/2010 06:00:02

LE Tilt_CH190_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

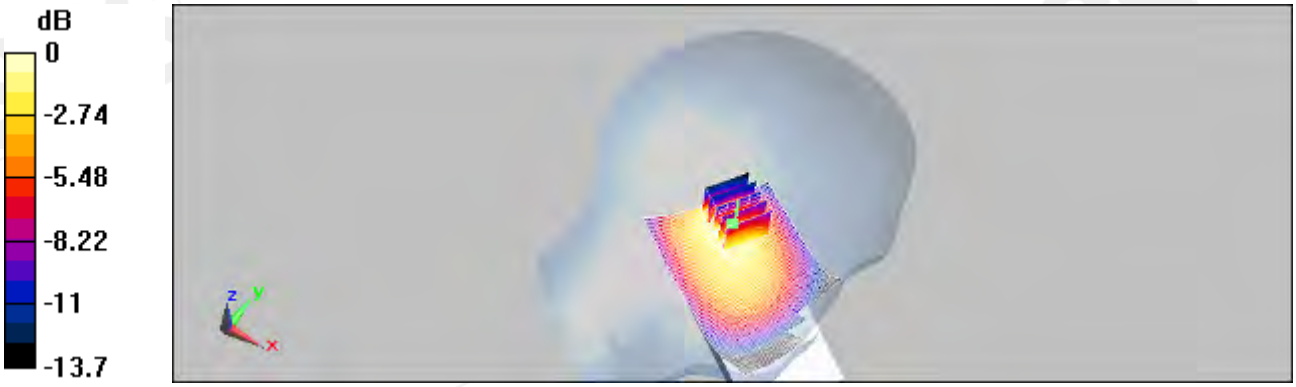
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.474 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 0.777 W/kg

SAR(1 g) = 0.420 mW/g; SAR(10 g) = 0.262 mW/g
Maximum value of SAR (measured) = 0.447 mW/g



0 dB = 0.447mW/g

Date/Time: 2/10/2010 6:26:38

LE Tilt_CH251_Slider off

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Left Section

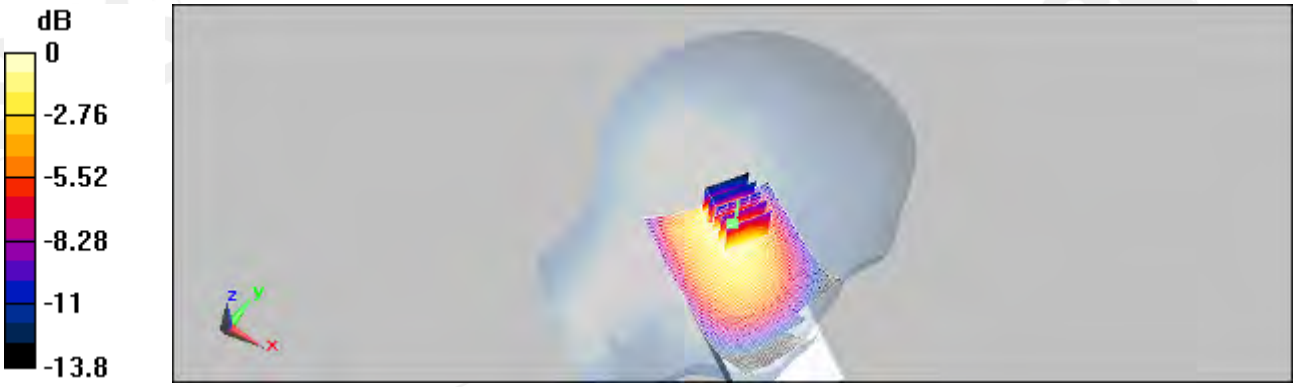
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.319 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.532 W/kg

SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.174 mW/g
Maximum value of SAR (measured) = 0.302 mW/g



0 dB = 0.302mW/g

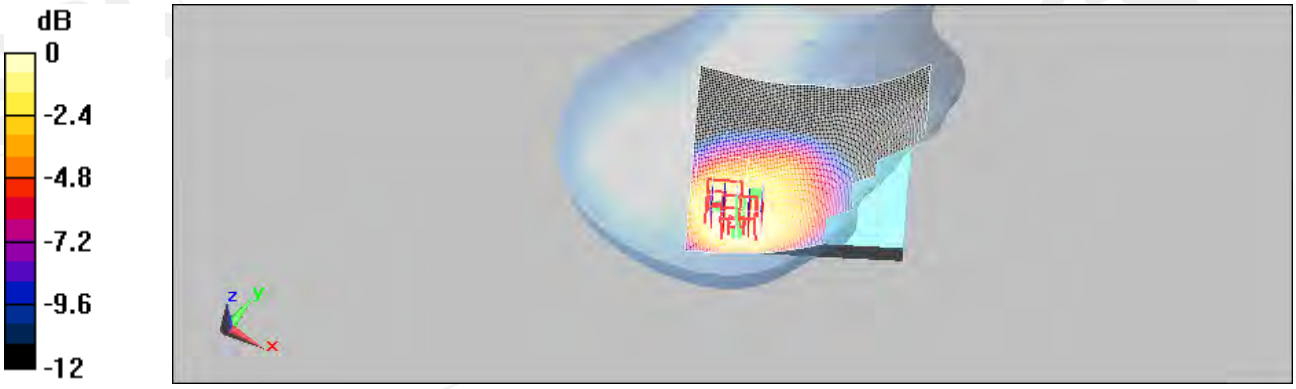
Date/Time: 2/10/2010 06:50:37

RE Cheek_CH128_Slider on

DUT: RQ5-J01;
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.833 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.480 mW/g
Maximum value of SAR (measured) = 0.829 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.783 mW/g; SAR(10 g) = 0.504 mW/g
Maximum value of SAR (measured) = 0.847 mW/g



0 dB = 0.847mW/g

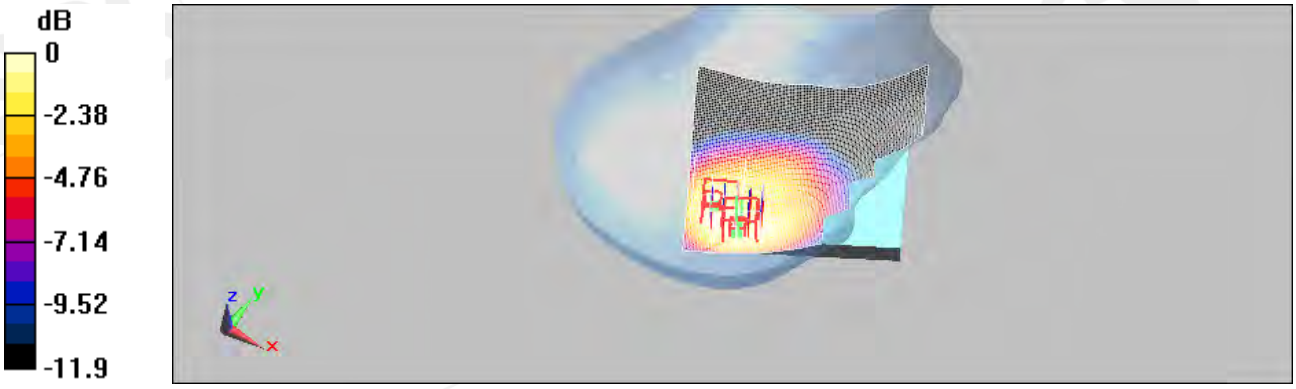
Date/Time: 2/10/2010 7:14:17

RE Cheek_CH190_Slider on

DUT: RQ5-J01;
Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.594 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = -0.112 dB
Peak SAR (extrapolated) = 0.910 W/kg
SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.337 mW/g
Maximum value of SAR (measured) = 0.600 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = -0.112 dB
Peak SAR (extrapolated) = 0.902 W/kg
SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.355 mW/g
Maximum value of SAR (measured) = 0.603 mW/g



0 dB = 0.603mW/g

Date/Time: 2/10/2010 7:39:37

RE Cheek_CH251_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Right Section

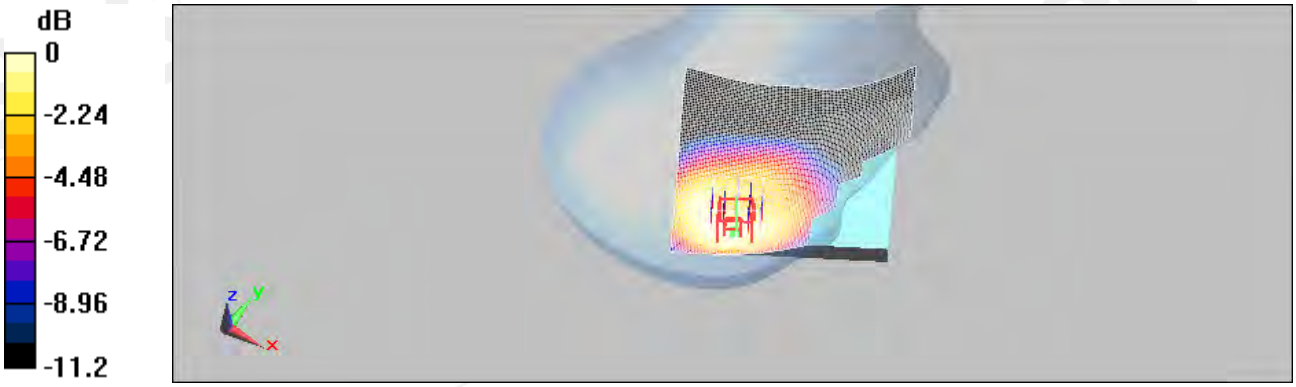
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.427 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.661 W/kg

SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.263 mW/g
Maximum value of SAR (measured) = 0.444 mW/g



0 dB = 0.444mW/g

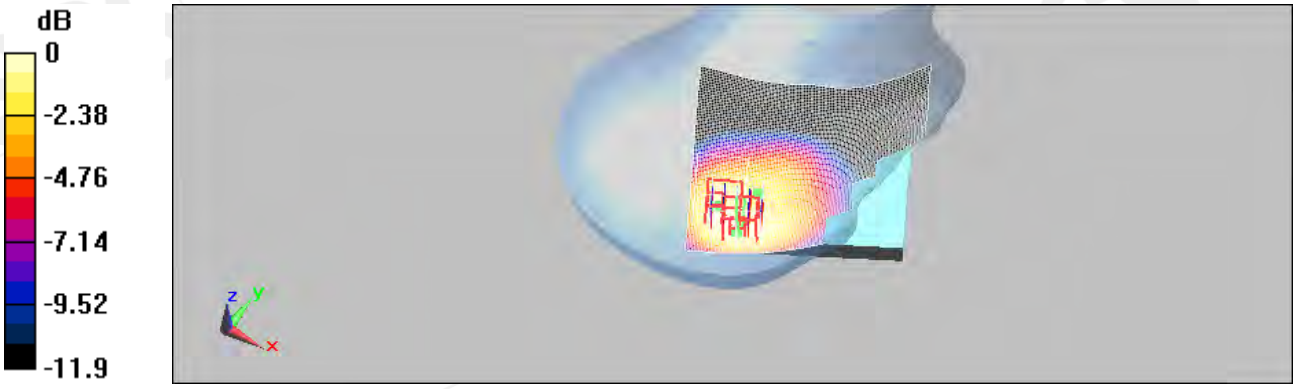
Date/Time: 2/10/2010 22:15:29

RE Cheek_CH128_Slider on_ repeated with Memory card

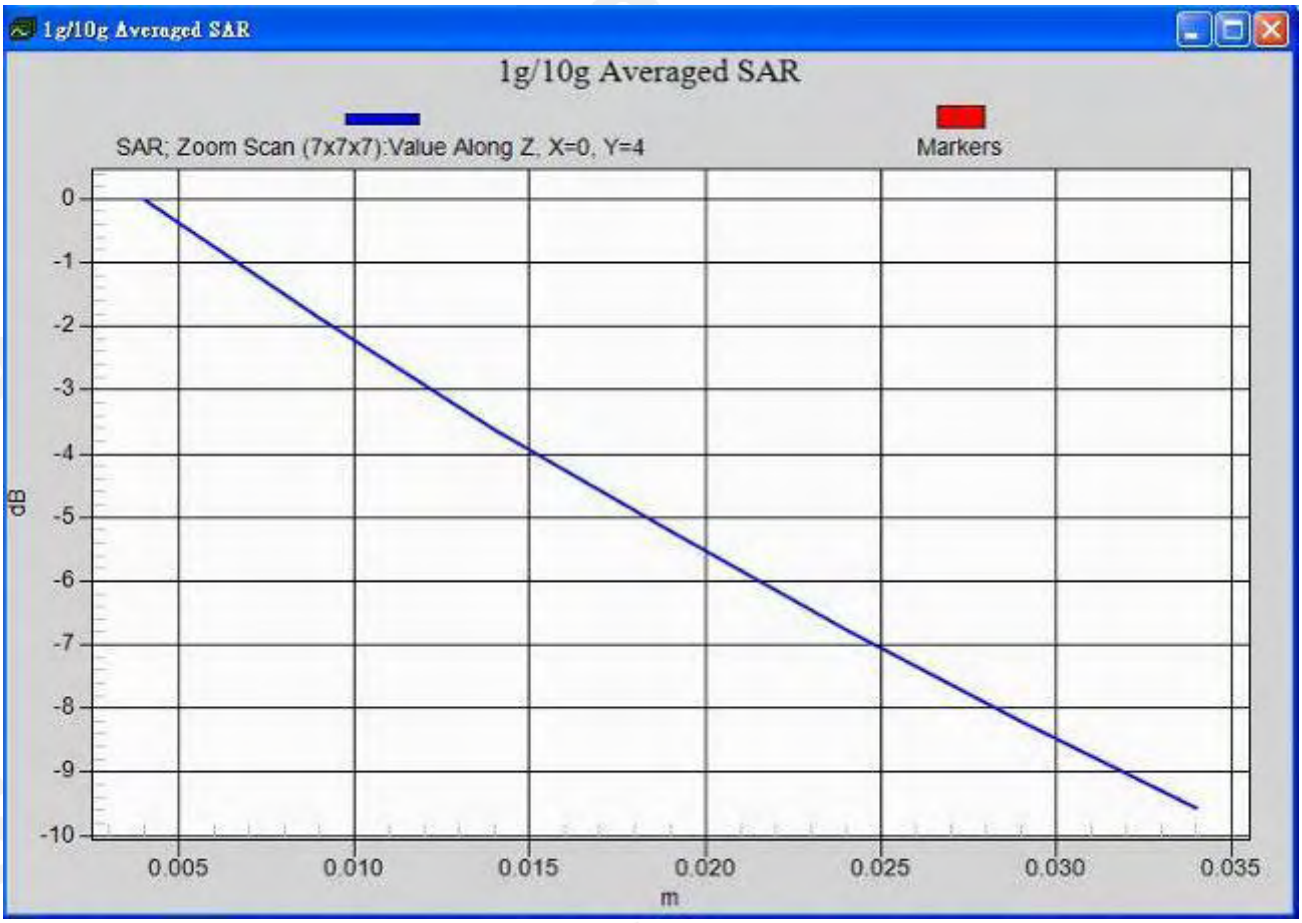
DUT: RQ5-J01;
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.824 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.9 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.480 mW/g
Maximum value of SAR (measured) = 0.833 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.9 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.798 mW/g; SAR(10 g) = 0.513 mW/g
Maximum value of SAR (measured) = 0.859 mW/g



0 dB = 0.859mW/g



Date/Time: 2/10/2010 9:14:14

LE Cheek_CH128_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Left Section

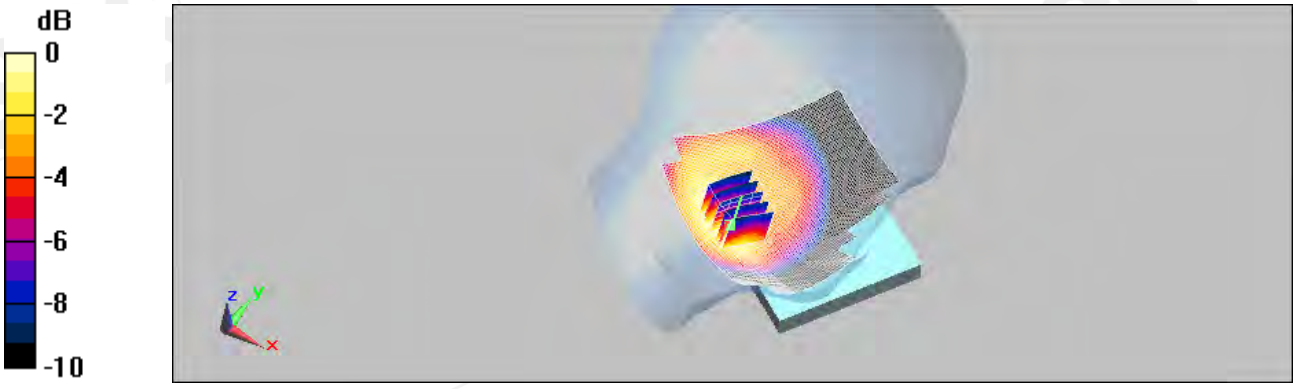
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.497 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.3 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 0.709 W/kg

SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.321 mW/g
Maximum value of SAR (measured) = 0.512 mW/g



0 dB = 0.512mW/g

Date/Time: 2/10/2010 9:40:58

LE Cheek_CH190_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

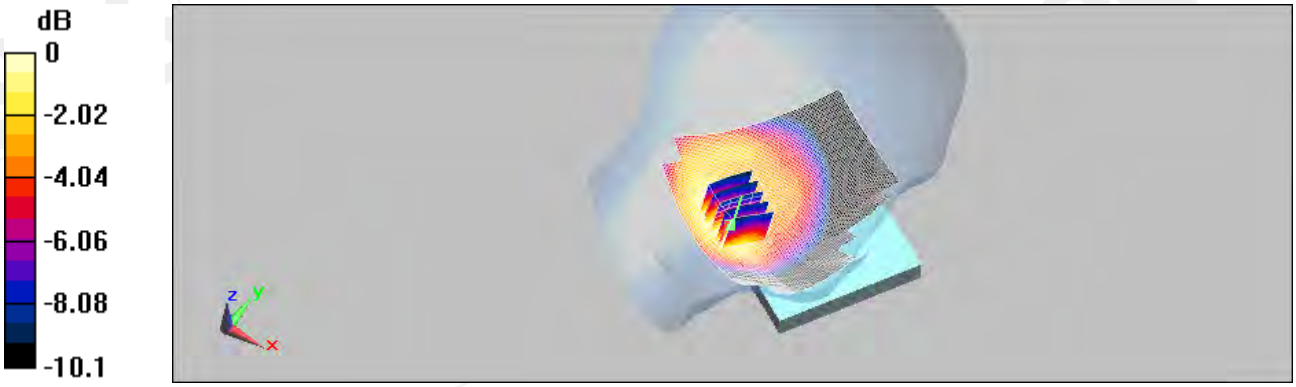
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.365 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13 V/m; Power Drift = 0.125 dB
Peak SAR (extrapolated) = 0.515 W/kg

SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.232 mW/g
Maximum value of SAR (measured) = 0.372 mW/g



0 dB = 0.372mW/g

Date/Time: 2/10/2010 10:04:05

LE Cheek_CH251_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Left Section

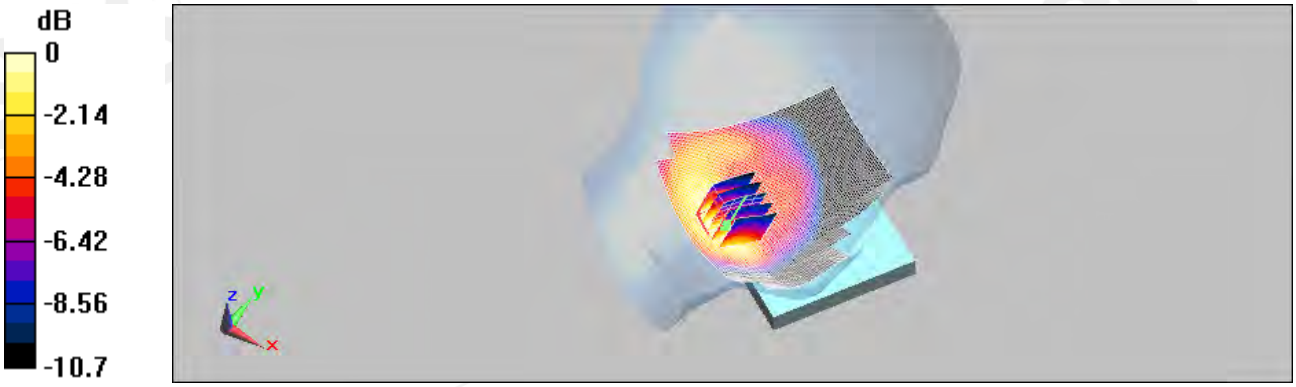
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.312 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.149 dB
Peak SAR (extrapolated) = 0.451 W/kg

SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.190 mW/g
Maximum value of SAR (measured) = 0.314 mW/g



0 dB = 0.314mW/g

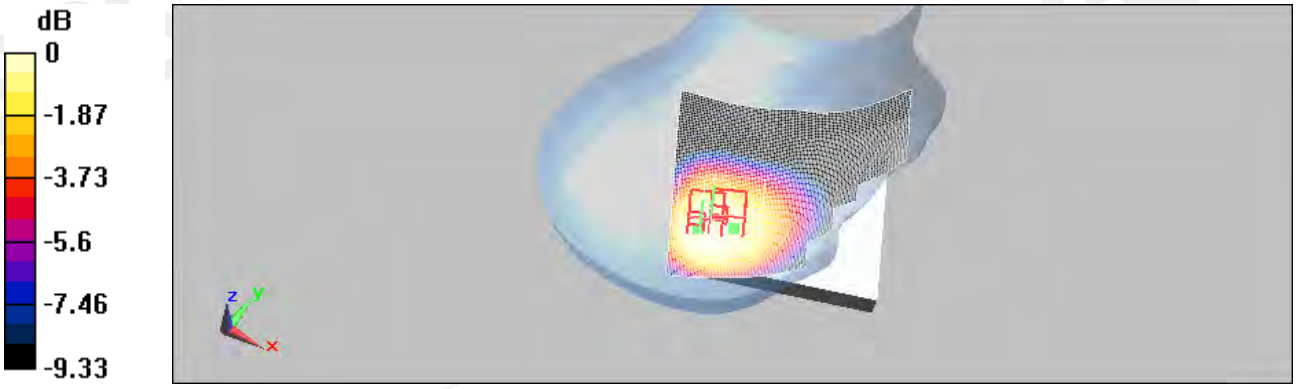
Date/Time: 2/10/2010 8:02:29

RE Tilt_CH128_Slider on

DUT: RQ5-J01;
Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.741 mW/g
RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.645 mW/g; SAR(10 g) = 0.421 mW/g
Maximum value of SAR (measured) = 0.685 mW/g
RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.785 W/kg
SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.408 mW/g
Maximum value of SAR (measured) = 0.611 mW/g



0 dB = 0.611mW/g

Date/Time: 2/10/2010 8:27:53

RE Tilt_CH190_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Right Section

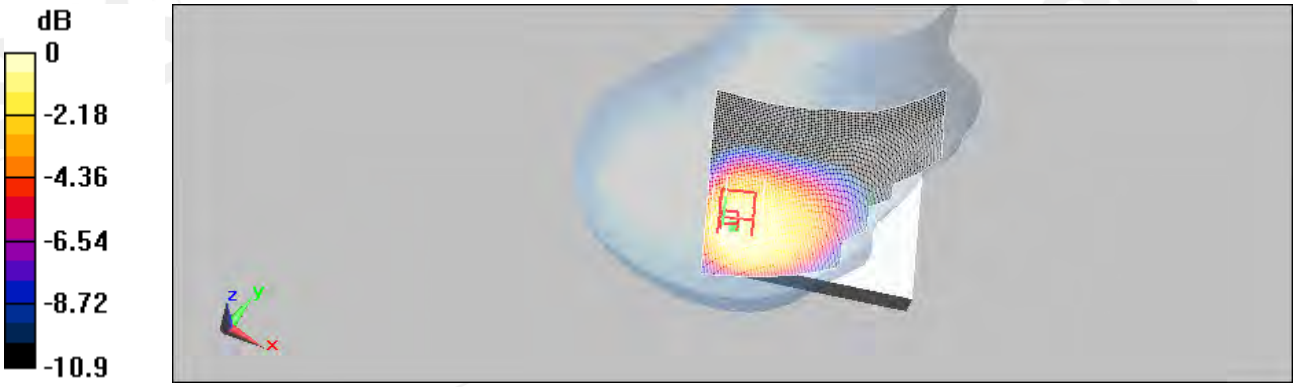
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.503 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.738 W/kg

SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.285 mW/g
Maximum value of SAR (measured) = 0.476 mW/g



0 dB = 0.476mW/g

Date/Time: 2/10/2010 8:51:51

RE Tilt_CH251_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Right Section

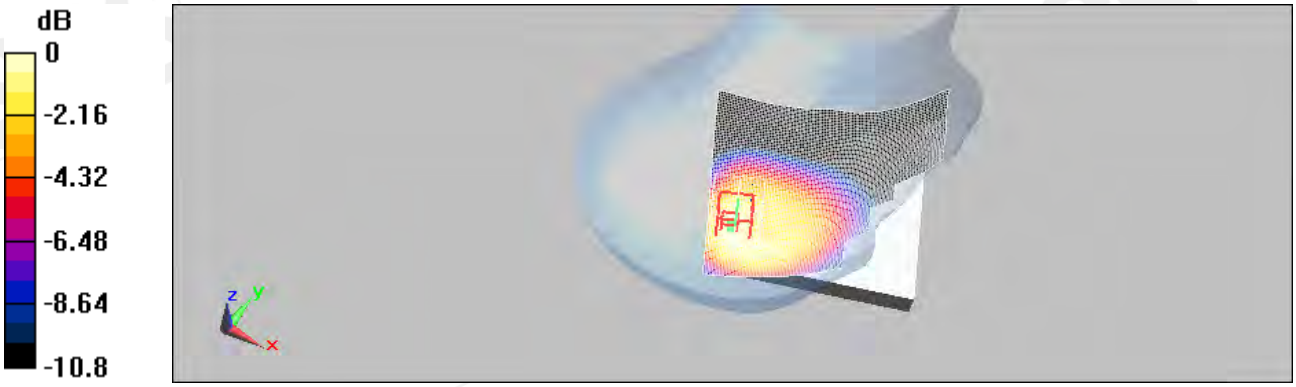
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.399 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 0.578 W/kg

SAR(1 g) = 0.352 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 0.379 mW/g



0 dB = 0.379mW/g

Date/Time: 2/10/2010 10:24:35

LE Tilt_CH128_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.87 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Left Section

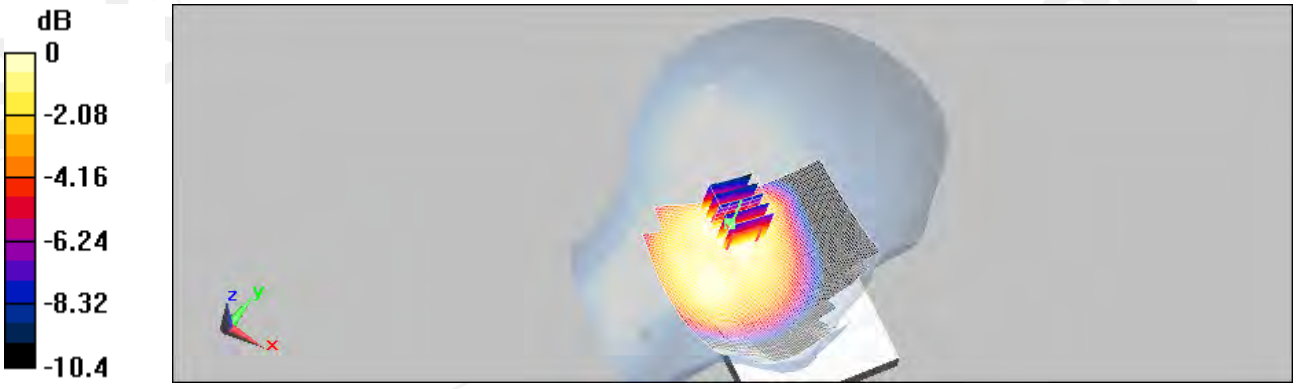
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.375 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.3 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 0.485 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.240 mW/g
Maximum value of SAR (measured) = 0.356 mW/g



0 dB = 0.356mW/g

Date/Time: 2/10/2010 10:49:20

LE Tilt_CH190_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 837 MHz; σ = 0.88 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Left Section

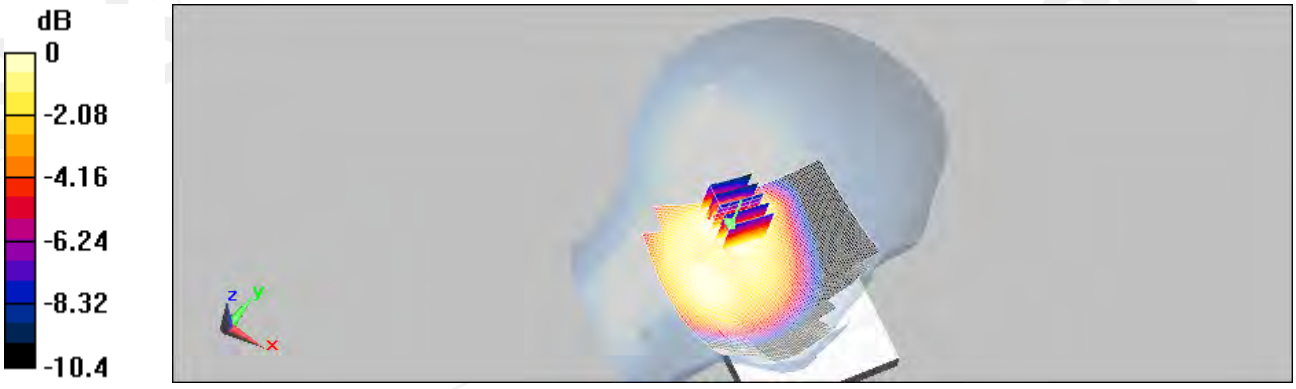
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.234 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.1 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.223 mW/g



0 dB = 0.223mW/g

Date/Time: 2/10/2010 11:12:06

LE Tilt_CH251_Slider on

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: Head 900 Medium parameters used: f = 849 MHz; σ = 0.894 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Left Section

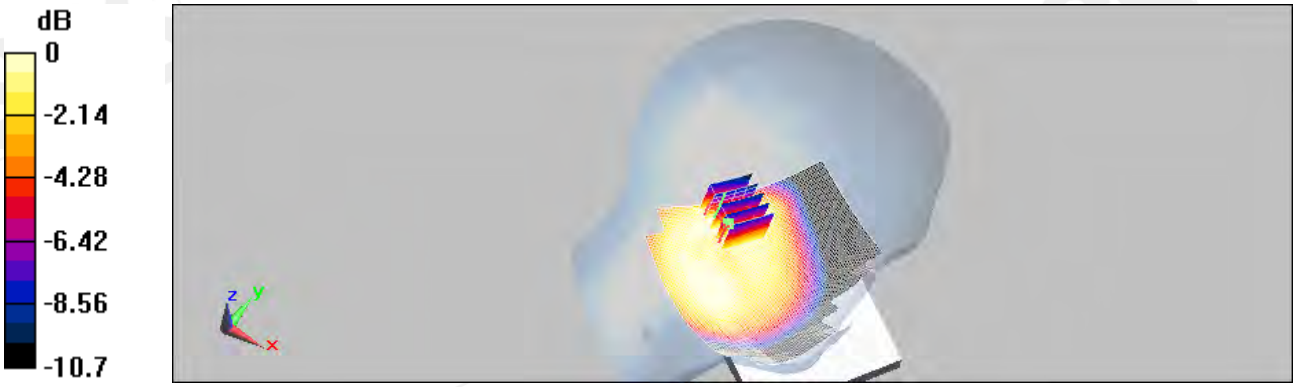
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.173 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 0.236 W/kg

SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.165 mW/g



0 dB = 0.165mW/g

Date/Time: 2/12/2010 5:58:40

Body_CH128

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

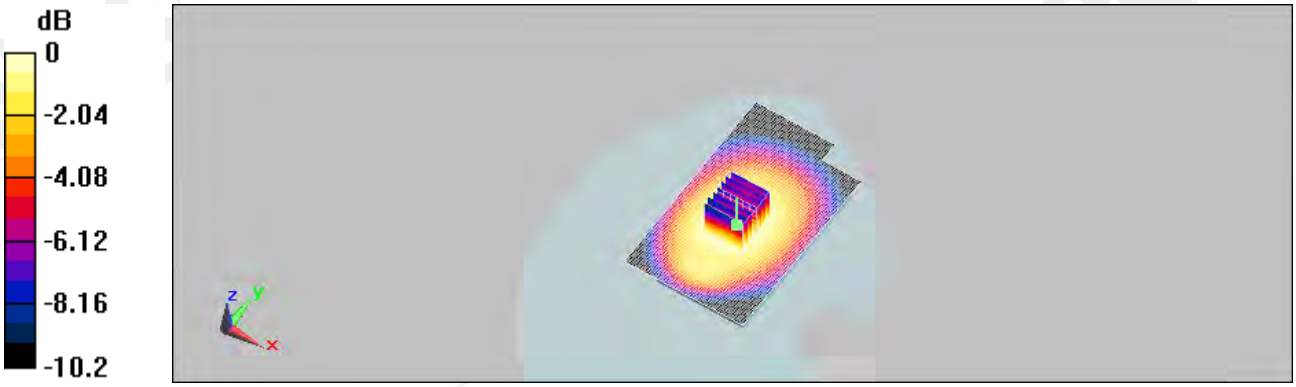
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.486 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.6 V/m; Power Drift = 0.00432 dB
Peak SAR (extrapolated) = 0.618 W/kg

SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.337 mW/g
Maximum value of SAR (measured) = 0.489 mW/g



0 dB = 0.489mW/g

Date/Time: 2/12/2010 6:24:59

Body_CH190

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used: f = 837 MHz; σ = 1.02 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

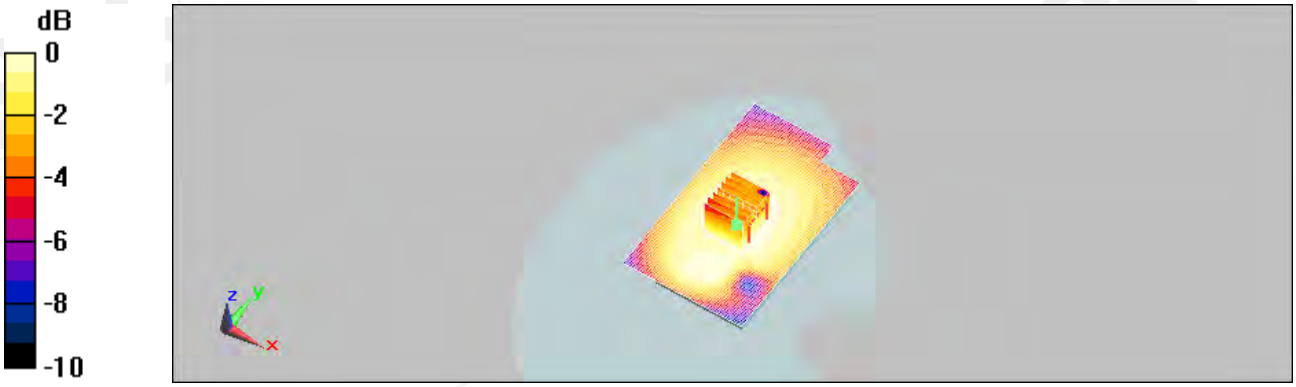
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.399 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.8 V/m; Power Drift = 0.119 dB
Peak SAR (extrapolated) = 0.506 W/kg

SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.278 mW/g
Maximum value of SAR (measured) = 0.404 mW/g



0 dB = 0.404mW/g

Date/Time: 2/12/2010 6:52:20

Body_CH251

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used: f = 849 MHz; σ = 1.03 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

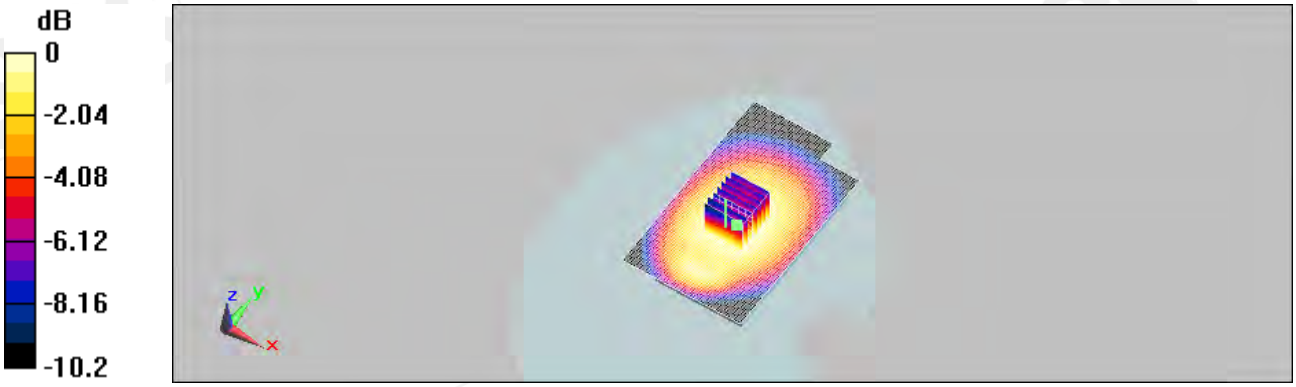
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.277 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.097 dB
Peak SAR (extrapolated) = 0.348 W/kg

SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.194 mW/g
Maximum value of SAR (measured) = 0.279 mW/g



0 dB = 0.279mW/g

Date/Time: 2/12/2010 8:39:58

Body_CH128 _repeated for EUT front to phantom

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

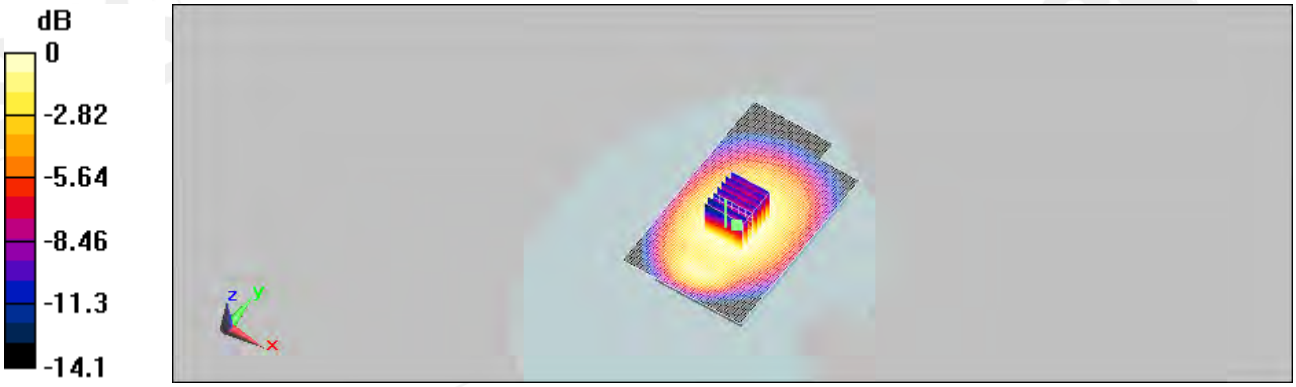
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.283 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12 V/m; Power Drift = 0.00933 dB
Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.205 mW/g
Maximum value of SAR (measured) = 0.281 mW/g



0 dB = 0.281mW/g

Date/Time: 2/12/2010 9:06:57

Body_CH128 _repeated with Memory card

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

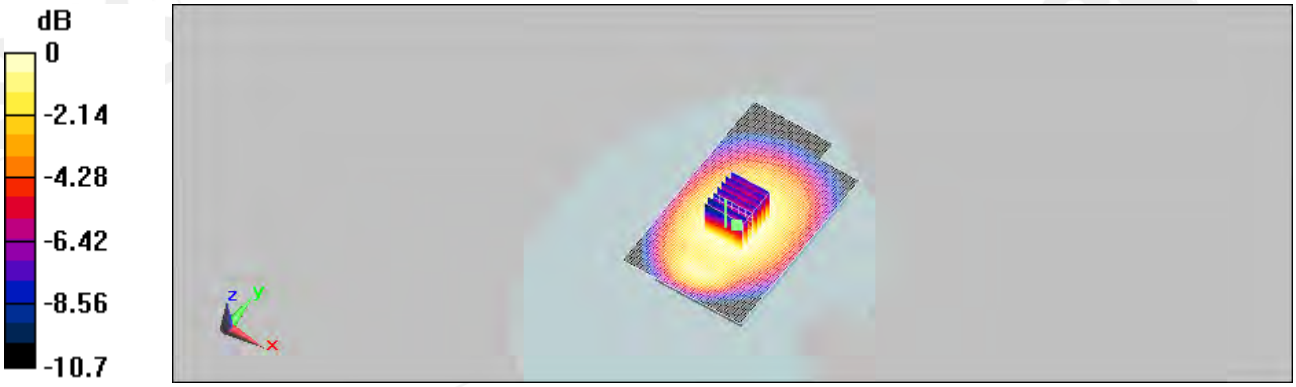
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.483 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.3 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 0.608 W/kg

SAR(1 g) = 0.457 mW/g; SAR(10 g) = 0.321 mW/g
Maximum value of SAR (measured) = 0.481 mW/g



0 dB = 0.481mW/g

Date/Time: 2/12/2010 9:32:44

Body_CH128 _repeated with headset

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

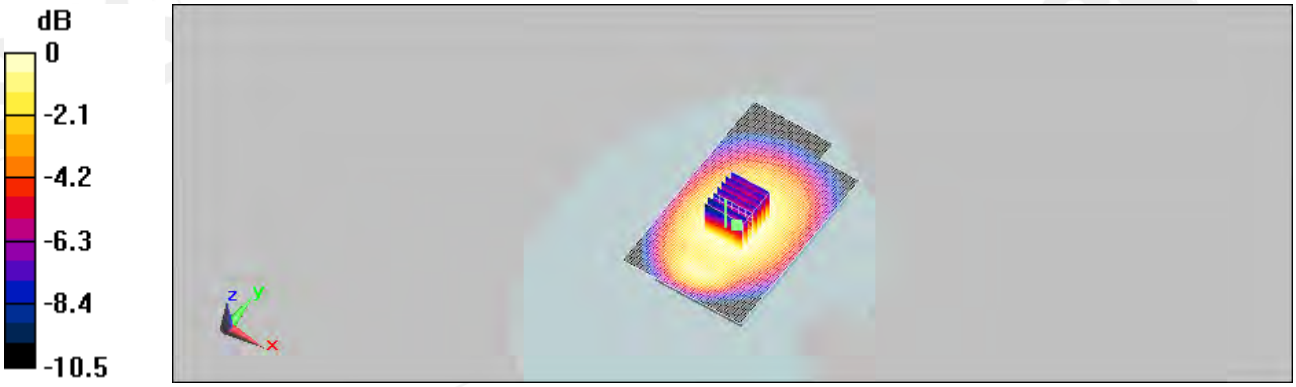
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

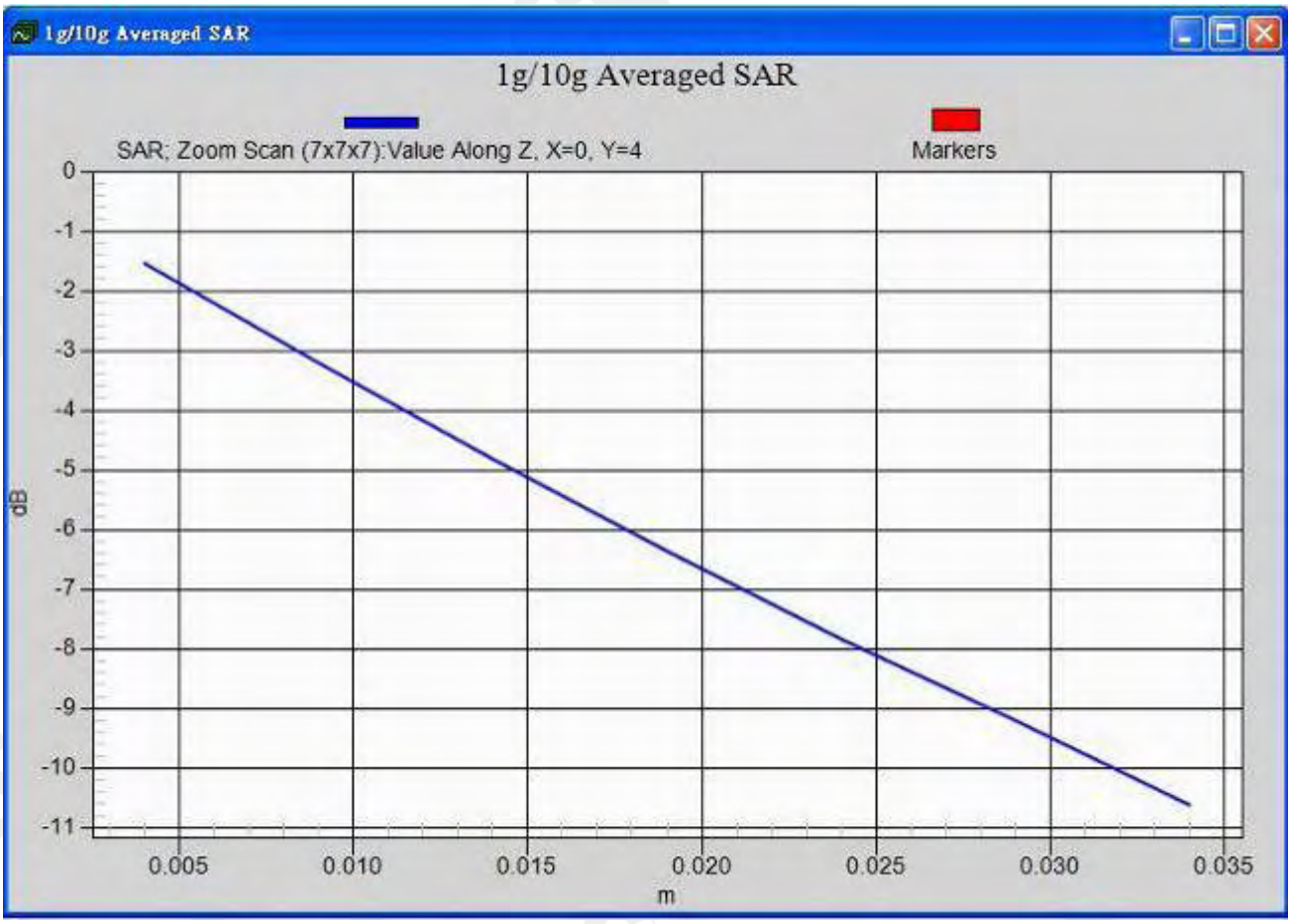
Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.512 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.120 dB
Peak SAR (extrapolated) = 0.664 W/kg

SAR(1 g) = 0.483 mW/g; SAR(10 g) = 0.346 mW/g
Maximum value of SAR (measured) = 0.512 mW/g



0 dB = 0.512mW/g



Date/Time: 2/12/2010 10:00:44

Body_CH128 _repeated with EGPRS mode

DUT: RQ5-J01;

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium: Body 850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

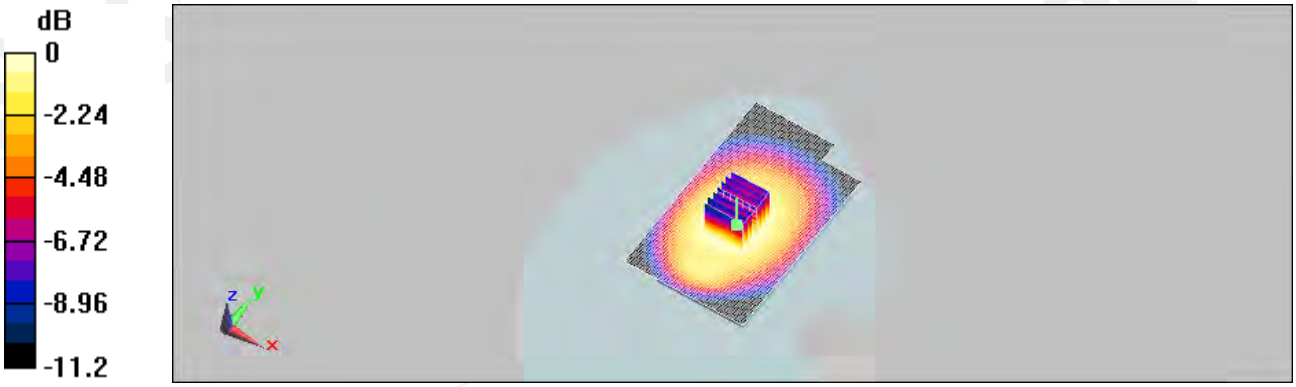
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.512 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.120 dB
Peak SAR (extrapolated) = 0.664 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.312 mW/g
Maximum value of SAR (measured) = 0.512 mW/g



0 dB = 0.512mW/g

Date/Time: 2/10/2010 13:26:58

RE Cheek_CH512_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

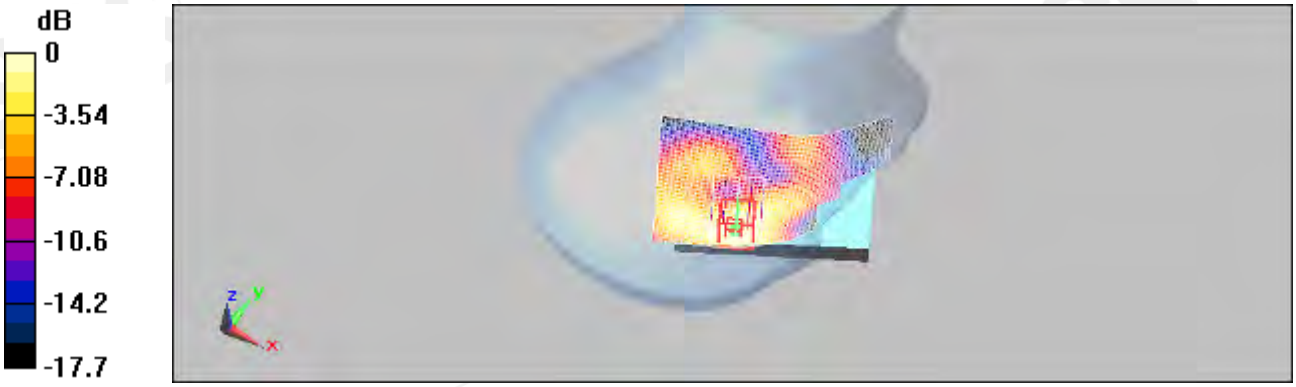
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.096 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.06 V/m; Power Drift = 0.155 dB
Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.053 mW/g
Maximum value of SAR (measured) = 0.097 mW/g



0 dB = 0.097mW/g

Date/Time: 2/10/2010 13:51:36

RE Cheek_CH661_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

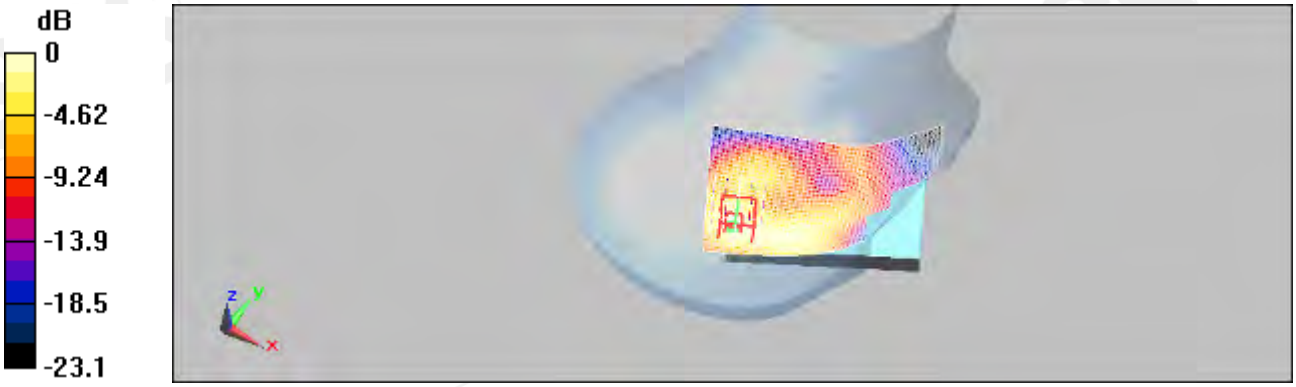
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.108 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.69 V/m; Power Drift = 0.173 dB
Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.053 mW/g
Maximum value of SAR (measured) = 0.114 mW/g



0 dB = 0.114mW/g

Date/Time: 2/10/2010 14:15:52

RE Cheek_CH810_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

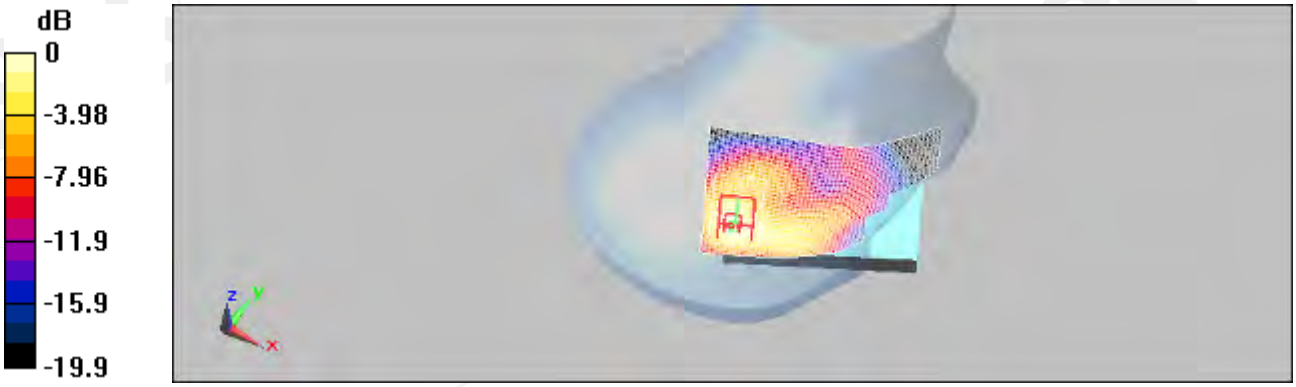
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.192 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.8 V/m; Power Drift = 0.118 dB
Peak SAR (extrapolated) = 0.335 W/kg

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.191 mW/g



0 dB = 0.191mW/g

Date/Time: 2/10/2010 15:54:49

LE Cheek_CH512_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

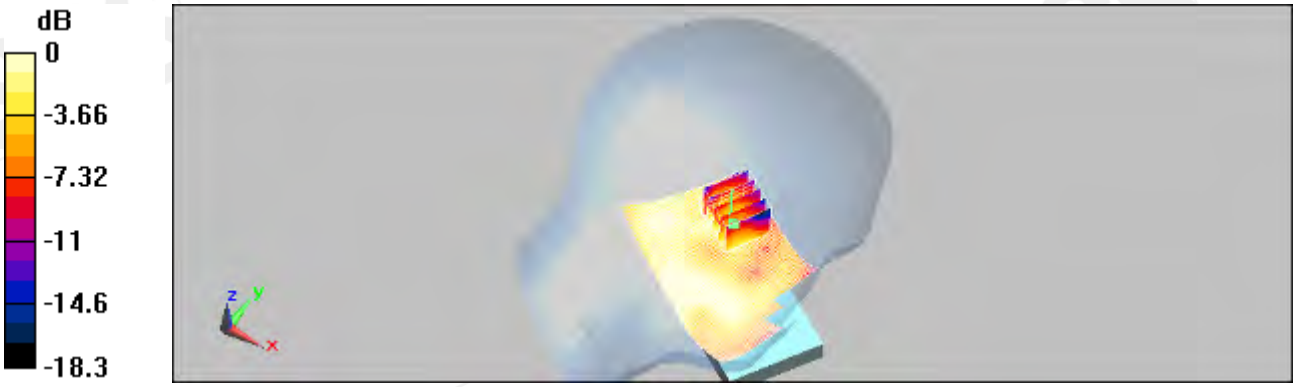
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.084 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.68 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.046 mW/g
Maximum value of SAR (measured) = 0.076 mW/g



0 dB = 0.076mW/g

Date/Time: 2/10/2010 16:20:55

LE Cheek_CH661_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

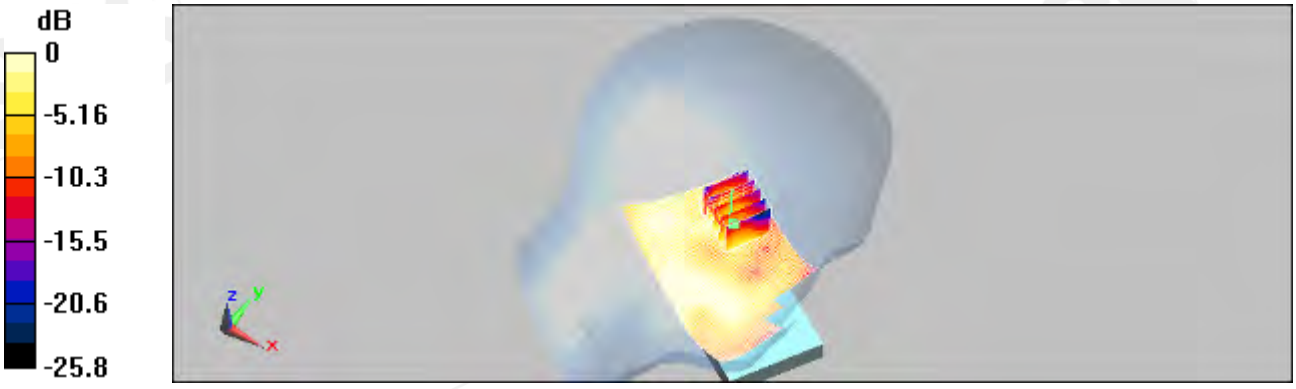
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.056 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.24 V/m; Power Drift = -0.075 dB
Peak SAR (extrapolated) = 0.080 W/kg

SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.030 mW/g
Maximum value of SAR (measured) = 0.054 mW/g



0 dB = 0.054mW/g

Date/Time: 2/10/2010 16:43:20

LE Cheek_CH810_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

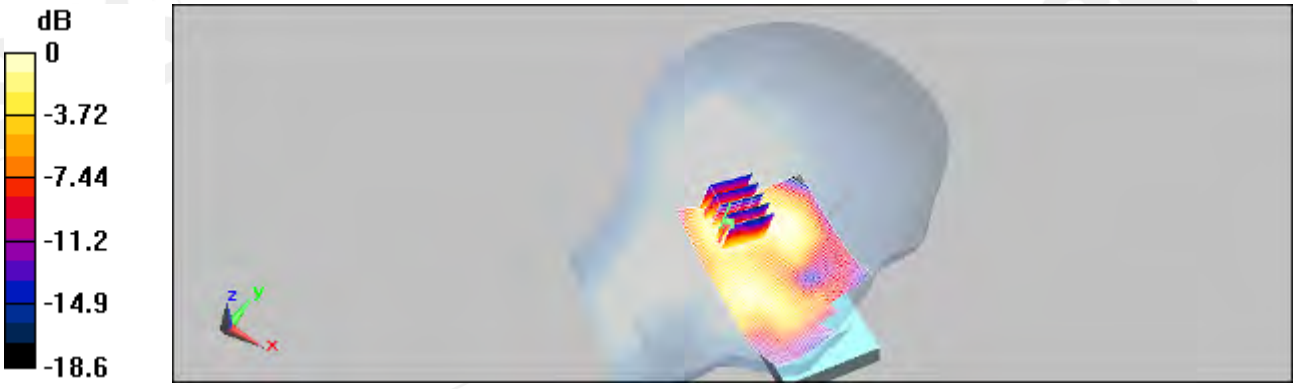
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.091 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.52 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.149 W/kg

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.046 mW/g
Maximum value of SAR (measured) = 0.087 mW/g



0 dB = 0.087mW/g

Date/Time: 2/10/2010 14:40:41

RE Tilt_CH512_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

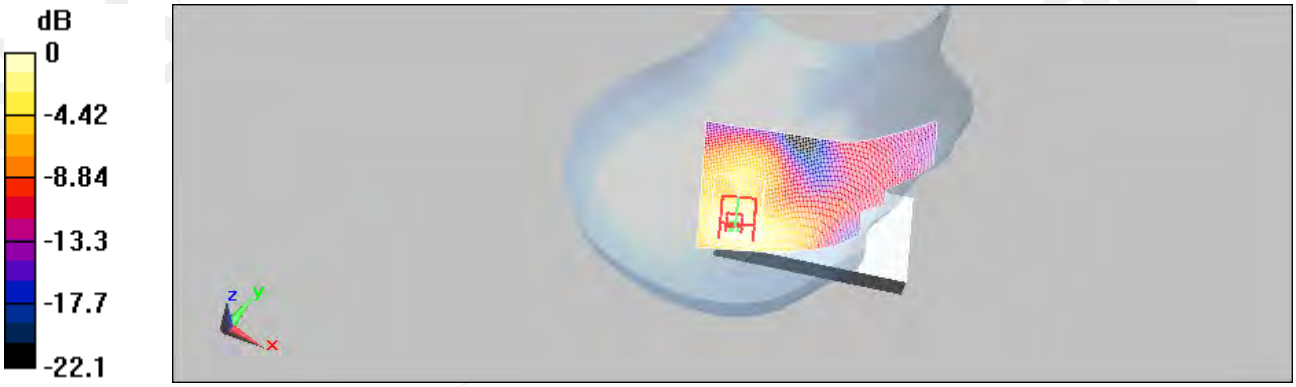
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.102 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5 V/m; Power Drift = 0.095 dB
Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.107 mW/g



0 dB = 0.107mW/g

Date/Time: 2/10/2010 15:05:14

RE Tilt_CH661_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

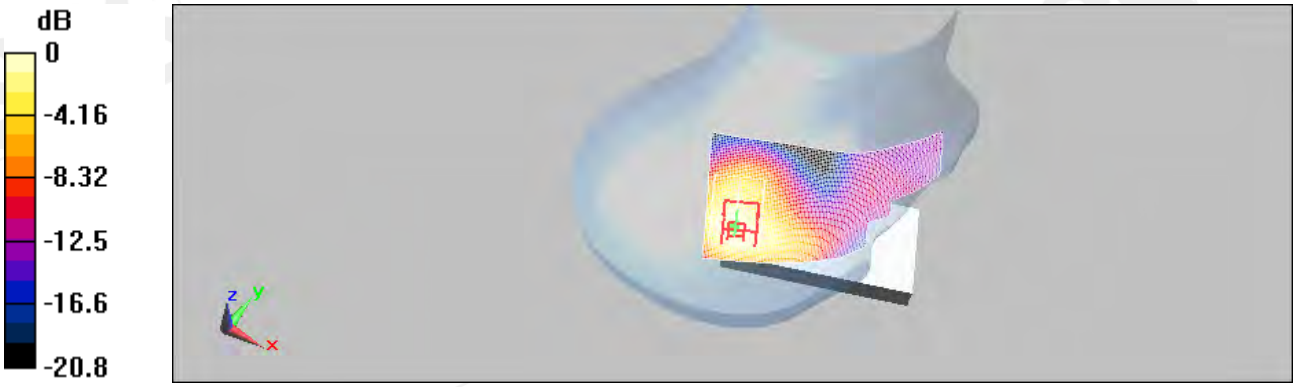
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.143 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.75 V/m; Power Drift = -0.194 dB
Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.117 mW/g



0 dB = 0.117mW/g

Date/Time: 2/10/2010 15:29:25

RE Tilt_CH810_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

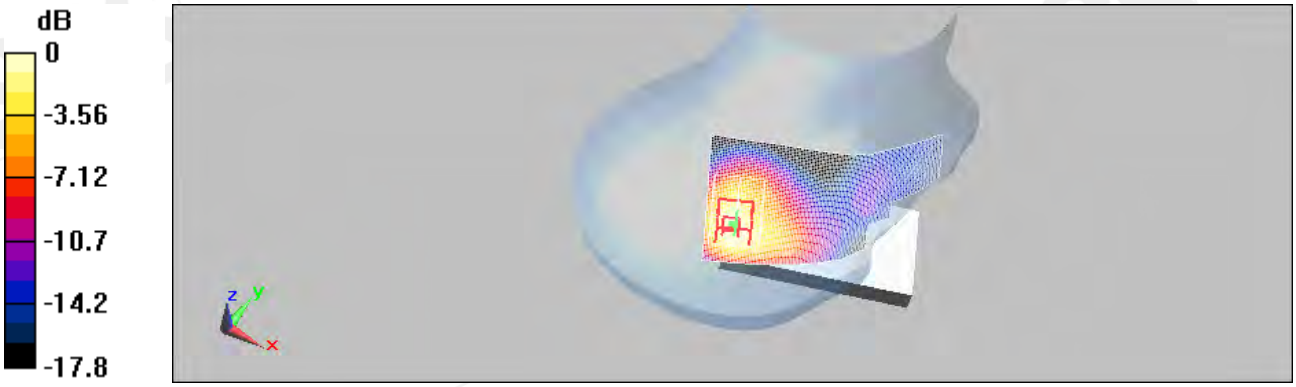
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.239 mW/g

RE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.91 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.401 W/kg

SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.222 mW/g



0 dB = 0.222mW/g

Date/Time: 2/10/2010 17:08:45

LE Tilt_CH512_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

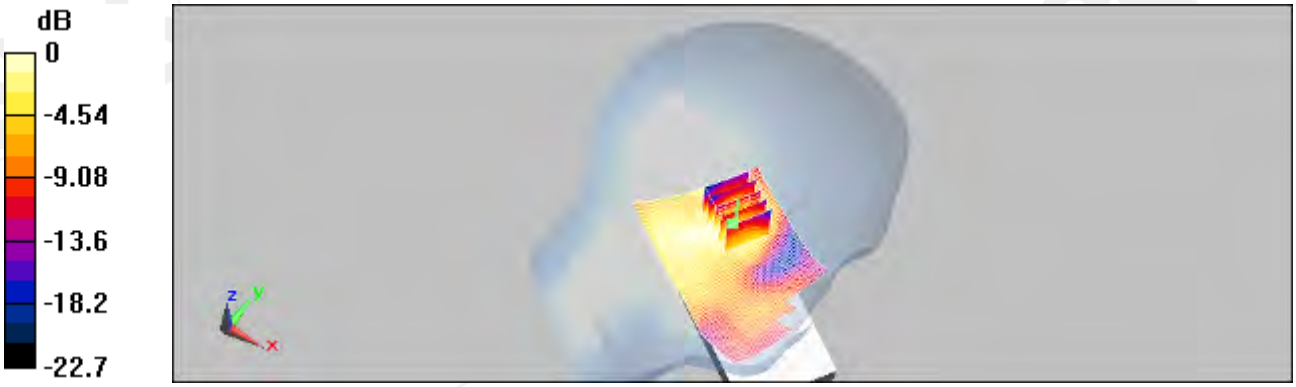
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.078 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.9 V/m; Power Drift = -0.00527 dB
Peak SAR (extrapolated) = 0.104 W/kg

SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.041 mW/g
Maximum value of SAR (measured) = 0.075 mW/g



0 dB = 0.075mW/g

Date/Time: 2/10/2010 17:32:37

LE Tilt_CH661

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

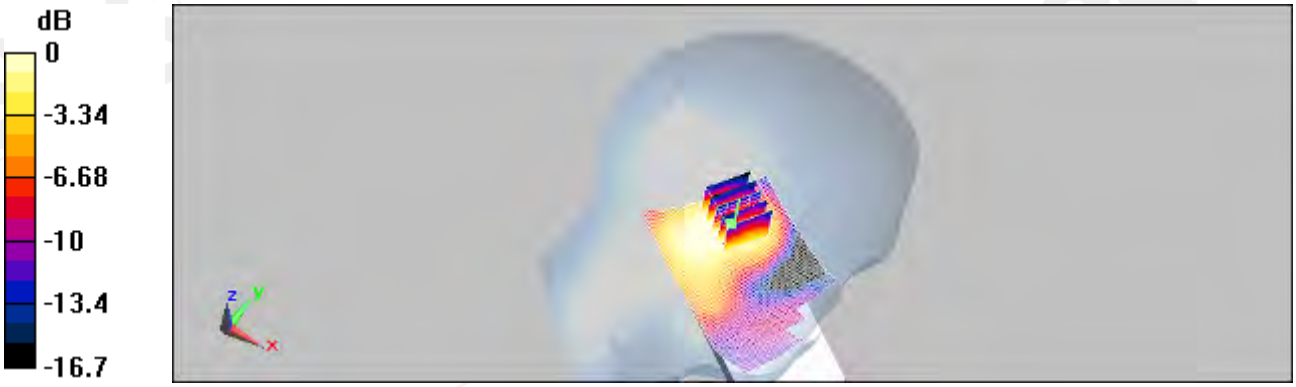
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.075 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.7 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 0.106 W/kg

SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.039 mW/g
Maximum value of SAR (measured) = 0.069 mW/g



0 dB = 0.069mW/g

Date/Time: 2/10/2010 17:57:34

LE Tilt_CH810_Slider off

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

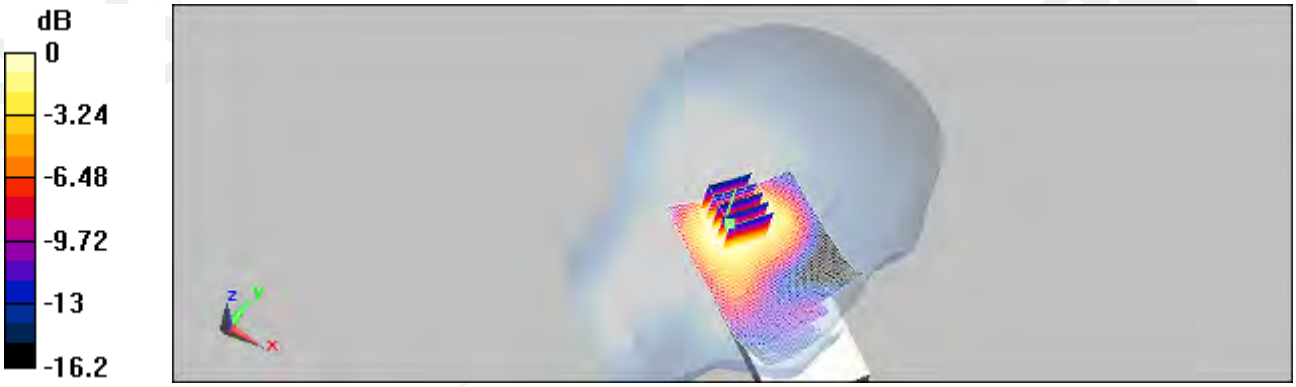
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.140 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 0.197 W/kg

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.068 mW/g
Maximum value of SAR (measured) = 0.119 mW/g



0 dB = 0.119mW/g

Date/Time: 2/10/2010 18:20:14

RE Cheek_CH512_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

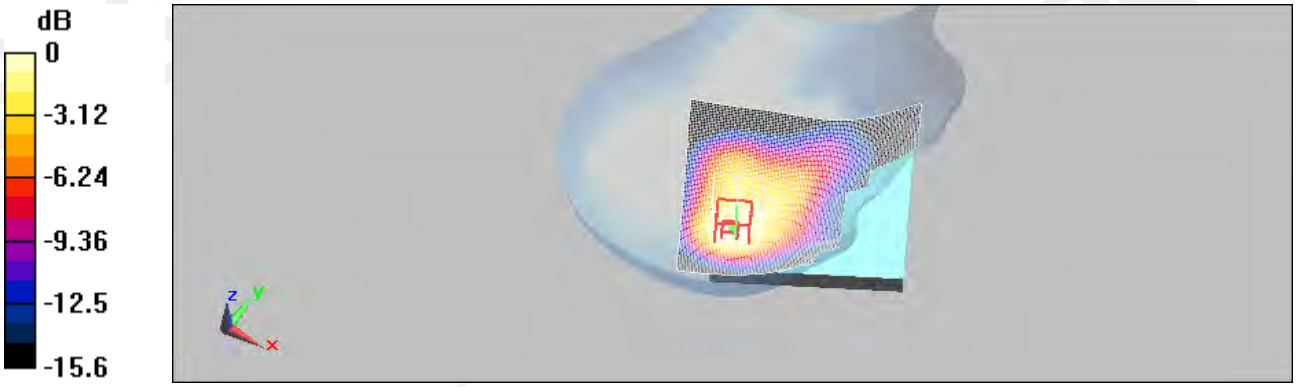
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.399 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 0.656 W/kg

SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.216 mW/g
Maximum value of SAR (measured) = 0.399 mW/g



0 dB = 0.399mW/g

Date/Time: 2/10/2010 18:45:04

RE Cheek_CH661_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

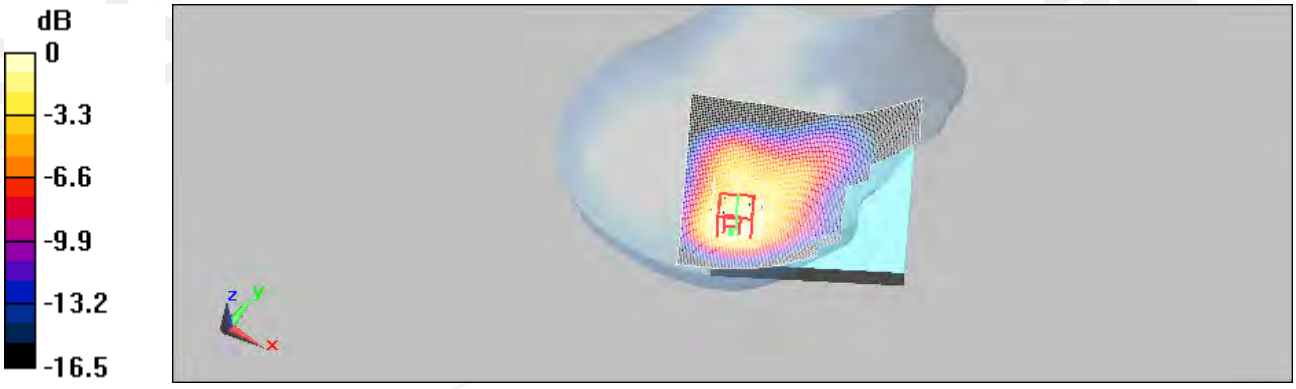
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.470 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = -0.000519 dB
Peak SAR (extrapolated) = 0.763 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.249 mW/g
Maximum value of SAR (measured) = 0.481 mW/g



0 dB = 0.481mW/g

Date/Time: 2/10/2010 19:09:58

RE Cheek_CH810_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

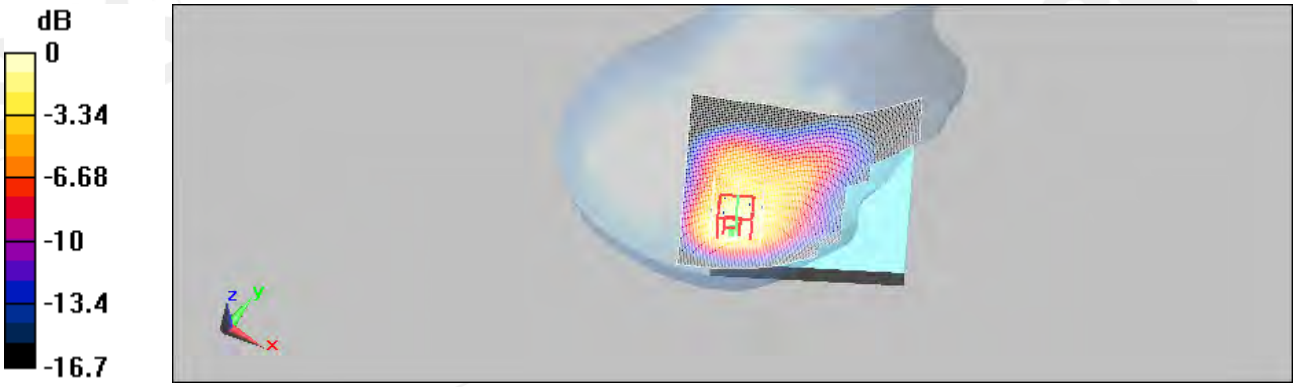
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.568 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = -0.029 dB
Peak SAR (extrapolated) = 0.938 W/kg

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.301 mW/g
Maximum value of SAR (measured) = 0.588 mW/g



0 dB = 0.588mW/g

Date/Time: 2/10/2010 20:46:22

LE Cheek_CH512_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

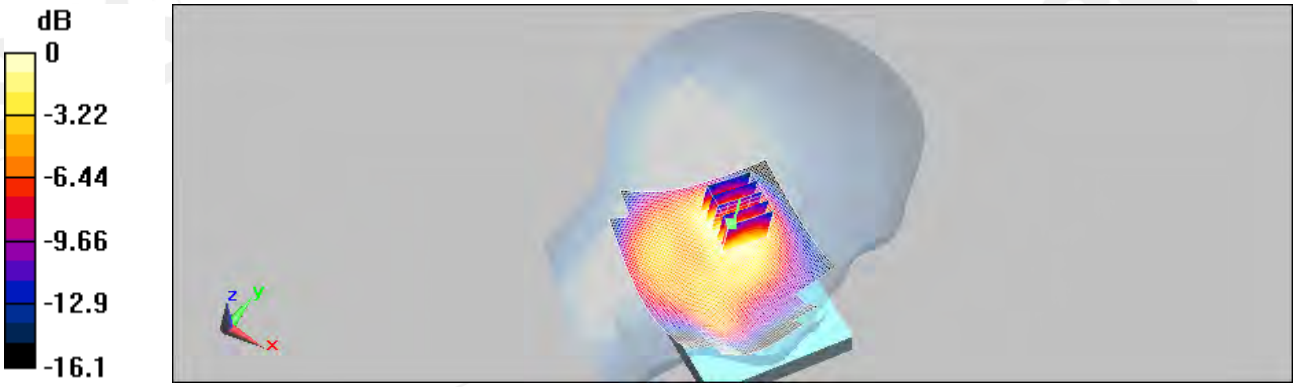
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.227 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.127 mW/g
Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214mW/g

Date/Time: 2/10/2010 21:11:07

LE Cheek_CH661_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

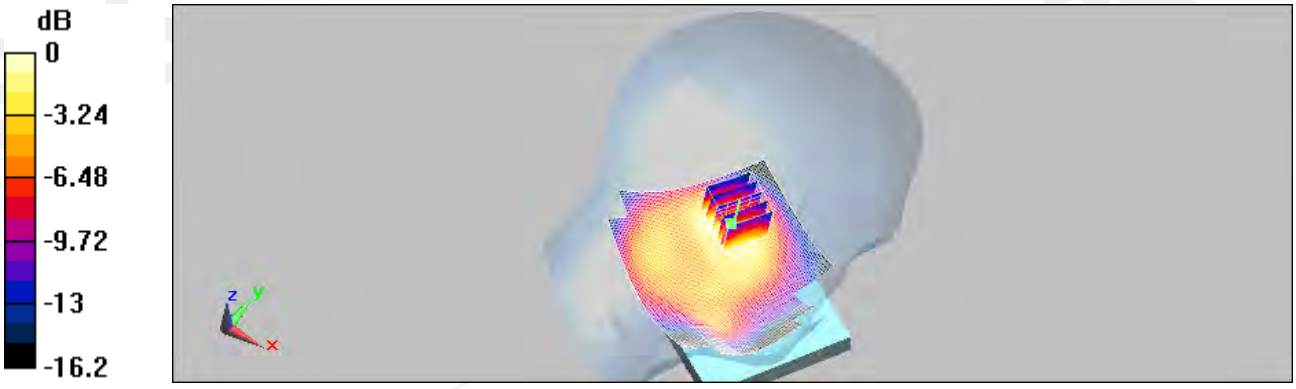
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.262 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.7 V/m; Power Drift = -0.00896 dB
Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.145 mW/g
Maximum value of SAR (measured) = 0.248 mW/g



0 dB = 0.248mW/g

Date/Time: 2/10/2010 21:35:32

LE Cheek_CH810_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

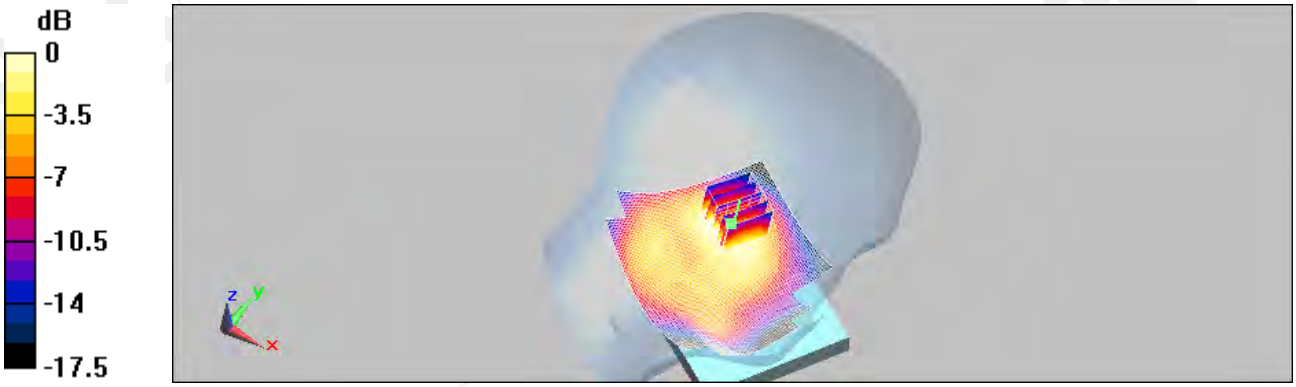
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Cheek/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.325 mW/g

LE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.9 V/m; Power Drift = 0.00488 dB
Peak SAR (extrapolated) = 0.447 W/kg

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.178 mW/g
Maximum value of SAR (measured) = 0.306 mW/g



0 dB = 0.306mW/g

Date/Time: 2/10/2010 19:33:30

RE Tilt_Ch512_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

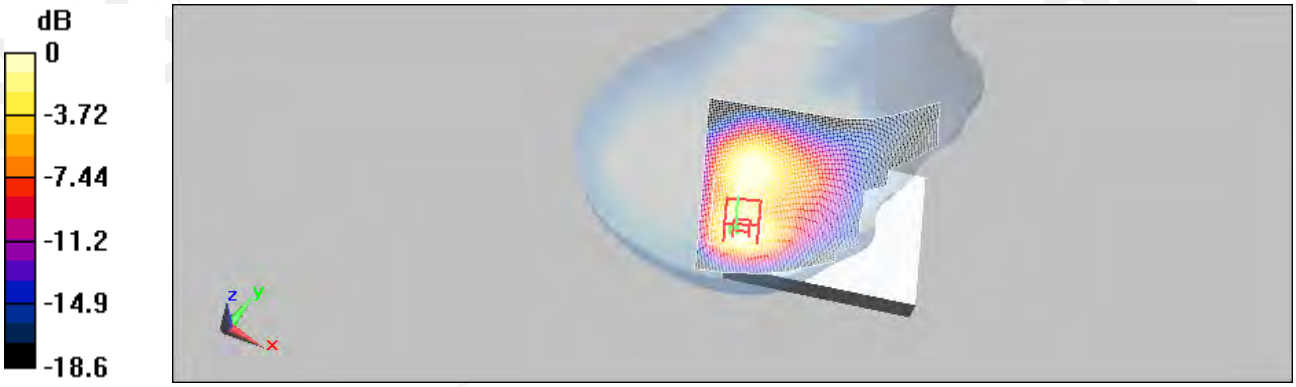
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.408 mW/g

RE Cheek/Zoom Scan (7x7x7) (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) = 0.649 W/kg

SAR(1 g) = 0.369 mW/g; SAR(10 g) = 0.202 mW/g
Maximum value of SAR (measured) = 0.393 mW/g



0 dB = 0.393mW/g

Date/Time: 2/10/2010 19:59:39

RE Tilt_CH661_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

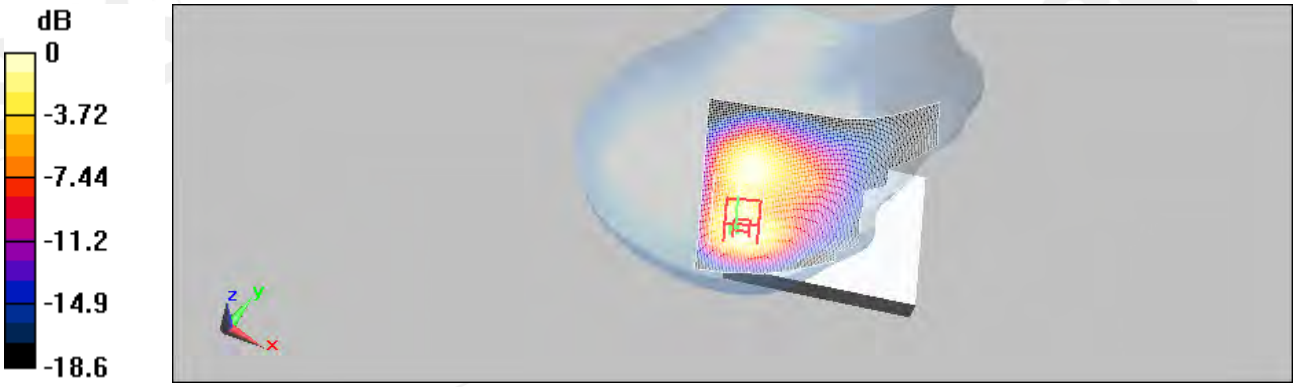
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.498 mW/g

RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.5 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 0.812 W/kg

SAR(1 g) = 0.462 mW/g; SAR(10 g) = 0.251 mW/g
Maximum value of SAR (measured) = 0.489 mW/g



0 dB = 0.489mW/g

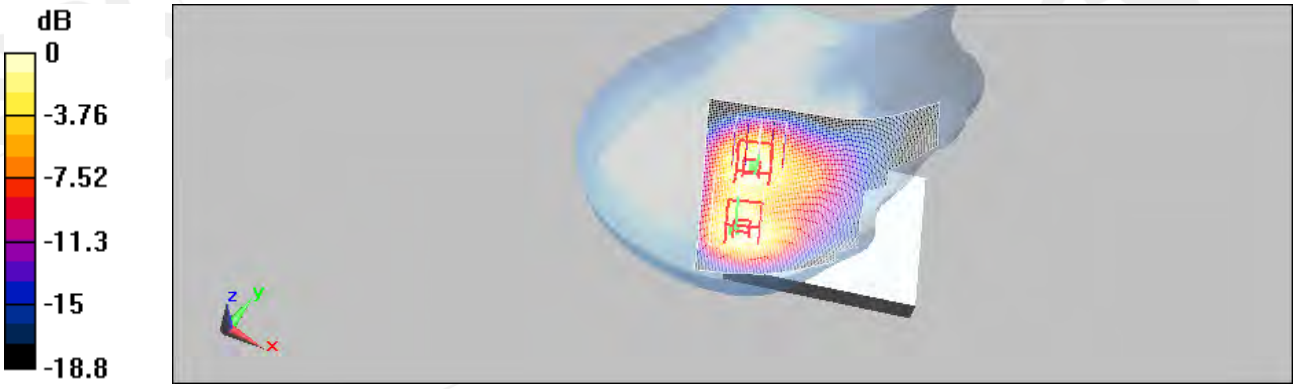
Date/Time: 2/10/2010 20:23:22

RE Tilt_Ch810_Slider on

DUT: RQ5-J01;
Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Right Section

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

RE Cheek/Area Scan (91x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.527 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.758 W/kg
SAR(1 g) = 0.473 mW/g; SAR(10 g) = 0.273 mW/g
Maximum value of SAR (measured) = 0.497 mW/g
RE Cheek/Zoom Scan (7x7x7) (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.6 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.834 W/kg
SAR(1 g) = 0.481 mW/g; SAR(10 g) = 0.265 mW/g
Maximum value of SAR (measured) = 0.507 mW/g



0 dB = 0.507mW/g

Date/Time: 2/10/2010 21:58:31

LE Tilt_Ch512_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

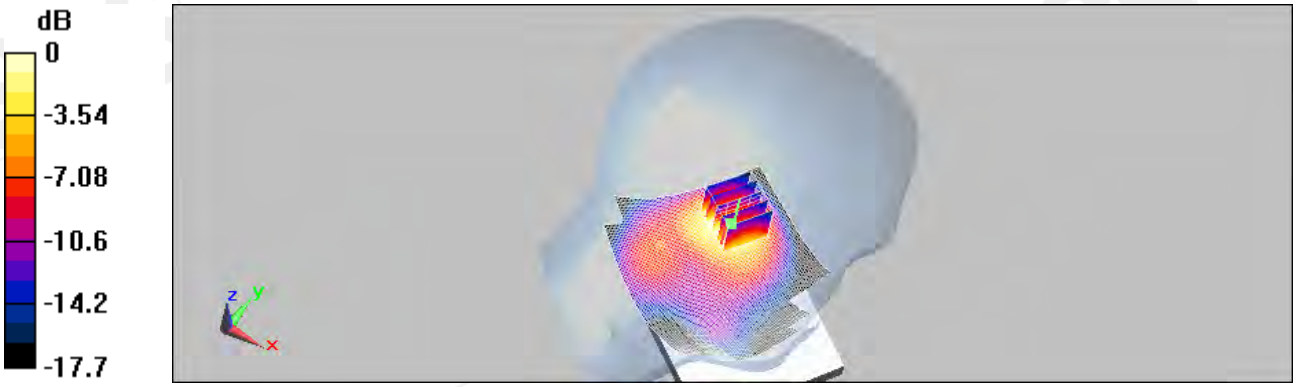
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.356 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.2 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.177 mW/g
Maximum value of SAR (measured) = 0.328 mW/g



0 dB = 0.328mW/g

Date/Time: 2/10/2010 22:23:43

LE Tilt_Ch661_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

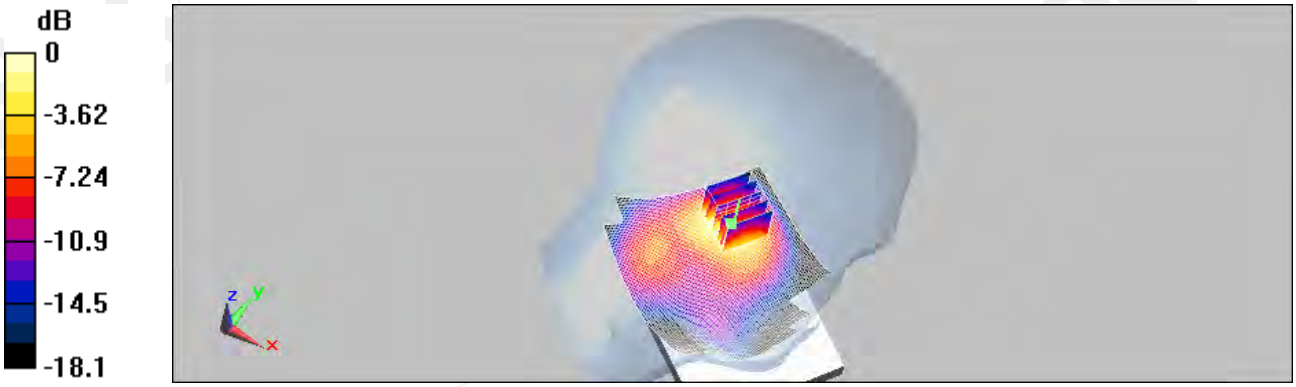
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.415 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 0.591 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.204 mW/g
Maximum value of SAR (measured) = 0.388 mW/g



0 dB = 0.388mW/g

Date/Time: 2/12/2010 22:47:48

LE Tilt_Ch810_Slider on

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: Head 1900 Medium parameters used: f = 1910 MHz; σ = 1.46 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Left Section

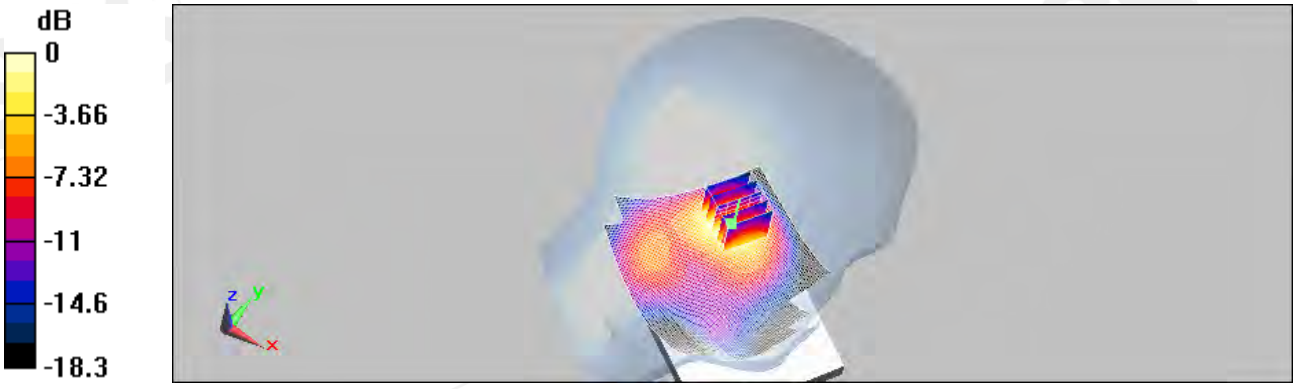
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

LE Tilt/Area Scan (81x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.522 mW/g

LE Tilt/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.8 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.743 W/kg

SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.254 mW/g
Maximum value of SAR (measured) = 0.487 mW/g



0 dB = 0.487mW/g

Date/Time: 2/12/2010 01:23:44

Body_CH512

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:2
Medium: Body 1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.52 mho/m; ε_r = 55.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

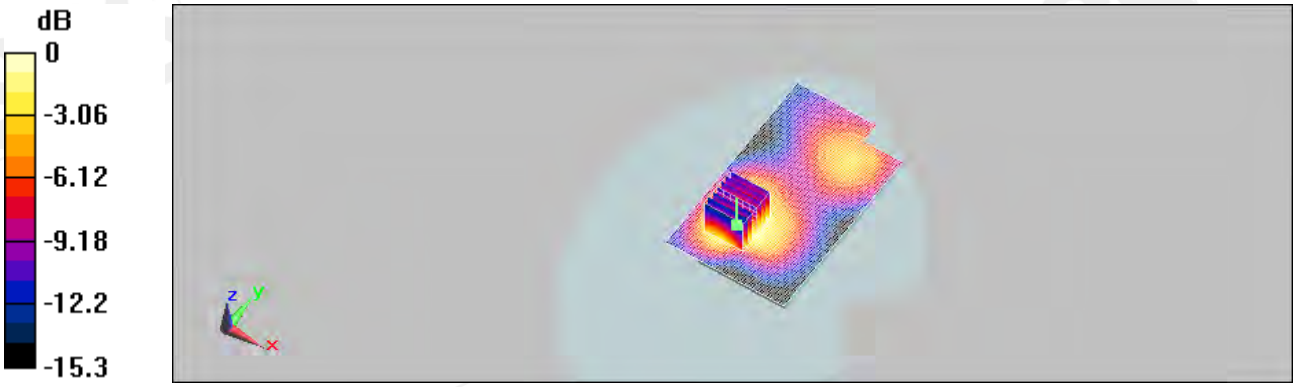
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.54, 4.54, 4.54); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.398 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = 0.00222 dB
Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.226 mW/g
Maximum value of SAR (measured) = 0.393 mW/g



0 dB = 0.393mW/g

Date/Time: 2/12/2010 01:50:25

Body_CH661

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:2
Medium: Body 1900 Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

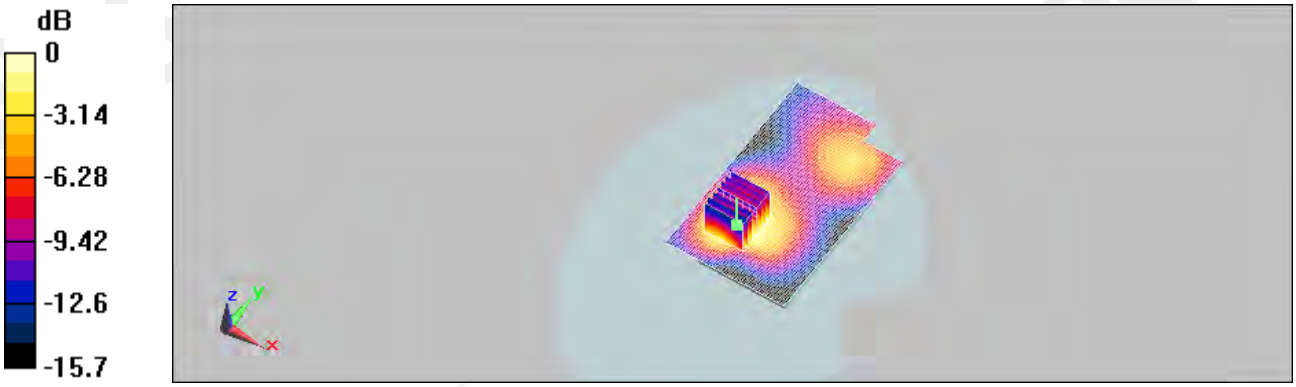
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.54, 4.54, 4.54); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.302 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.430 W/kg

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.171 mW/g
Maximum value of SAR (measured) = 0.296 mW/g



0 dB = 0.296mW/g

Date/Time: 2/10/2010 02:18:25

Body_CH810

DUT: RQ5-J01;

Communication System: GSM 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2
Medium: Body 1900 Medium parameters used: f = 1910 MHz; σ = 1.6 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

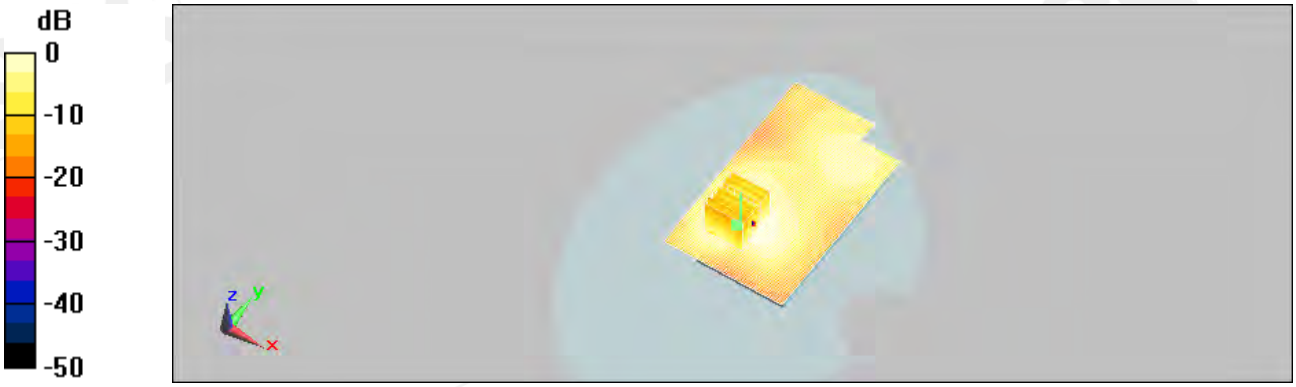
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.54, 4.54, 4.54); Calibrated: 5/27/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 5/26/2009
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.285 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.029 dB
Peak SAR (extrapolated) = 0.419 W/kg

SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.161 mW/g
Maximum value of SAR (measured) = 0.283 mW/g



0 dB = 0.283mW/g

Date/Time: 2/12/2010 12:12:36

BODY_WLAN802.11b_CH1

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2412 MHz; σ = 2.03 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

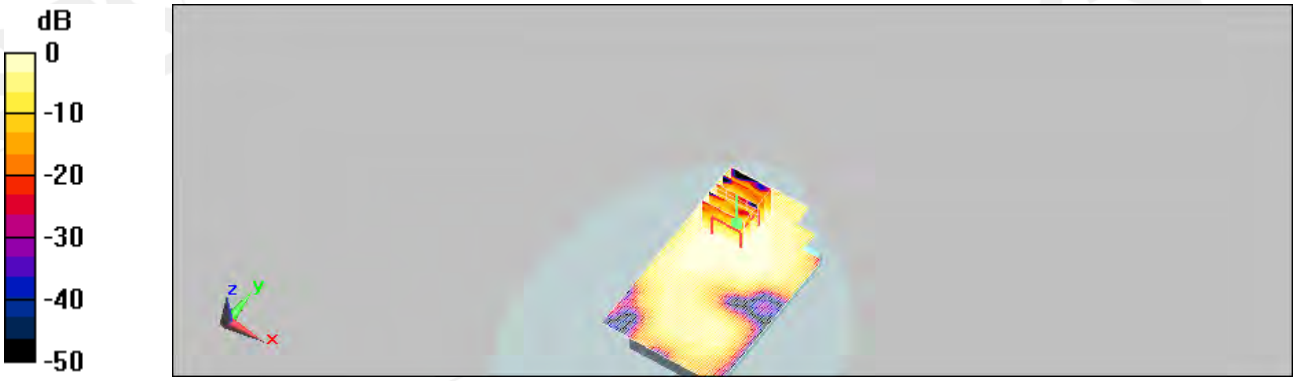
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.026 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.046 W/kg

SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.014 mW/g
Maximum value of SAR (measured) = 0.026 mW/g



0 dB = 0.026mW/g

Date/Time: 2/12/2010 12:41:53

BODY_WLAN802.11b_CH6

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2437 MHz; σ = 2.07 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

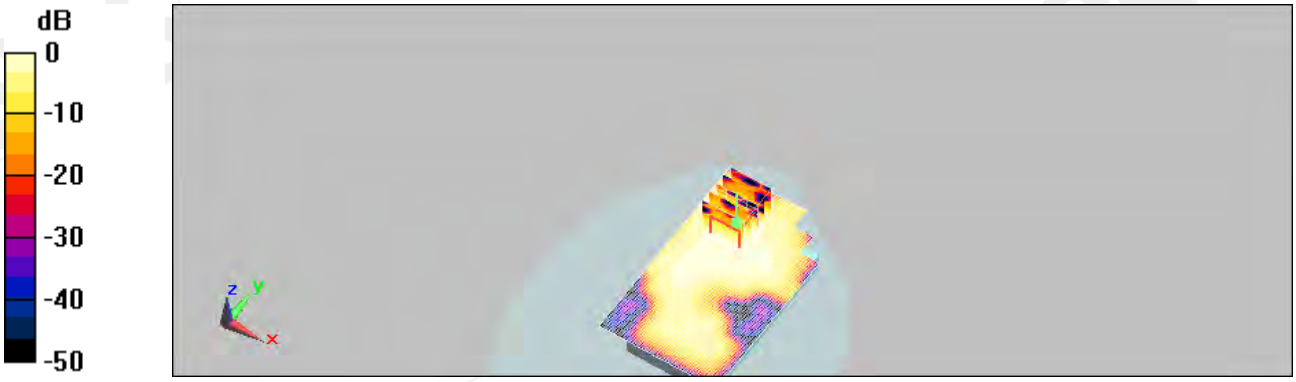
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.023 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.46 V/m; Power Drift = 0.148 dB
Peak SAR (extrapolated) = 0.027 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00796 mW/g
Maximum value of SAR (measured) = 0.017 mW/g



0 dB = 0.017mW/g

Date/Time: 2/12/2010 13:08:09

BODY_WLAN802.11b_CH11

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

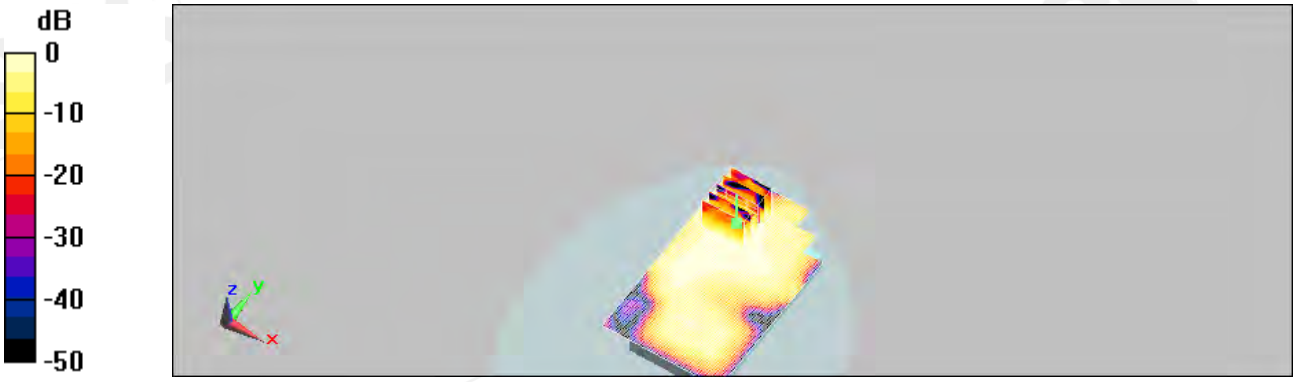
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.021 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.76 V/m; Power Drift = 0.106 dB
Peak SAR (extrapolated) = 0.034 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00975 mW/g
Maximum value of SAR (measured) = 0.020 mW/g



0 dB = 0.020mW/g

Date/Time: 2/12/2010 17:45:03

BODY_WLAN802.11b_CH11 _repeated for EUT front to phantom

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

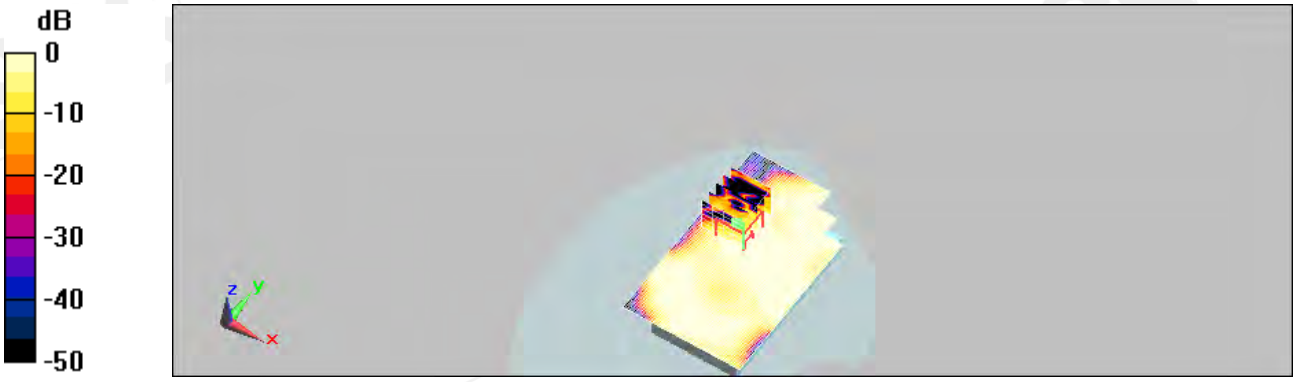
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.00648 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.26 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.012 W/kg

SAR(1 g) = 0.00511 mW/g; SAR(10 g) = 0.00246 mW/g
Maximum value of SAR (measured) = 0.00555 mW/g



0 dB = 0.00555mW/g

Date/Time: 2/12/2010 18:12:23

BODY_WLAN802.11b _CH11_repeated with Memory card

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

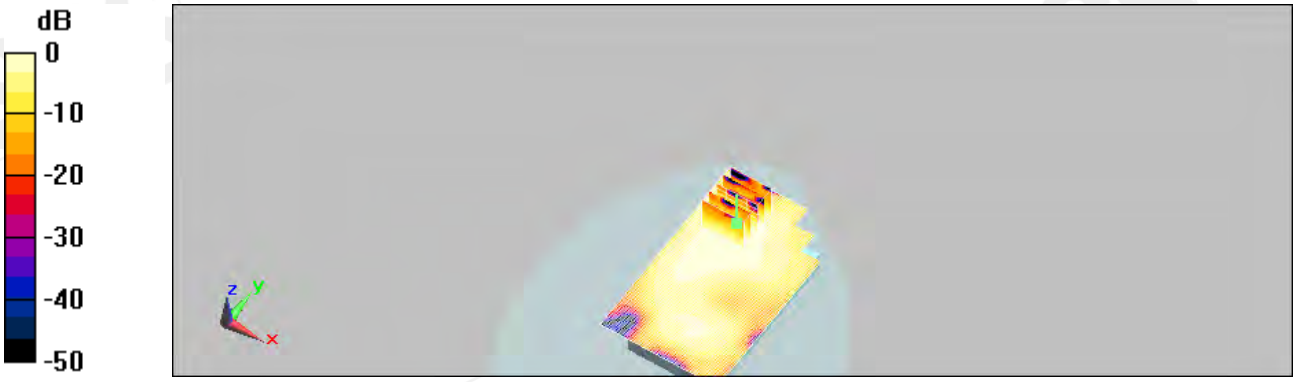
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.022 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.95 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.040 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.022 mW/g



0 dB = 0.022mW/g

Date/Time: 2/12/2010 18:38:34

BODY_WLAN802.11b _CH11_repeated with Bluetooth active

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

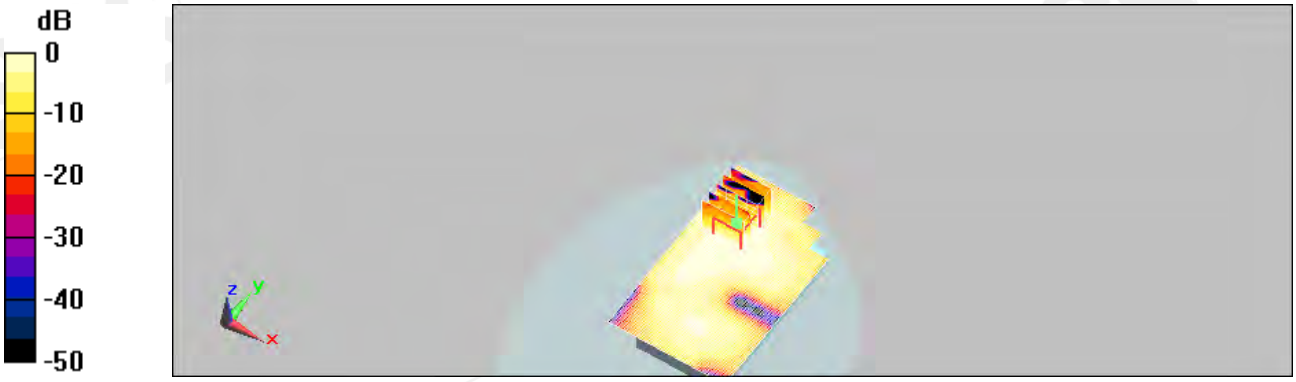
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.019 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.14 V/m; Power Drift = 0.210 dB
Peak SAR (extrapolated) = 0.032 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00999 mW/g
Maximum value of SAR (measured) = 0.020 mW/g



0 dB = 0.020mW/g

Date/Time: 2/12/2010 19:06:40

BODY_WLAN802.11b _CH11_repeated with headset

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

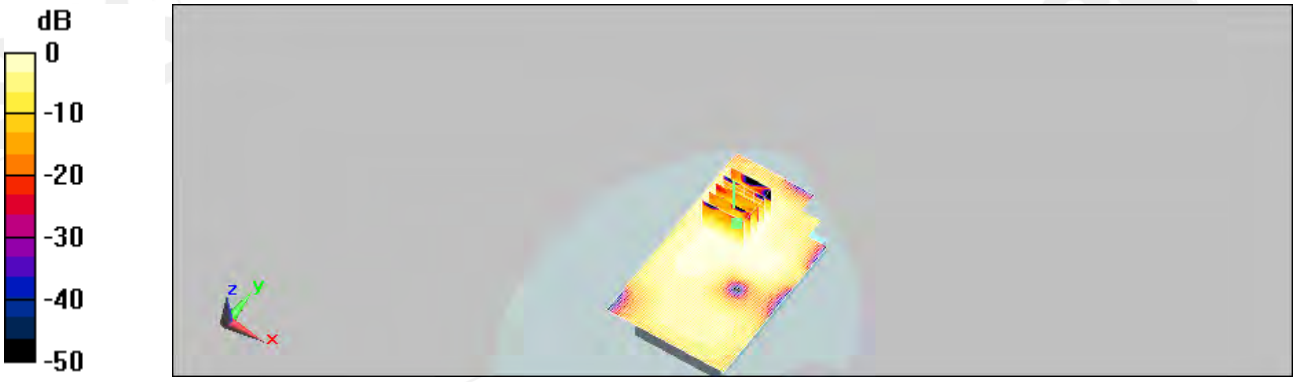
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.017 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.99 V/m; Power Drift = 0.176 dB
Peak SAR (extrapolated) = 0.029 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00902 mW/g
Maximum value of SAR (measured) = 0.018 mW/g



0 dB = 0.018mW/g

Date/Time:2/12/2010 13:35:44

BODY_WLAN802.11g _CH1

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2412 MHz; σ = 2.03 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

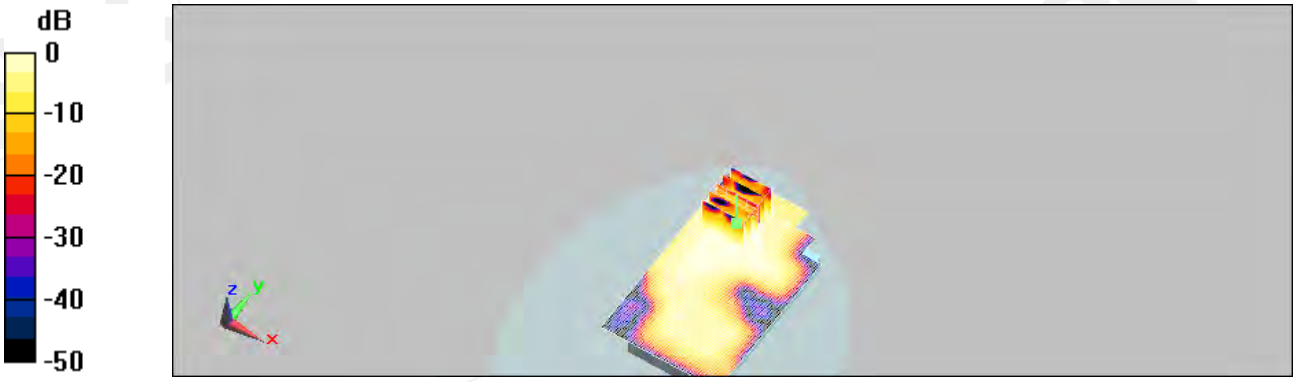
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.015 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.4 V/m; Power Drift = -0.132 dB
Peak SAR (extrapolated) = 0.022 W/kg

SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.0063 mW/g
Maximum value of SAR (measured) = 0.014 mW/g



0 dB = 0.014mW/g

Date/Time: 2/12/2010 14:03:39

BODY_WLAN802.11g _CH6

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2437 MHz; σ = 2.07 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

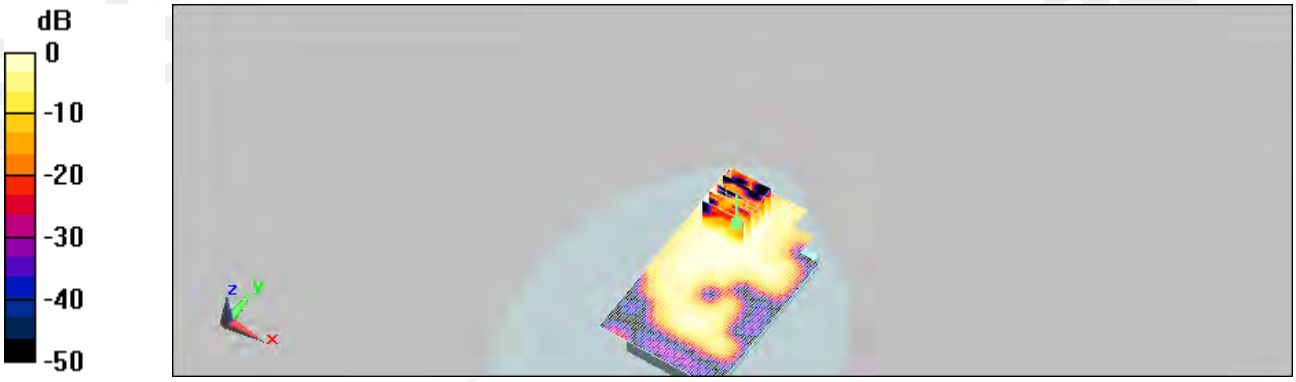
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.010 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.984 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 0.015 W/kg

SAR(1 g) = 0.00862 mW/g; SAR(10 g) = 0.00423 mW/g
Maximum value of SAR (measured) = 0.00977 mW/g



0 dB = 0.00977mW/g

Date/Time: 2/10/2010 14:30:01

BODY_WLAN802.11g _CH11

DUT: RQ5-J01;

Communication System: Wireless LAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: Body 2450 Medium parameters used: f = 2462 MHz; σ = 2.08 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

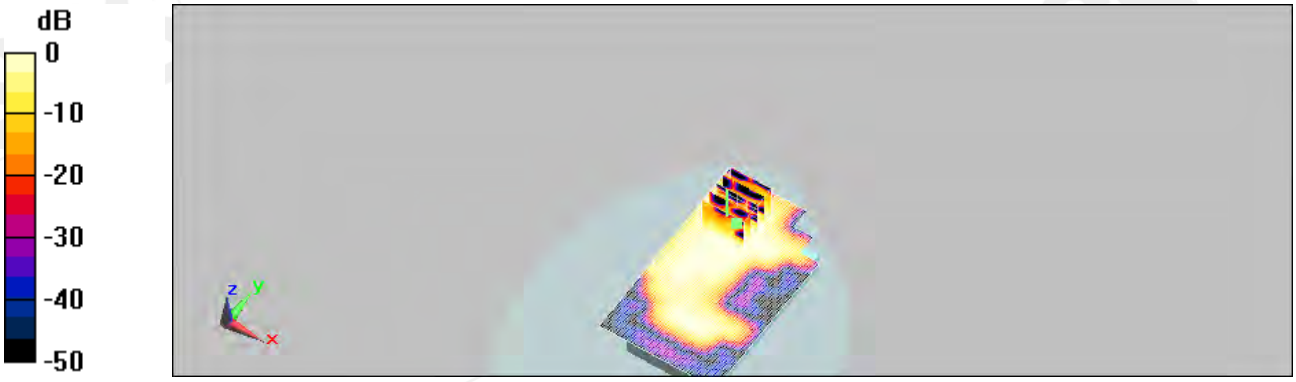
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

Body/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.0098 mW/g

Body/Zoom Scan (7x7x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.873 V/m; Power Drift = 2.17 dB
Peak SAR (extrapolated) = 0.020 W/kg

SAR(1 g) = 0.00835 mW/g; SAR(10 g) = 0.00395 mW/g
Maximum value of SAR (measured) = 0.00896 mW/g



0 dB = 0.00896mW/g

5. System Verification

Date/Time: 2/10/2010 00:42:22

DUT: Dipole 835 MHz;

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL900 Medium parameters used: f = 835 MHz; σ = 0.878 mho/m; ε_r = 40.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

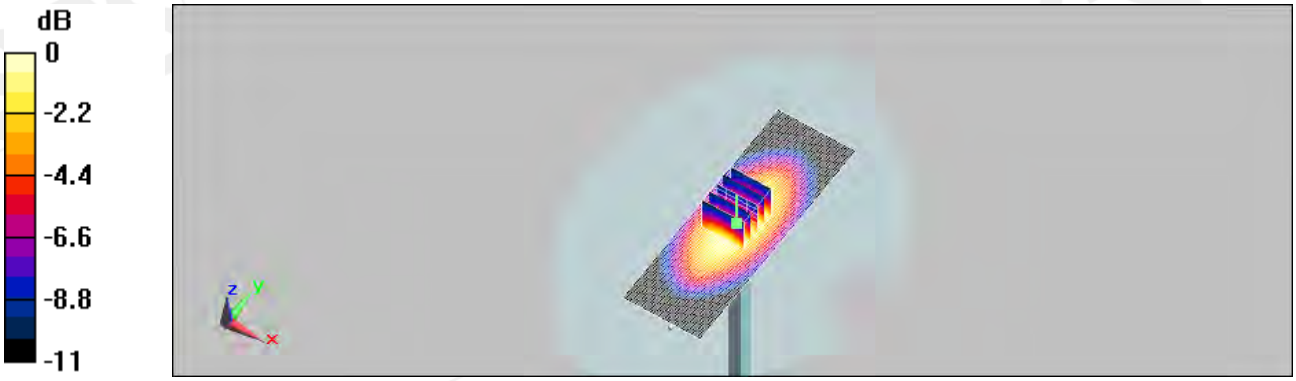
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.83, 5.83, 5.83); Calibrated: 2009/5/27
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

d=15mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.59 mW/g

d=15mm, Pin=250mW, dist=3.4mm : Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.2 V/m; Power Drift = 0.00645 dB
Peak SAR (extrapolated) = 3.47 W/kg

SAR(1 g) = 2.27 mW/g; SAR(10 g) = 1.47 mW/g
Maximum value of SAR (measured) = 2.57 mW/g



0 dB = 2.57mW/g

Date/Time: 2/12/2010 04:52:35

DUT: Dipole 835 MHz;

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: BODY900 Medium parameters used: f = 835 MHz; σ = 1.02 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

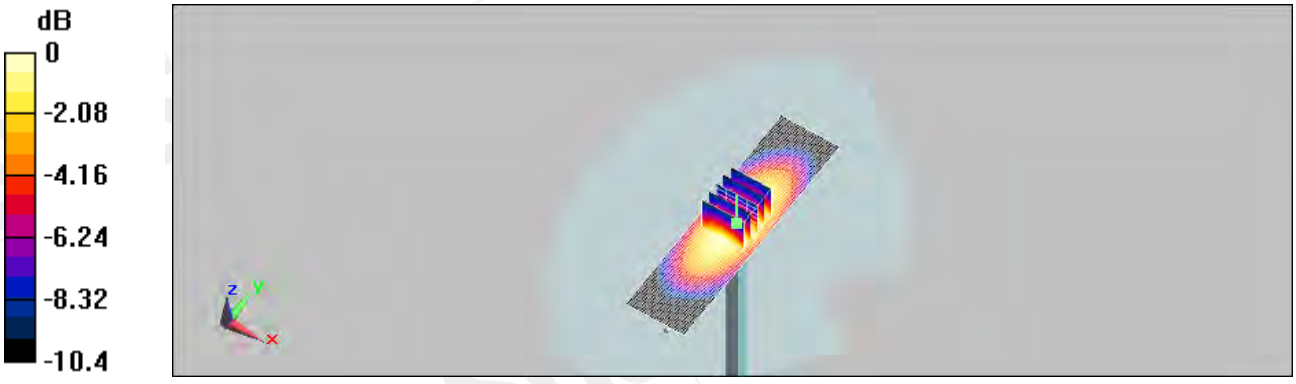
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(5.81, 5.81, 5.81); Calibrated: 2009/5/27
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

d=15mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.9 mW/g

d=15mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.2 V/m; Power Drift = -0.0067 dB
Peak SAR (extrapolated) = 3.8 W/kg

SAR(1 g) = 2.62 mW/g; SAR(10 g) = 1.73 mW/g
Maximum value of SAR (measured) = 2.96 mW/g



0 dB = 2.96mW/g

Date/Time: 2/10/2010 11:12:22

DUT: Dipole 1900 MHz;

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL1900 Medium parameters used: f = 1900 MHz; σ = 1.46 mho/m; ε_r = 38.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

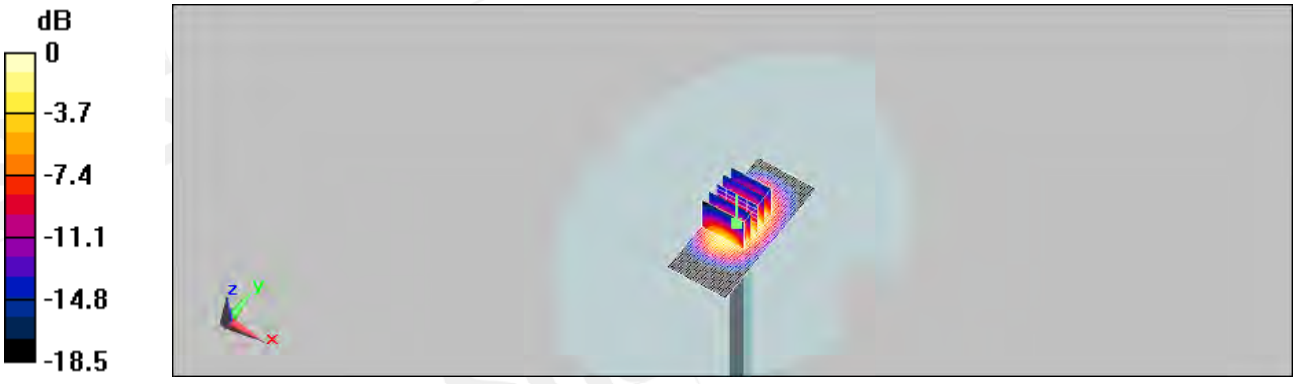
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.86, 4.86, 4.86); Calibrated: 2009/5/27
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 13.3 mW/g

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 95.2 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.45 mW/g
Maximum value of SAR (measured) = 12.6 mW/g



0 dB = 12.6mW/g

Date/Time: 2/12/2010 00:11:33

DUT: Dipole 1900 MHz;

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: BODY1900 Medium parameters used: f = 1900 MHz; σ = 1.59 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

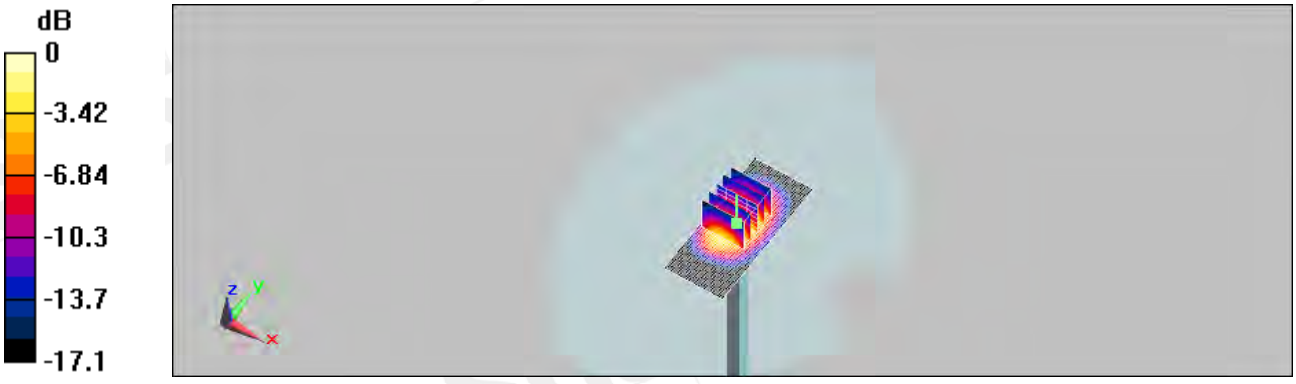
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.54, 4.54, 4.54); Calibrated: 2009/5/27
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 14.1 mW/g

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 95.8 V/m; Power Drift = 0.035 dB
Peak SAR (extrapolated) = 19.6 W/kg

SAR(1 g) = 10.9 mW/g; SAR(10 g) = 5.86 mW/g
Maximum value of SAR (measured) = 13.7 mW/g



0 dB = 13.7mW/g

Date/Time: 2/12/2010 11:03:04

DUT: Dipole 2450 MHz;

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: Body2450 Medium parameters used: f = 2450 MHz; σ = 2.08 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

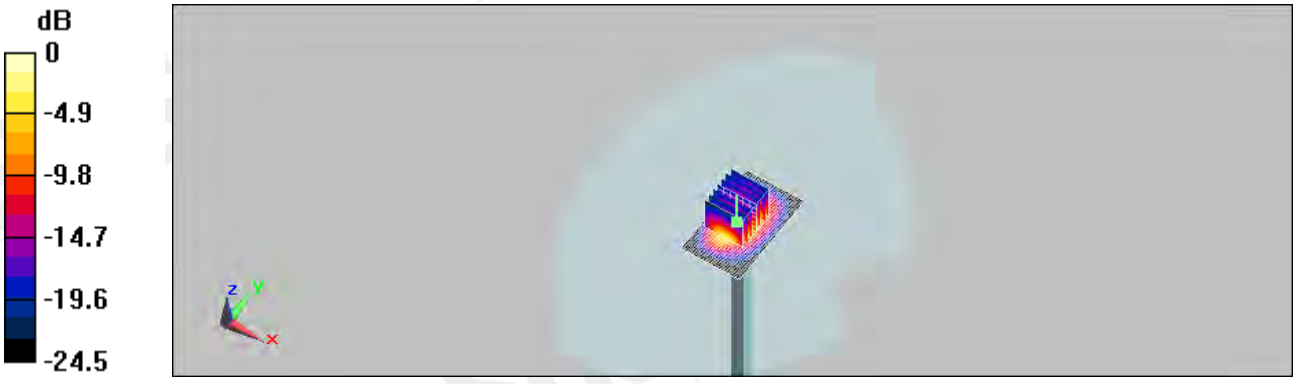
DASY5 Configuration:

- Probe: ES3DV3 - SN3172; ConvF(4.02, 4.02, 4.02); Calibrated: 2009/5/27
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2009/5/26
- Phantom: SAM1; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 19.7 mW/g

d=10mm, Pin=250mW, dist=3.4mm: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.2 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 37.2 W/kg

SAR(1 g) = 13.8 mW/g; SAR(10 g) = 5.64 mW/g
Maximum value of SAR (measured) = 18 mW/g



0 dB = 18mW/g

6. DAE & Probe Calibration certificate

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

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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: DAE4-856_May09

CALIBRATION CERTIFICATE

Object	DAE4 - SD 000 D04 BJ - SN: 856
Calibration procedure(s)	QA CAL-06.v12 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	May 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
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:	Dominique Steffen	Technician	
Approved by:	Fin Bomholt	R&D Director	

Issued: May 26, 2009

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

Certificate No: DAE4-856_May09 Page 1 of 5

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Accreditation No.: SCS 108

Client SGS (Auden)

Certificate No: ES3-3172_May09

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3172
Calibration procedure(s)	QA CAL-01.v6 and QA CAL-23.v3 Calibration procedure for dosimetric E-field probes
Calibration date:	May 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 (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	9-Sep-08 (No. DAE4-660_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

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

Issued: May 27, 2009

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Swiss Calibration Service

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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (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 ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ES3DV3

SN:3172

Manufactured:	January 23, 2008
Last calibrated:	June 23, 2008
Recalibrated:	May 27, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

ES3DV3 SN:3172 May 27, 2009

DASY - Parameters of Probe: ES3DV3 SN:3172

Sensitivity in Free Space[A]

NormX	**1.41** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**94** mV
NormY	**1.17** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**93** mV
NormZ	**0.96** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**94** 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		**3.0 mm**	**4.0 mm**
SAR_{be} [%]	Without Correction Algorithm	9.6	5.4
SAR_{be} [%]	With Correction Algorithm	0.9	0.7

TSL 1810 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance		**3.0 mm**	**4.0 mm**
SAR_{be} [%]	Without Correction Algorithm	9.2	5.4
SAR_{be} [%]	With Correction Algorithm	0.7	0.4

Sensor Offset

Probe Tip to Sensor Center	**2.0** 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%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

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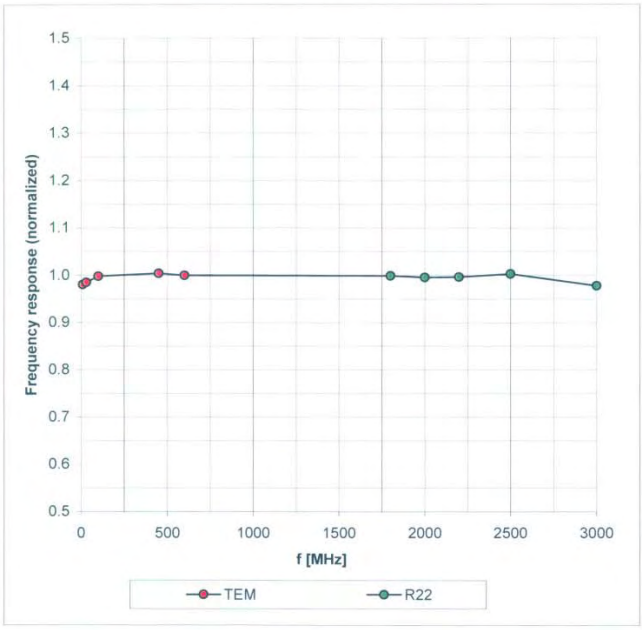
ES3DV3 SN:3172 May 27, 2009

Frequency Response of E-Field

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



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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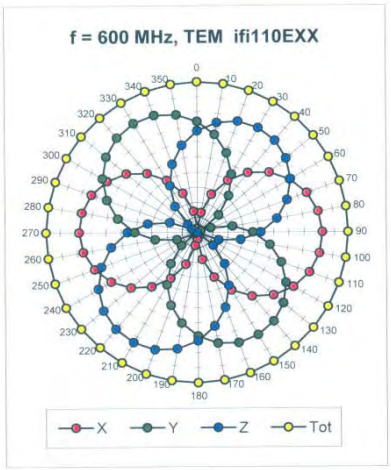
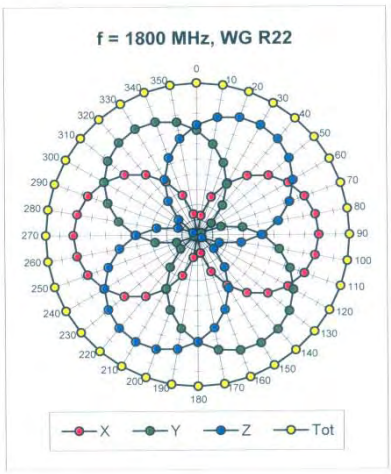
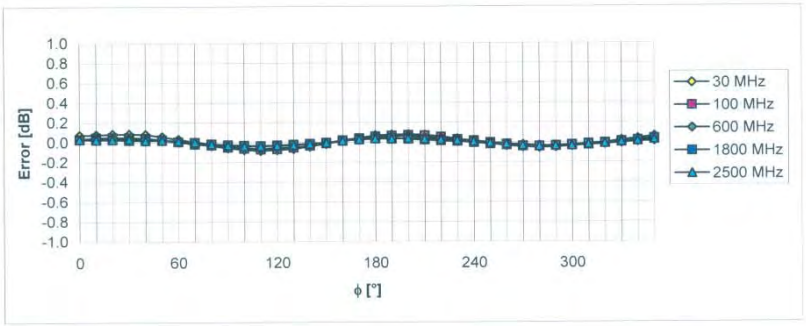
ES3DV3 SN:3172 May 27, 2009

Receiving Pattern (ϕ), ϑ = 0°







Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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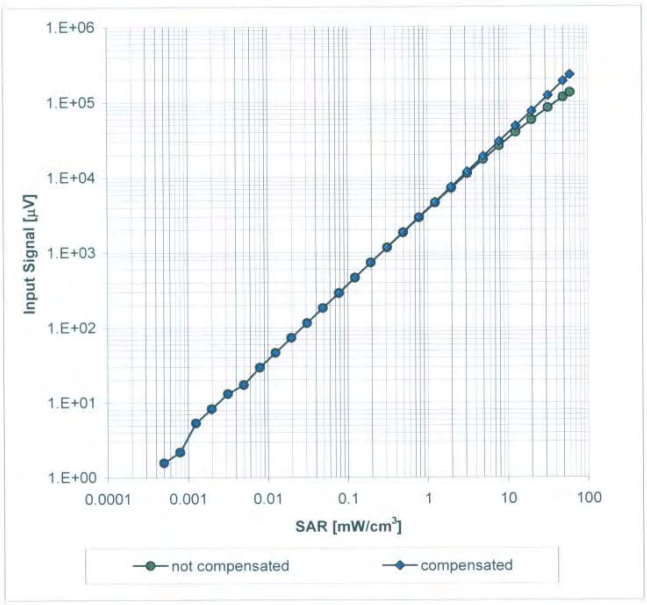
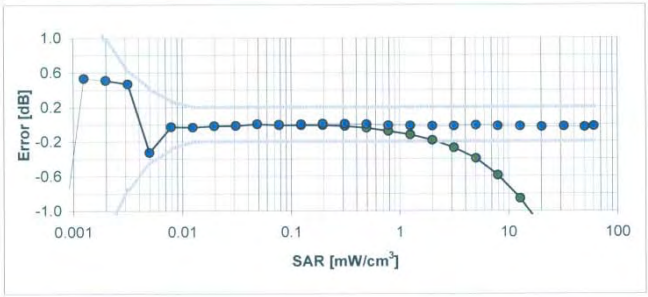
ES3DV3 SN:3172 May 27, 2009

Dynamic Range f(SAR_{head})

(Waveguide R22, f = 1800 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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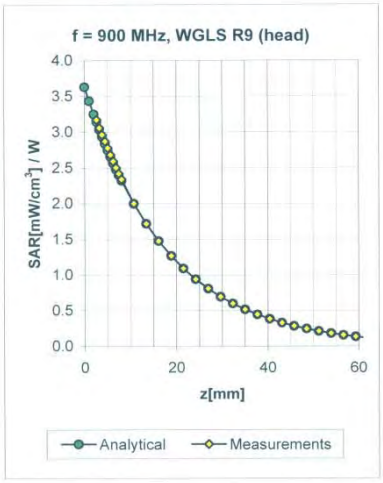
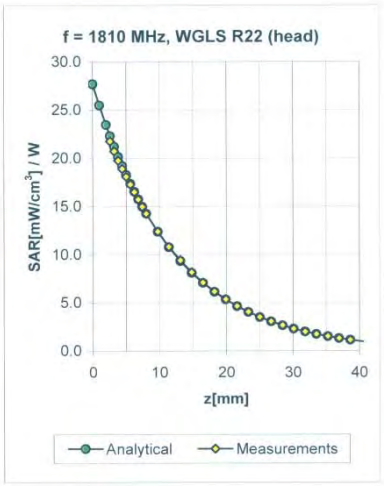
ES3DV3 SN:3172 May 27, 2009

Conversion Factor Assessment





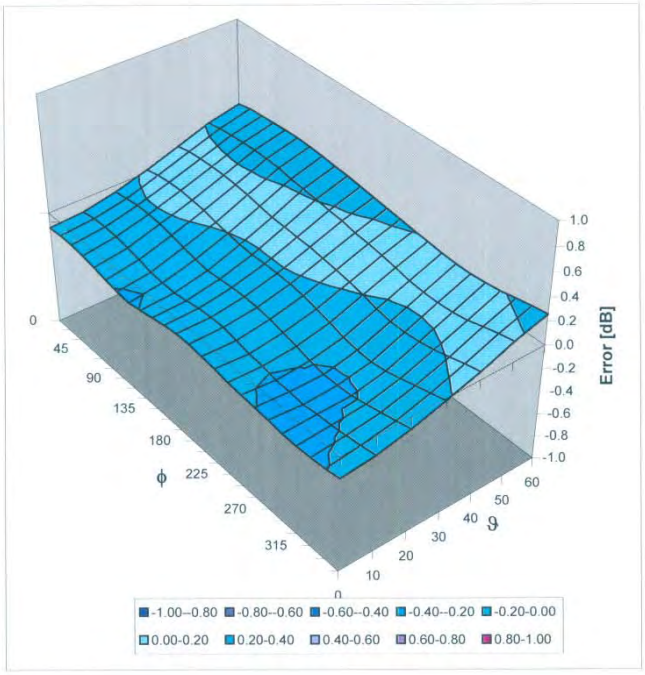
f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.86	1.08	5.83 ± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.87	1.08	5.65 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.35	1.81	4.99 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.38	1.73	4.86 ± 11.0% (k=2)
1950	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.48	1.51	4.71 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.41	1.78	4.33 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.78	1.15	5.81 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.78	1.15	5.67 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.45	1.75	4.69 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.33	2.23	4.54 ± 11.0% (k=2)
1950	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.27	2.99	4.53 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.40	1.40	4.02 ± 11.0% (k=2)

[C] 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.

ES3DV3 SN:3172 May 27, 2009

Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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7. Uncertainty Analysis

DASY5 Uncertainty Budget
According to IEEE 1528 [1]

Error Description	Uncertainty value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±5.9%	N	1	1	1	±5.9%	±5.9%	∞
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	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
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 Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±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%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
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						±10.9%	±10.7%	387
Expanded STD Uncertainty						±21.9%	±21.4%	

Table 19.6: Worst-Case uncertainty budget for DASY5 assessed according to IEEE 1528 [1]. The budget is valid for the frequency range 300 MHz - 3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

8. Phantom description

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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 Zürich 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

Signature / Stamp

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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

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 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

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

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 Page 1 of 9

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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.8 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature during test	(21.6 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 mW / g
SAR normalized	normalized to 1W	9.52 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**9.56 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.56 mW / g
SAR normalized	normalized to 1W	6.24 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**6.26 mW /g ± 16.5 % (k=2)**

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.8 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.55 mW / g
SAR normalized	normalized to 1W	10.2 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**9.84 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.68 mW / g
SAR normalized	normalized to 1W	6.72 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**6.55 mW / g ± 16.5 % (k=2)**

[2] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.9 Ω - 3.0 jΩ
Return Loss	- 29.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.7 Ω - 4.3 jΩ
Return Loss	- 26.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.392 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 27, 2006

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DASY5 Validation Report for Head TSL

Date/Time: 25.05.2009 10:53:04

Test Laboratory: SPEAG, Zurich, Switzerland

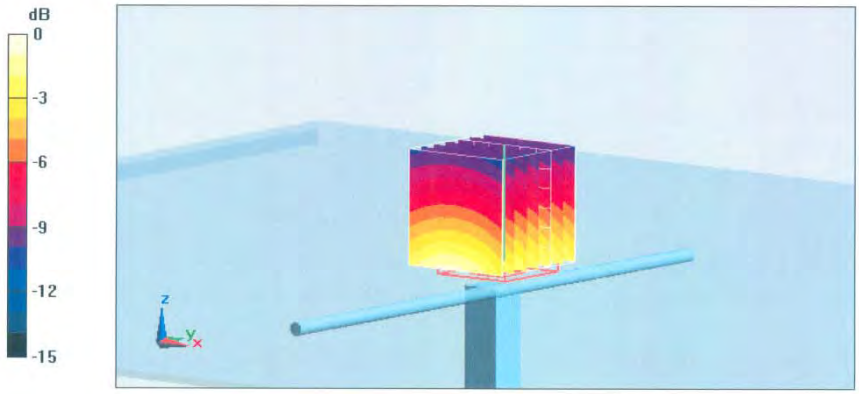
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL 900 MHz
Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3
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

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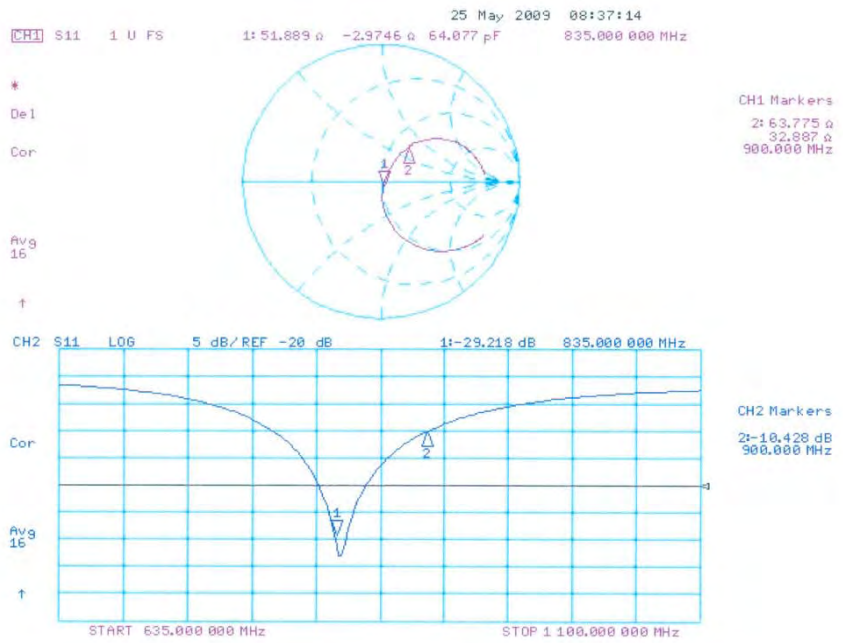
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date/Time: 25.05.2009 14:01:33

Test Laboratory: SPEAG, Zurich, Switzerland

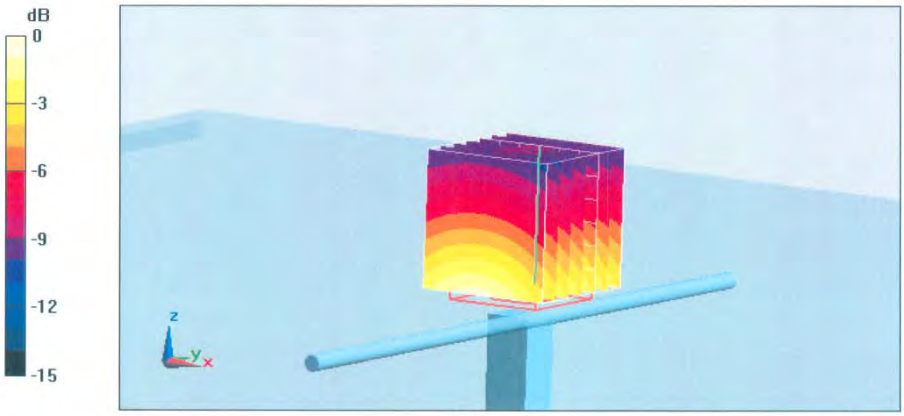
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL900
Medium parameters used: f = 835 MHz; σ = 1.01 mho/m; ε_r = 53.8; ρ = 1000 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=5mm, dy=5mm, dz=5mm
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



0 dB = 2.94mW/g

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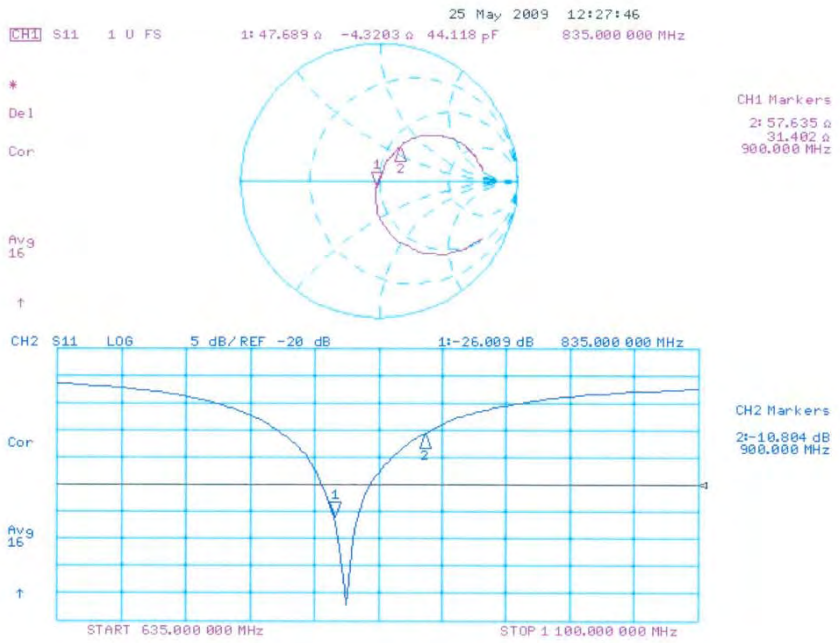
Impedance Measurement Plot for Body TSL



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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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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.6 ± 6 %	1.47 mho/m ± 6 %
Head TSL temperature during test	(21.6 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	condition	
SAR measured	250 mW input power	10.5 mW / g
SAR normalized	normalized to 1W	42.0 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**40.5 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.38 mW / g
SAR normalized	normalized to 1W	21.5 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**21.1 mW / g ± 16.5 % (k=2)**

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	1.56 mho/m ± 6 %
Body TSL temperature during test	(21.3 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.6 mW / g
SAR normalized	normalized to 1W	42.4 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**42.1 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.58 mW / g
SAR normalized	normalized to 1W	22.3 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**22.3 mW / g ± 16.5 % (k=2)**

[2] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.4 Ω + 5.6 jΩ
Return Loss	- 24.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.9 Ω + 6.4 jΩ
Return Loss	- 22.7 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.197 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 17, 2002

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DASY5 Validation Report for Head TSL

Date/Time: 27.04.2009 11:54:57

Test Laboratory: SPEAG, Zurich, Switzerland

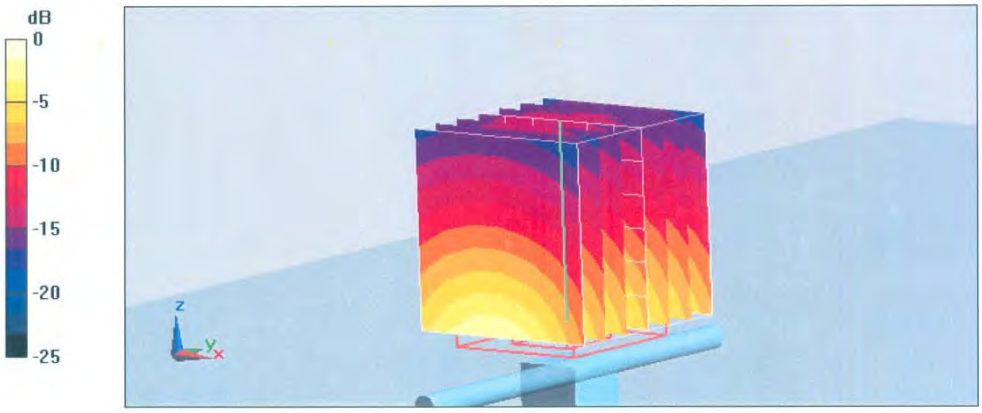
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL U10 BB
Medium parameters used: f = 1900 MHz; σ = 1.47 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
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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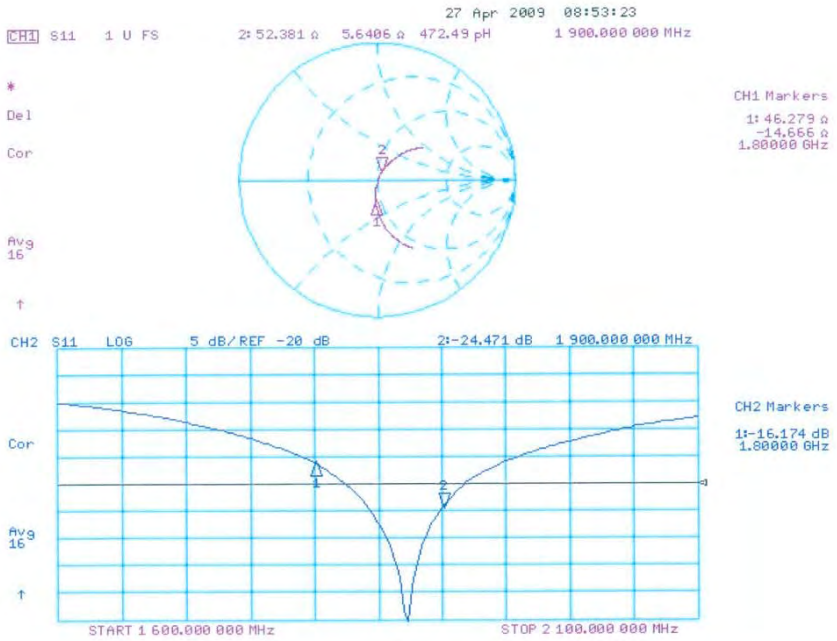
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date/Time: 21.04.2009 14:59:34

Test Laboratory: SPEAG, Zurich, Switzerland

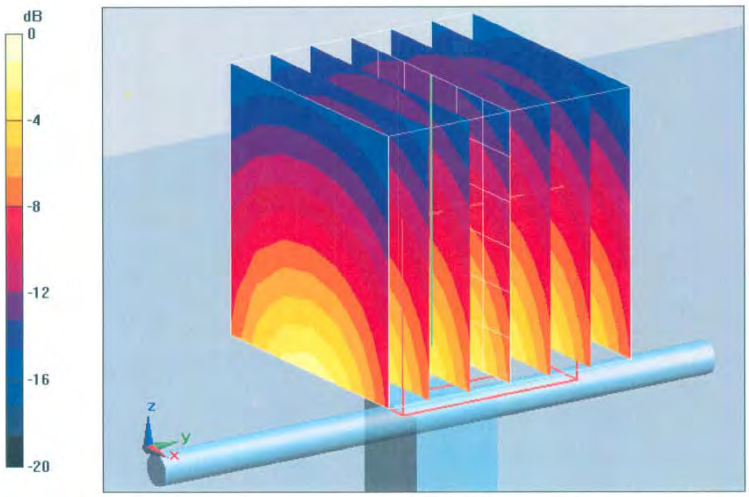
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL U10 BB
Medium parameters used: f = 1900 MHz; σ = 1.56 mho/m; ε_r = 55; ρ = 1000 kg/m^3
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



0 dB = 13.4mW/g

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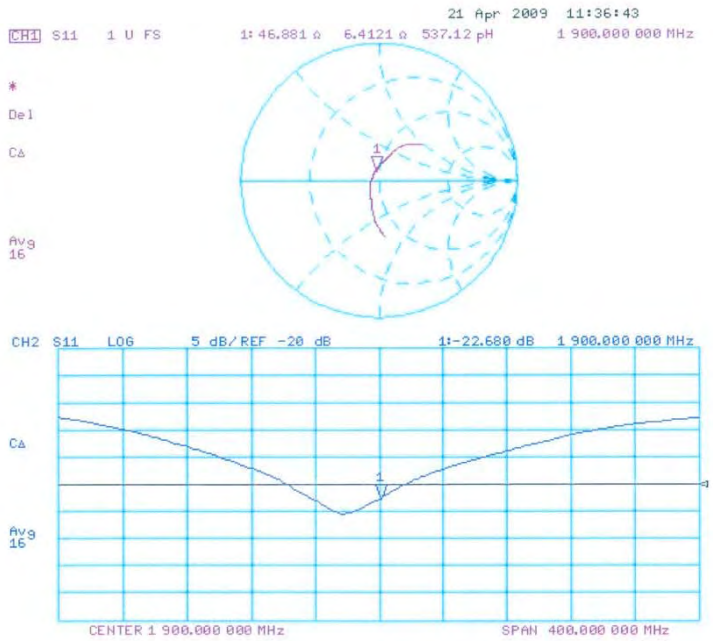
Impedance Measurement Plot for Body TSL



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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

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

Issued: April 28, 2009

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

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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.0 ± 6 %	1.82 mho/m ± 6 %
Head TSL temperature during test	(21.6 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.5 mW / g
SAR normalized	normalized to 1W	54.0 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**53.3 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.28 mW / g
SAR normalized	normalized to 1W	25.1 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**24.9 mW /g ± 16.5 % (k=2)**

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.4 ± 6 %	1.98 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.2 mW / g
SAR normalized	normalized to 1W	52.8 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**52.8 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.18 mW / g
SAR normalized	normalized to 1W	24.7 mW / g
SAR for nominal Body TSL parameters [2]	normalized to 1W	**24.8 mW /g ± 16.5 % (k=2)**

[2] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.1 Ω + 1.2 jΩ
Return Loss	- 26.1 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.5 Ω + 3.3 jΩ
Return Loss	- 29.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.149 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 09, 2003

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DASY5 Validation Report for Head TSL

Date/Time: 27.04.2009 13:40:04

Test Laboratory: SPEAG, Zurich, Switzerland

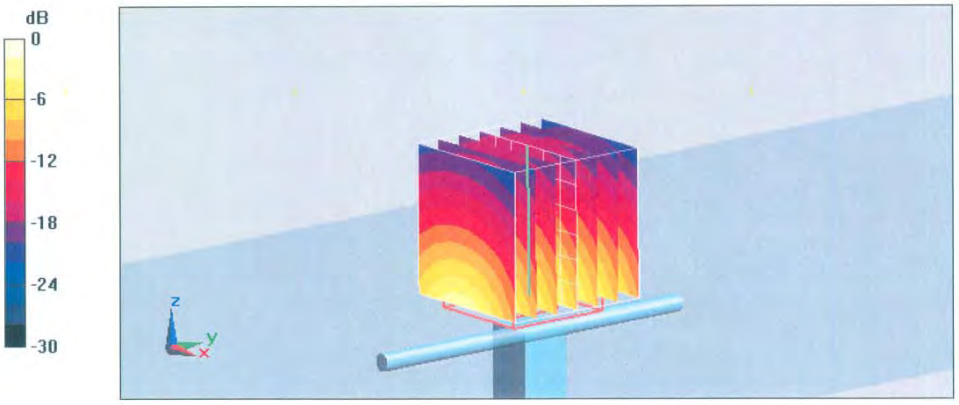
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HSL U10 BB
Medium parameters used: f = 2450 MHz; σ = 1.82 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.4, 4.4, 4.4); 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; d = 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.3 V/m; Power Drift = 0.036 dB
Peak SAR (extrapolated) = 28.3 W/kg
SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.28 mW/g
Maximum value of SAR (measured) = 17.2 mW/g



0 dB = 17.2mW/g

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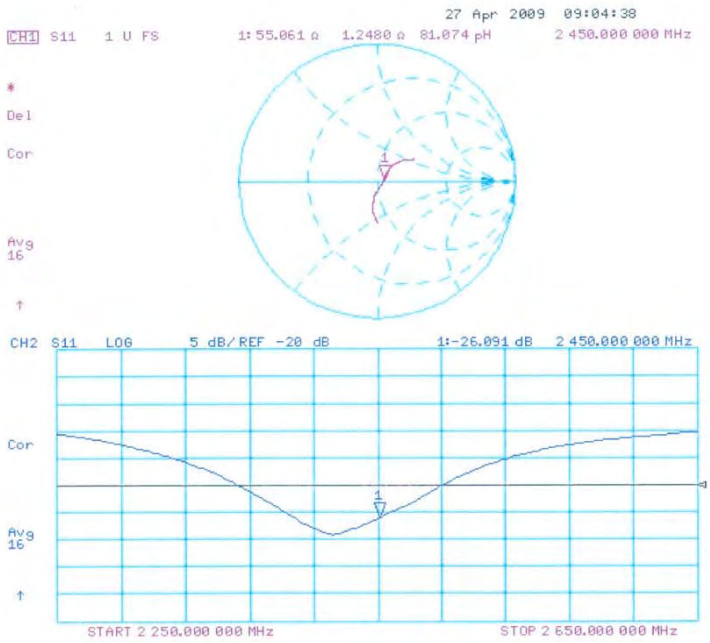
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date/Time: 22.04.2009 13:12:14

Test Laboratory: SPEAG, Zurich, Switzerland

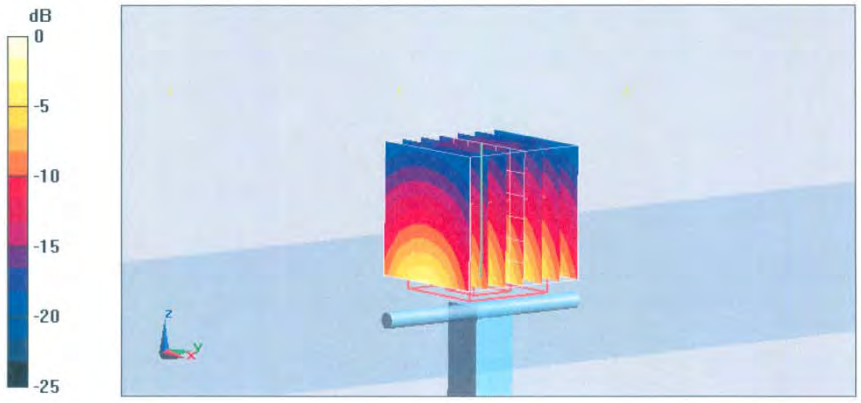
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: MSL U10 BB
Medium parameters used: f = 2450 MHz; σ = 1.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

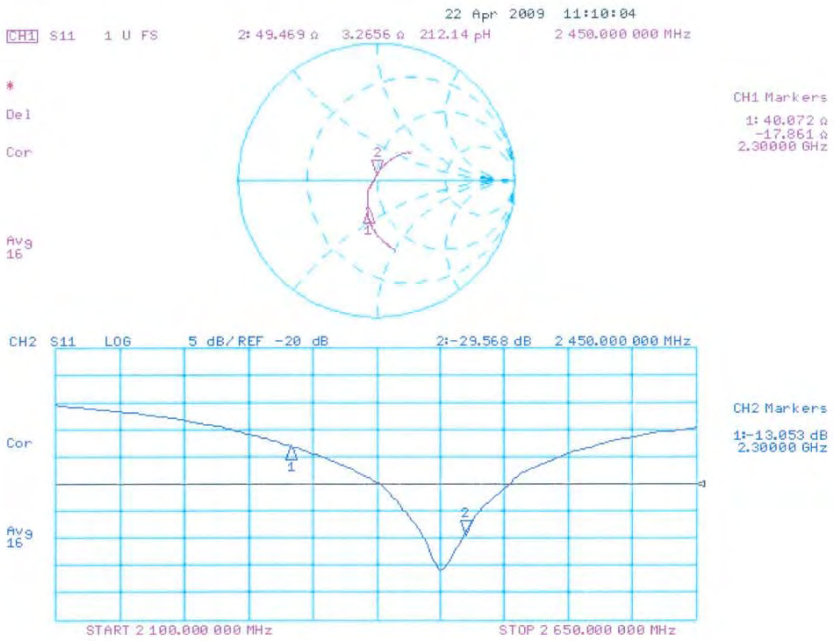
- Probe: ES3DV2 - SN3025; ConvF(4.07, 4.07, 4.07); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version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



0 dB = 17.3mW/g

Impedance Measurement Plot for Body TSL



End of 1st part of report