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# SAR TEST REPORT

Equipment Under Test	Smart Phone
Model Name	V02S002
Company Name	DELL Inc.
Company Address	One Dell Way Round Rock Texas 78682 United States
Date of Receipt	2010.07.26
Date of Test(s)	2010.09.10-2010.09.15
Date of Issue	2010.10.29

Standards:

FCC OET Bulletin 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.

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Tested by : Ricky Huang

Asst. Supervisor

Approved by : Nick Hsu

**Supervisor** 

Date

2010.10.29

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# Version

Version No.	Date	Description	
1.0	Sep. 28, 2010	Initial issue of report	
1.1	Oct. 27, 2010	1 <sup>st</sup> modification	
1.2	Oct. 29, 2010	2 <sup>nd</sup> modification	



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## 1. General Information

## 1.1 Testing Laboratory

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Internet	http://www.tw.sgs.com/	

## 1.2 Details of Applicant

Company Name	DELL Inc.
Company Address	One Dell Way Round Rock Texas 78682 United States
Contact Person	Matthew Samonek
TEL	815-382-4275
E-mail	matthew_samonek@dell.com

## 1.3 Description of EUT

EUT Name	Smart Phone		
Model Name	V02S002		
Brand Name	DELL		
IMEI Code	012287000009109		
FCC ID	E2KV02S002		
Mode of Operation	GSM/GPRS/EGPRS/WCDMA/HSDPA/ HSUPA/WLAN802.11 b/g band		

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Definition	Production unit			
Duty Cycle	Cycle GSM GPRS		WCDMA B4	WLAN 802.11 b/g
	1/8	1/2(Class B)	1	1
TX Frequency Range	GSM 850	GSM1900	WCDMA B4	WLAN802.1 1b/g
(MHz)	824.2- 848.8MHZ	1850.2- 1909.8MHZ	1712.4- 1752.6 MHZ	2412- 2462 MHZ
Channel Number	GSM 850	GSM1900	WCDMA B4	WLAN802.1 1b/g
(ARFCN)	128-251	512- 810	1312-1513	1-11
VOIP Function	No			
Battery Type	3.7 V Lithium-Ion			
Antenna Type		Internal	Antenna	
	GSM850			
Max. SAR Measured	Head		Во	dy
(1 g)	O.436 mW/g (At GSM 850 Right Head (Cheek Position)_Slider off_ 251 Channel		1.39 mW/g (At GSM 850 Body _ 251 channel)	
	GSM1900			
Max. SAR	Head		Body	
Measured (1 g)	O.646 mW/g (At GSM 1900 Left Head (Cheek Position)_Slider off_ 661 channel)		<b>0.68</b> (At GSM 1 <sup>o</sup> _ 512 chai	

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	WCDMA B4			
Max. SAR	Head	Body		
Measured (1 g)	1.12 mW/g (At WCDMA B4 Left Head (Cheek Position)_Slider off_ 1513 channel)	0.984 mW/g (At WCDMA B4 Body _ 1312 channel)		
	WLAN802.11 b/g			
	WLAN802	.11 b/g		
Max. SAR Measured	Body	.11 <b>b/g</b> Body		

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## #. Conducted power table:

	GSM 8	350 (Ave	rage)	GSM 1	900 (Ave	erage)
Mode\ARFCN	128	190	251	512	661	810
GSM	32.2	32.2	32.2	28.9	29	29
EGPRS 12	22.5	22.6	22.5	25.3	25.4	25.5
GPRS 12	28.5	28.5	28.5	28.6	28.7	28.8

		WCDMA Band 4 Channel		
Mode	Subtest	4132	4183	4233
Rel99	R99	23.3	23.2	23.1
	1	23.59	23.46	23.37
Rel6 HSDPA	2	23.18	23.06	22.95
KEID IISDPA	3	23.11	23.01	22.84
	4	23.18	23.02	22.96
	1	23.22	23.18	23.04
	2	21.27	21.25	21.08
Rel6 HSUPA	3	22.28	22.2	22.12
	4	21.4	21.3	21.12
	5	23.11	23.04	22.95

EUT Mode	Frequency	СН	Average Power
	(MHz)		(dBm)
	2412	1	13.74
WLAN802.11b	2437	6	14.04
	2462	11	14.92
	Frequency	011	Average
EUT Mode		СН	Power
	(MHz)		(dBm)
	2412	1	9.54
WLAN802.11g	2437	6	9.93
	2462	11	10.53

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#### 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 (R&S CMU200), and the communication between the EUT and the tester is established by air link.
- 2. 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 batt ery is fully charged.
- 3. During the SAR testing, the DASY4 system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
- 4. Testing Head SAR at lowest, middle and highest channel for all bands with LET/LEC/RET/REC conditions.
- 5. Testing body-worn SAR by separating **1.5cm** between the back of the EUT and the flat phantom in GPRS mode.

## SAR evaluation considerations for handsets with multiple transmitters:

- 6. 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.
- 7. When the maximum transmitter and antenna output power are  $\leq$  60/f(GHz) (mW) SAR evaluation is typically not required for FCC or TCB approval (BT power= 3.62dBm)
- 8. WWAN to WLAN antenna distance is 11cm.

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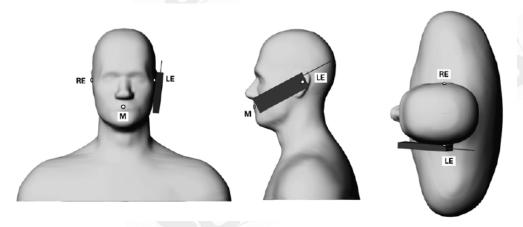
9. The highest 1-g SAR for WLAN is 0.161 W/kg and the highest 1-g SAR for WWAN is 1.39W/kg. The sum of 1-g for simultaneous transmitting WLAN and WWAN antenna pair is 0.161+1.39=1.551 W/kg < 1.6 W/kg. According to KDB648474/KDB447498 /KDB248227/KDB941225 Simultaneous SAR evaluation is not required.

## Additional configuration(Head):

10. For highest SAR configuration in this band repeated with external Memory card inside. **Additional configuration(Body)**:

- 11. For highest SAR configuration in this band repeated with external Memory card inside.
- 12. For highest SAR configuration in this band repeated with external Headset (Foster).
- 13. For highest SAR configuration in this band repeated with external Headset (PCH).

## 1.6 Positioning Procedure

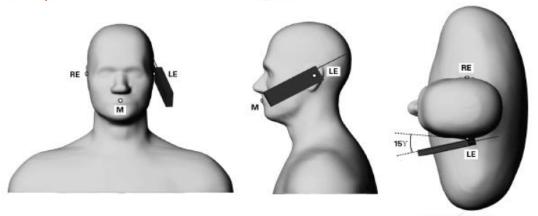


Phone position 1, "cheek" or "touch" position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning

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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.

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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

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case the cube measurement can be repeated, using the new interpolated maximum as the center.

## 1.8 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 4 professional system ). A Model ES3DV3 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR=  $\sigma$  ( $|Ei|^2$ )/  $\rho$  where  $\sigma$  and p are the conductivity and mass density of the tissue-simulant.

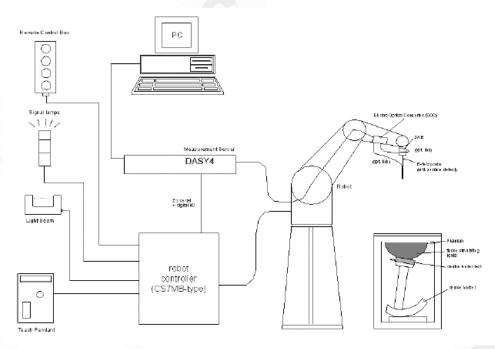


Fig.a The block diagram of SAR system

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

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

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- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
  - A computer operating Windows 2000 or Windows XP.
  - DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
  - The SAM twin phantom enabling testing left-hand and right-hand usage.
  - The device holder for handheld mobile phones.
  - Tissue simulating liquid mixed according to the given recipes.
  - Validation dipole kits allowing to validate the proper functioning of the system.

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## 1.9 System Components

## **ES3DV3 E-Field Probe**

	Compare attributed and a signs of the tribute and a signs		
Construction:	Symmetrical design with triangular core		
	Built-in shielding against static charges		
	PEEK enclosure material (resistant to		
	organic solvents, e.g., DGBE)		
Calibration:	Basic Broad Band Calibration in air		
	Conversion Factors (CF) for		
	HSL850/1750/1900/2450MHz		
	Additional CF for other liquids and		
	frequencies upon request		
	inequencies apon request	ES3DV3 E-Field Probe	
Frequency:	10 MHz to > 4 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)		
Directivity:	± 0.3 dB in HSL (rotation around probe axis)		
,	± 0.5 dB in tissue material (rotation normal to probe axis)		
Dynamic Range:	$10 \mu W/g \text{ to } > 100 \text{ mW/g};$		
7	Linearity: $\pm$ 0.2 dB (noise: typically < 1 $\mu$ W/g)		
Dimensions:	Overall length: 330 mm (Tip: 20 mm)		
	Tip diameter: 2.5 mm (Body: 12 mm)		
	Typical distance from probe tip to dipole centers: 1 mm		
Application:	High precision dosimetric measurements in any exposure scenario		
, фр. сас.	(e.g., very strong gradient fields). Only probe which enables		
	compliance testing for frequencies up to 6 GHz with precision of better		
	30%.		
<u> </u>	50 701		

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#### **SAM PHANTOM V4.0C**

The shell corresponds to the specifications of the Specific Construction:

Anthropomorphic Mannequin (SAM) phantom defined in IEEE

1528-200X, CENELEC 50361 and IEC 62209.

It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points

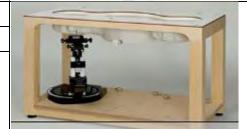
with the robot.

Shell Thickness:  $2 \pm 0.2 \text{ mm}$ 

Approx. 25 liters Filling Volume:

Height: 251 mm; Dimensions:

Length: 1000 mm; Width: 500 mm



## **DEVICE HOLDER**

Construction

In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).



Device Holder

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## 1.10 SAR System Verification

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

These tests were done at 850/1750/1900/2450 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was in the range 22.1°C, the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

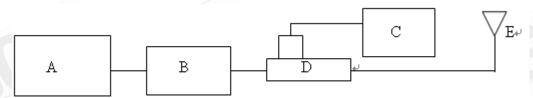
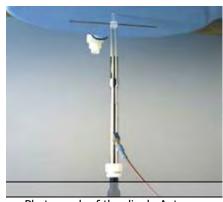


Fig.b The block diagram of system verification

- A. Agilent Model 8648D Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent Model U2001B Power Sensor
- D. Agilent Model 778D/777D Dual directional coupling
- E. Reference dipole antenna



Photograph of the dipole Antenna

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Validation Kit	Frequency (MHz)	Target SAR (1g) (Pin=250mW)	Measured SAR (1g)	Measured Date
D835V2 S/N: 4d063	835 MHz (Head)	2.42 mW/g	2.37mW/g	2010-09-12
D835V2 S/N: 4d092	835 MHz (Body)	2.53 mW/g	2.61mW/g	2010-09-10
D1750V2 S/N: 1008	1750 MHz (Head)	8.84 mW/g	8.88mW/g	2010-09-12
D1750V2 S/N: 1008	1750 MHz (Body)	9.46 mW/g	9.18 mW/g	2010-09-10
D1900V2 S/N: 5d027	1900 MHz (Head)	9.91 mW/g	10.2mW/g	2010-09-10
D1900V2 S/N: 5d027	1900 MHz (Body)	10.1 mW/g	10.2mW/g	2010-09-10
D2450V2 S/N: 727	2450 MHz (Body)	13.4 mW/g	12.9mW/g	2010-09-15

Table 1. System validation (follow manufacture target value)

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## 1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the 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 iin the flat section of the phantom was 15cm±5mm during all tests. (Appendix Fig. 2)

13011123	min during an	tests. (Appendix rig.2)	,				
Frequency		Measurement date/	Die	Dielectric Parameters			
(MHz)	Tissue type	Limits	0	σ (S/m)	Simulated Tissue		
(141112)		Limits	ρ         Dielectric Parameters           ρ         σ (S/m)         Simulated Tiss Temperature(°           12         42         0.903         21.7           its         39.62-43.79         0.86-0.96         20-24           10         53.1         0.974         21.7           its         51.49-56.91         0.93-1.03         20-24           12         39.3         1.35         21.7           its         37.81-41.79         1.26-1.4         20-24           10         51.9         1.45         21.7           its         51.4-56.81         1.36-1.50         20-24           10         39         1.45         21.7           its         38.48-42.53         1.34-1.48         20-24           10         53.2         1.6         21.7           its         52.06-57.54         1.45-1.61         20-24           15         53.4         2.03         21.7	Temperature(° C)			
850	Head	Measured, 2010-09-12	42	0.903	21.7		
030	rieau	Recommended Limits	39.62-43.79	0.86-0.96	20-24		
850		Measured, 2010-09-10	53.1	0.974	21.7		
650	Body	Recommended Limits	51.49-56.91	0.93-1.03	20-24		
1750		Measured, 2010-09-12	39.3	1.35	21.7		
1/50	Head	Recommended Limits	37.81-41.79	1.26-1.4	20-24		
1750	Body	Measured, 2010-09-10	51.9	1.45	21.7		
1750		Recommended Limits	51.4-56.81	1.36-1.50	20-24		
1000		Measured, 2010-09-10	39	1.45	21.7		
1900	Head	Recommended Limits	38.48-42.53	1.34-1.48	20-24		
1900		Measured, 2010-09-10	53.2	1.6	21.7		
1900	Body	Recommended Limits	52.06-57.54	1.45-1.61	20-24		
2450		Measured, 2010-09-15	53.4	2.03	21.7		
2 <del>4</del> 30	Body	Recommended Limits	51.49-56.91	1.91-2.11	20-24		

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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## The composition of the brain tissue simulating liquid:

	The composition of the brain assue simulating liquid:						
Ingredie nt	850MHz (Head)	850MHz (Body)	1700MHz (Head)	1750MHz (Body)	1900MHz (Head)	1900MHz (Body)	2450MHz (Body)
DGMBE	Χ	X	444.52 g	300.67 g	444.52 g	300.67g	301.7ml
Water	532.98 g	631.68 g	552.42 g	716.56 g	552.42 g	716.56 g	698.3ml
Salt	18.3 g	11.72 g	3.06 g	4.0 g	3.06 g	4.0 g	X
Prevento I D-7	2.4 g	1.2 g	X	X	X	X	X
Cellulose	3.2 g	X	X	X	X	X	Х
Sugar	766.0 g	600 g	X	X	X	X	Х
Total	1 L	1 L	1 L	1 L	1 L	1 L	1 L
amount	(1.0kg)	(1.0kg)	(1.0kg)	(1.0kg)	(1.0kg)	(1.0kg)	(1.0kg)

Table 3. Recipes for tissue simulating liquid

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## 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

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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	Controlled Environment
	General Population	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

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

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# 2. Summary of Results

## **GSM 850 MH7**

GOINI OF						
Right Head	(Cheek Po	osition)	_Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.403	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.428	22.1	21.7
	251	848.8	32.20 dBm	0.436	22.1	21.7
Left Head (	Cheek Pos	ition) _	Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.382	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.427	22.1	21.7
	251	848.8	32.20 dBm	0.426	22.1	21.7
Right Head	(15° Tilt I	Position	n) _Slider off		461	
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.261	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.3	22.1	21.7
	251	848.8	32.20 dBm	0.311	22.1	21.7
Left Head (	15° Tilt Po	sition)	_Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.267	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.31	22.1	21.7
	251	848.8	32.20 dBm	0.314	22.1	21.7

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Right Head	(Cheek Po	osition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.205	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.277	22.1	21.7
	251	848.8	32.20 dBm	0.289	22.1	21.7
Left Head (	Cheek Pos	ition) _	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.201	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.255	22.1	21.7
	251	848.8	32.20 dBm	0.267	22.1	21.7
Right Head	(15° Tilt I	Position	n) _Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.125	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.172	22.1	21.7
	251	848.8	32.20 dBm	0.180	22.1	21.7
Left Head (	15° Tilt Po	sition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	32.20 dBm	0.107	22.1	21.7
850 MHz	190	836.6	32.20 dBm	0.147	22.1	21.7
	251	848.8	32.20 dBm	0.154	22.1	21.7
Body worn	(testing ir	GPRS	mode)			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	128	824.2	28.50 dBm	1.25	22.1	21.7
850 MHz	190	836.6	28.50 dBm	1.31	22.1	21.7
	251	848.8	28.50 dBm	1.39	22.1	21.7

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Body worn	Body worn (testing in GPRS mode)_repeated for EUT front to phantom							
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	251	848.8	28.50 dBm	1.09	22.1	21.7		
Body worn	(testing ir	GPRS	mode)_repeated \	with Headset (PC	H)			
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	251	848.8	28.50 dBm	1.12	22.1	21.7		
Body worn	Body worn (testing in GPRS mode)_repeated with Headset (Foster)							
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	251	848.8	28.50 dBm	1.13	22.1	21.7		
Body worn	(testing ir	n GPRS	mode)_repeated v	with Memory car	d			
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	251	848.8	28.50 dBm	1.36	22.1	21.7		
Body worn	(testing ir	i EGPR	S mode)_repeated	with EGPRS mo	de			
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	251	848.8	22.50 dBm	0.552	22.1	21.7		

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# **PCS 1900 MHZ**

1 63 17	OO IVII	14				
Right Head	(Cheek Po	osition)	_Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
00	512	1850.2	28.90 dBm	0.347	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.396	22.1	21.7
	810	1909.8	29.00 dBm	0.356	22.1	21.7
Left Head (	Cheek Pos	ition) _	Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	512	1850.2	28.90 dBm	0.559	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.646	22.1	21.7
	810	1909.8	29.00 dBm	0.608	22.1	21.7
Right Head	(15° Tilt I	Position	n) _Slider off		( e	
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	512	1850.2	28.90 dBm	0.204	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.23	22.1	21.7
	810	1909.8	29.00 dBm	0.214	22.1	21.7
Left Head (	15° Tilt Po	sition)	_Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	512	1850.2	28.90 dBm	0.184	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.22	22.1	21.7
180	810	1909.8	29.00 dBm	0.205	22.1	21.7
	•					

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Right Head	(Cheek Po	osition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C
	512	1850.2	28.90 dBm	0.125	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.165	22.1	21.7
	810	1909.8	29.00 dBm	0.195	22.1	21.7
Left Head (	Cheek Pos	sition) _	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C
	512	1850.2	28.90 dBm	0.209	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.279	22.1	21.7
	810	1909.8	29.00 dBm	0.322	22.1	21.7
Right Head	(15° Tilt I	Position	n) _Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C
I PPO	512	1850.2	28.90 dBm	0.14	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.169	22.1	21.7
	810	1909.8	29.00 dBm	0.201	22.1	21.7
Left Head (	15° Tilt Po	osition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C
	512	1850.2	28.90 dBm	0.112	22.1	21.7
1900 MHz	661	1880	29.00 dBm	0.155	22.1	21.7
	810	1909.8	29.00 dBm	0.186	22.1	21.7
Body worn	(testing ir	GPRS	mode)		7 64	5
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C
	512	1850.2	28.60 dBm	0.684	22.1	21.7
1900 MHz	661	1880	28.70 dBm	0.644	22.1	21.7
	810	1909.8	28.80 dBm	0.482	22.1	21.7

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Right Head	(Cheek Po	osition)	_Slider off	\		
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.624	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.497	22.1	21.7
	1513	1752.6	23.10 dBm	0.714	22.1	21.7
Left Head (0	Cheek Pos	ition) _	Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.944	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.732	22.1	21.7
	1513	1752.6	23.10 dBm	1.09	22.1	21.7
Right Head	(15° Tilt I	Position	) _Slider off			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.416	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.322	22.1	21.7
	1513	1752.6	23.10 dBm	0.539	22.1	21.7
Left Head (	15° Tilt Po	sition)	_Slider off			•
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.402	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.337	22.1	21.7
	1513	1752.6	23.10 dBm	0.477	22.1	21.7
Left Head (0	Cheek Pos	ition) _	Slider off_repeate	ed with Memory	card	
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid
			Power (Average)	1g	Temp[°C]	Temp[°C]
1750 MHz	1513	1752.6	23.10 dBm	1.12	22.1	21.7

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Right Head	(Cheek Po	osition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.299	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.207	22.1	21.7
	1513	1752.6	23.10 dBm	0.334	22.1	21.7
Left Head (0	Cheek Pos	ition) _	Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.529	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.36	22.1	21.7
	1513	1752.6	23.10 dBm	0.525	22.1	21.7
Right Head	(15° Tilt I	Position	n) _Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
Po	1312	1712.4	23.30 dBm	0.315	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.221	22.1	21.7
	1513	1752.6	23.10 dBm	0.371	22.1	21.7
Left Head (*	15° Tilt Po	osition)	_Slider on			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.355	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.232	22.1	21.7
	1513	1752.6	23.10 dBm	0.388	22.1	21.7
Body worn	(testing ir	R99 m	node)		7 6	
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]
	1312	1712.4	23.30 dBm	0.984	22.1	21.7
1750 MHz	1412	1732.4	23.20 dBm	0.712	22.1	21.7
	1513	1752.6	23.10 dBm	0.901	22.1	21.7

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## WLAN802.11 b

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Body worn			THO !	\			
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]	
	1	2412	13.74 dBm	0.117	22.1	21.7	
2450 MHz	6	2437	14.04 dBm	0.152	22.1	21.7	
	11	2462	14.92 dBm	0.161	22.1	21.7	
Body worn-	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]	
2450 MHz	11	2462	14.92 dBm	0.03	22.1	21.7	
Body worn-	repeated	with He	eadset				
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]	
2450 MHz	11	2462	14.92 dBm	0.146	22.1	21.7	
Body worn-	repeated	with BI	uetooth active				
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]	
2450 MHz	11	2462	14.92 dBm	0.127	22.1	21.7	
Body worn-	repeated	with M	emory card				
Frequency	Channel	MHz	Conducted Output Power (Average)	Measured(W/kg) 1g	Amb. Temp[°C]	Liquid Temp[°C]	
2450 MHz	11	2462	14.92 dBm	0.132	22.1	21.7	

# WLAN 802.11 a

Body worn										
Frequency	Channel MHz Conducted Output Measured(W/		Measured(W/kg)	Amb.	Liquid					
100	1		Power (Average)	1g	Temp[°C]	Temp[°C]				
	1	2412	9.54 dBm	0.097	22.1	21.7				
2450 MHz	6	2437	9.93 dBm	0.112	22.1	21.7				
	11	2462	10.53 dBm	0.127	22.1	21.7				

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# 3. Instruments List

Manufacturer	Device	Туре	Serial number	Date of last calibration
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ES3DV3	3712	May.21.2010
	850 /1750/1900	D835V2	4d063	May.21.2010
Schmid & Partner	/2450 MHz System Validation Dipole	D1750V2	1008	May.26.2010
Engineering AG		D1900V2	5d027	Apr.28.2010
		D2450V2	727	Apr.29.2010
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	547	Aug.18.2010
Schmid & Partner Engineering AG	Software	DASY 4 V4.7 Build 80	N/A	Calibration not required
Schmid & Partner Engineering AG	Phantom	SAM	N/A	Calibration not required
HP	Network Analyzer	8753D	3410A05662	Mar.30.2010
HP	Dielectric Probe Kit	85070D	US01440168	Calibration not required
A millows	Dual-directional	778D	50313	Aug.25.2010
Agilent	coupler	777D	50114	Aug.25.2010
Agilent	RF Signal Generator	8648D	3847M00432	Jun.04.2010
Agilent	Power Sensor	U2001B	MY48100169	Apr.30.2010
R&S	Radio Communication Test	CMU200	113505	Mar.25.2010

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## 4. Measurements

Date: 2010/9/12

## Re Cheek\_CH128\_Slider off

DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 0.423 mW/g

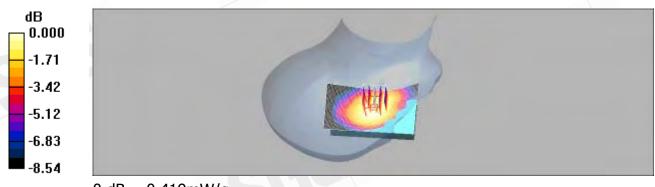
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 10.8 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.483 W/kg

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.315 mW

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



0 dB = 0.419 mW/g

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Date: 2010/9/12

## Re Cheek\_CH190\_Slider off

## DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\epsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 0.448 mW/g

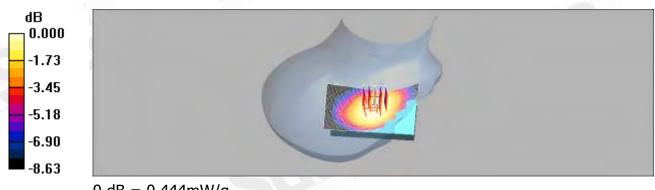
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.509 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.334 mW/g

Maximum value of SAR (measured) = 0.444 mW/g



0 dB = 0.444 mW/q

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Page: 33 of 196 Date: 2010/9/12

## Re Cheek\_CH251\_Slider off

## DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.451 mW/g

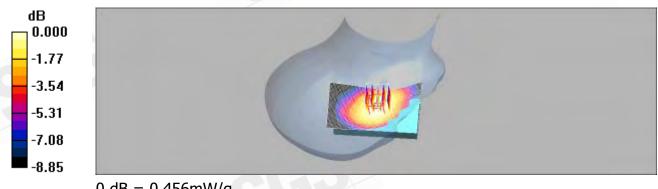
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.340 mW/g

Maximum value of SAR (measured) = 0.456 mW/g



0 dB = 0.456 mW/g

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## Le Cheek\_CH128\_Slider off

## DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

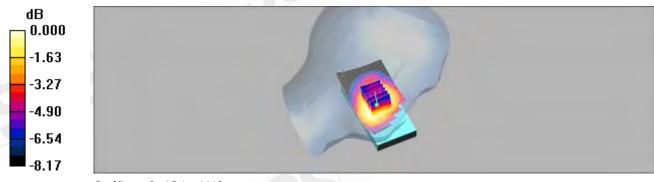
**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.392 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.2 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 0.465 W/kg

SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.401 mW/g



0 dB = 0.401 mW/g

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## Le Cheek\_CH190\_Slider off

## DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\varepsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

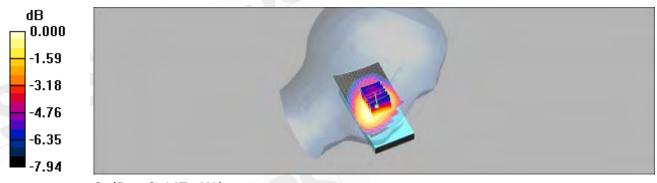
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.440 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.7 V/m; Power Drift = -0.013 dB Peak SAR (extrapolated) = 0.518 W/kg

SAR(1 g) = 0.427 mW/g; SAR(10 g) = 0.329 mW/gMaximum value of SAR (measured) = 0.447 mW/g



0 dB = 0.447 mW/g

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## Le Cheek\_CH251\_Slider off

#### DUT: V02S002:

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

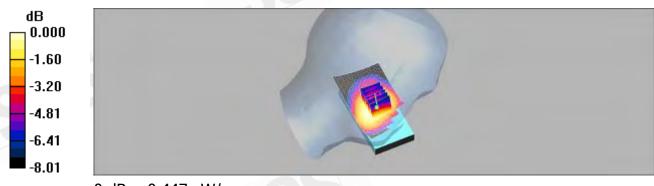
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.441 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.5 V/m; Power Drift = 0.031 dB Peak SAR (extrapolated) = 0.519 W/kg

SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.329 mW/gMaximum value of SAR (measured) = 0.447 mW/g



0 dB = 0.447 mW/g

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# Re Tilt\_CH128\_Slider off

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.270 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

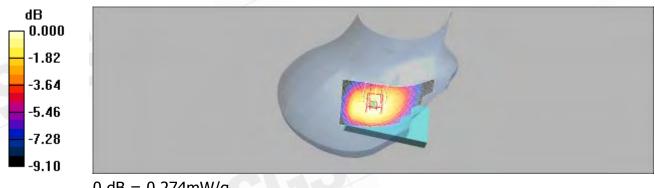
dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.274 mW/g



0 dB = 0.274 mW/g

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# Re Tilt\_CH190\_Slider off

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\varepsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.310 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

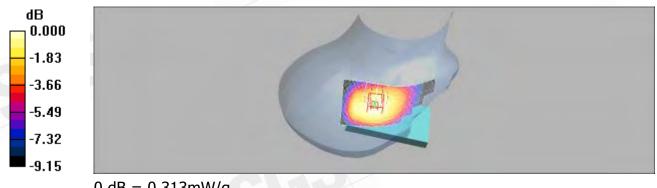
dz=5mm

Reference Value = 14.8 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.375 W/kg

SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.227 mW/g

Maximum value of SAR (measured) = 0.313 mW/g



0 dB = 0.313 mW/g

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# Re Tilt\_CH251\_Slider off

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.322 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

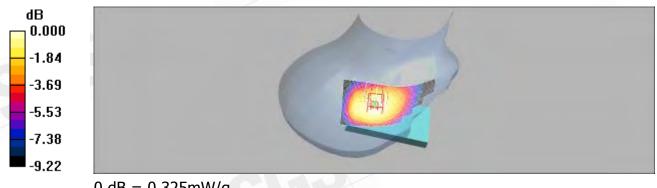
dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.389 W/kg

SAR(1 g) = 0.311 mW/g; SAR(10 g) = 0.236 mW/g

Maximum value of SAR (measured) = 0.325 mW/g



0 dB = 0.325 mW/g

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# Le Tilt\_CH128\_Slider off

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

### **LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.284 mW/g

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

Reference Value = 13.5 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.331 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.277 mW/g



0 dB = 0.277 mW/g

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# Le Tilt\_CH190\_Slider off

### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\epsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

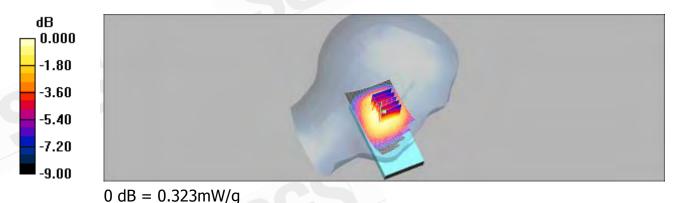
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.322 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 14.2 V/m; Power Drift = -0.006 dB Peak SAR (extrapolated) = 0.387 W/kg

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.235 mW/g

Maximum value of SAR (measured) = 0.323 mW/g



0 db = 0.52511100/9

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# Le Tilt\_CH251\_Slider off

#### DUT: V02S002:

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

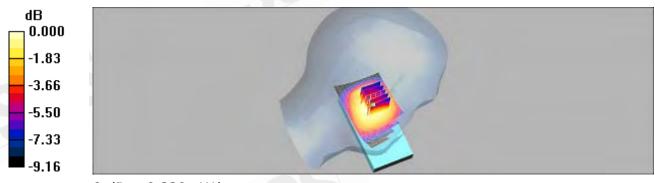
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.330 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 14.2 V/m; Power Drift = 0.026 dB Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.238 mW/gMaximum value of SAR (measured) = 0.329 mW/g



0 dB = 0.329 mW/g

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### Re Cheek\_CH128\_Slider on

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.214 mW/g

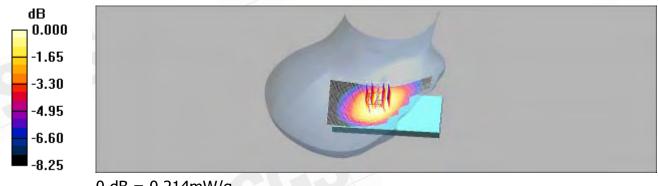
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.13 V/m; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.161 mW/g

Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214 mW/g

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# Re Cheek\_CH190\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\varepsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.285 mW/g

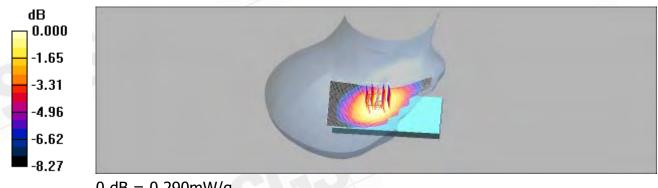
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.15 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.277 mW/g; SAR(10 g) = 0.218 mW/g

Maximum value of SAR (measured) = 0.290 mW/g



0 dB = 0.290 mW/g

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# Re Cheek\_CH251\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.302 mW/g

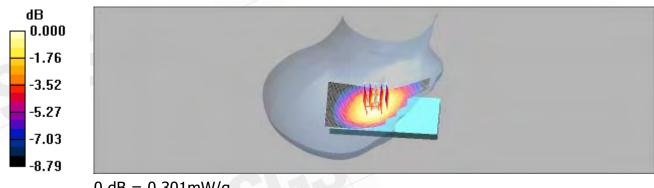
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.36 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.348 W/kg

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.301 mW/g



0 dB = 0.301 mW/g

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### Le Cheek\_CH128\_Slider on

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

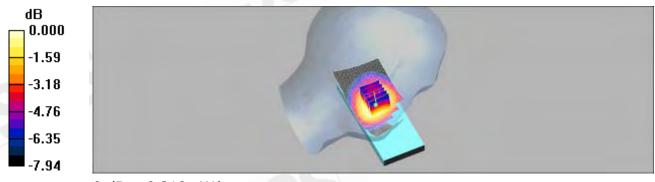
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.206 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 6.35 V/m; Power Drift = 0.199 dB Peak SAR (extrapolated) = 0.236 W/kg

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.158 mW/gMaximum value of SAR (measured) = 0.210 mW/g



0 dB = 0.210 mW/g

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# Le Cheek\_CH190\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\varepsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

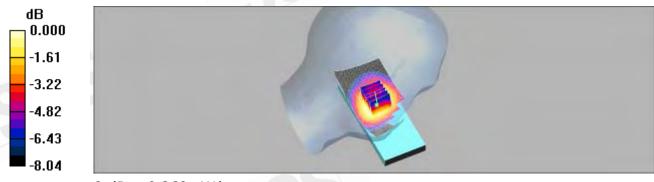
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

LEC/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.265 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 7.43 V/m; Power Drift = -0.065 dBPeak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.268 mW/g



0 dB = 0.268 mW/g

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### Le Cheek\_CH251\_Slider on

#### DUT: V02S002:

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

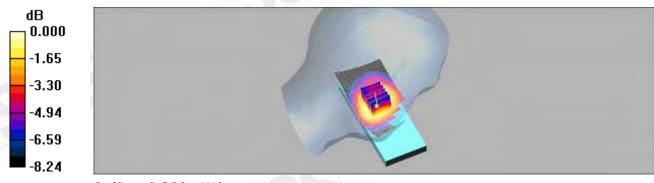
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.275 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 7.51 V/m; Power Drift = 0.001 dB Peak SAR (extrapolated) = 0.319 W/kg

SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.208 mW/gMaximum value of SAR (measured) = 0.280 mW/g



0 dB = 0.280 mW/g

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# Re Tilt\_CH128\_Slider on

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $\varepsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.129 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

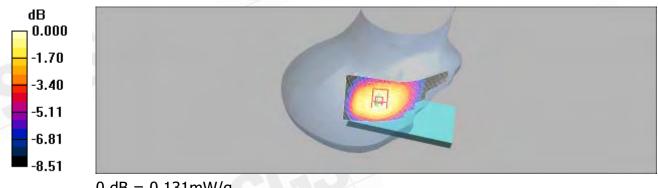
dz=5mm

Reference Value = 9.35 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.096 mW/g

Maximum value of SAR (measured) = 0.131 mW/g



0 dB = 0.131 mW/g

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# Re Tilt\_CH190\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\epsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.176 mW/g

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

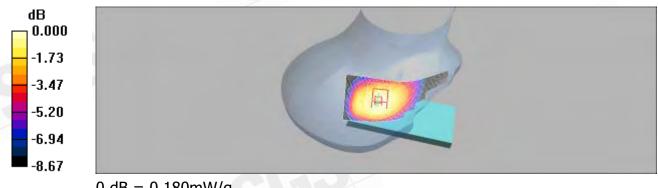
dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.132 mW/g

Maximum value of SAR (measured) = 0.180 mW/g



0 dB = 0.180 mW/g

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### Re Tilt\_CH251\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.187 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

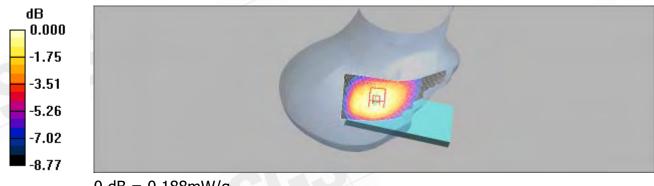
dz=5mm

Reference Value = 11.1 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.138 mW/g

Maximum value of SAR (measured) = 0.188 mW/g



0 dB = 0.188 mW/g

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### Le Tilt\_CH128\_Slider on

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Head 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.893$ 

mho/m;  $ε_r$  = 42.2; ρ = 1000 kg/m<sup>3</sup> Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

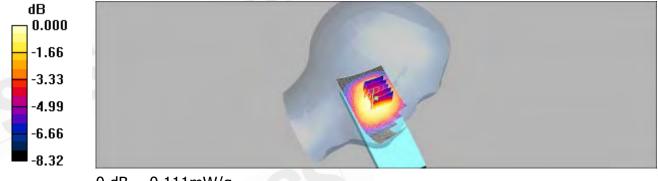
**LET/Area Scan (51x111x1)**: Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.110 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.06 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 0.130 W/kg

SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.083 mW/g

Maximum value of SAR (measured) = 0.111 mW/g



0 dB = 0.111 mW/g

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# Le Tilt\_CH190\_Slider on

#### DUT: V02S002;

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

Medium: Head 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.905$  mho/m;  $\epsilon_r = 41.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

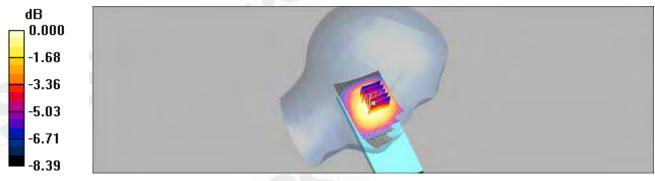
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x111x1)**: Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.154 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 9.32 V/m; Power Drift = -0.019 dB Peak SAR (extrapolated) = 0.181 W/kg

SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.114 mW/gMaximum value of SAR (measured) = 0.154 mW/g



0 dB = 0.154 mW/g

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### Le Tilt\_CH251\_Slider on

#### DUT: V02S002:

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

Medium: Head 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.914$  mho/m;  $\varepsilon_r = 41.6$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

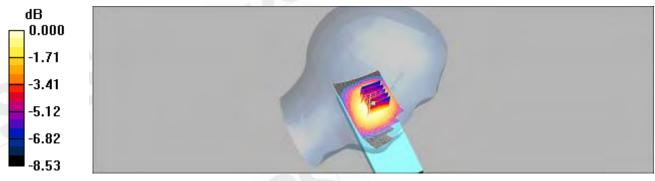
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.160 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 9.44 V/m; Power Drift = -0.019 dB Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161 mW/g

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### BODY\_CH128

### DUT: V02S002;

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.962$ 

mho/m;  $ε_r = 53.3$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.34 mW/g

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

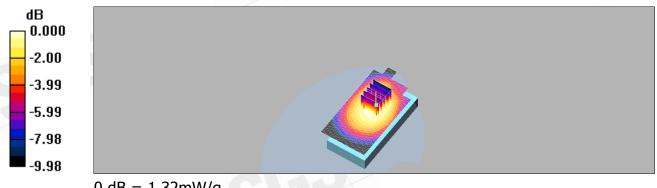
dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.914 mW/g

Maximum value of SAR (measured) = 1.32 mW/g



0 dB = 1.32 mW/g

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### BODY\_CH190

### DUT: V02S002;

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r =$ 

53.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.41 mW/g

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

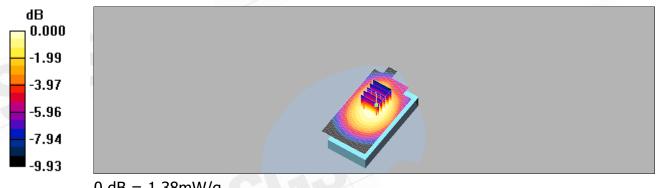
dz=5mm

Reference Value = 11.4 V/m; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 1.31 mW/g; SAR(10 g) = 0.959 mW/g

Maximum value of SAR (measured) = 1.38 mW/g



0 dB = 1.38 mW/g

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### BODY\_CH251

### DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.49 mW/g

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

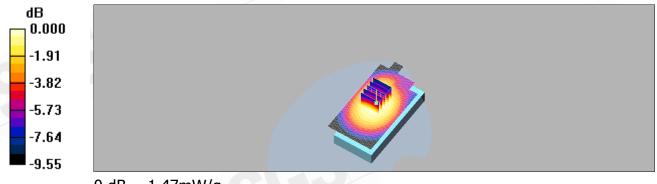
dz=5mm

Reference Value = 13.9 V/m; Power Drift = -0.186 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 1.39 mW/g; SAR(10 g) = 1.01 mW/g

Maximum value of SAR (measured) = 1.47 mW/g



0 dB = 1.47 mW/g

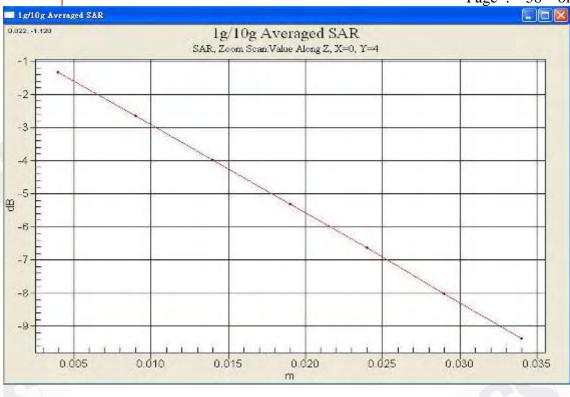
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# BODY\_CH251\_repeated for EUT front to phantom

DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.16 mW/g

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

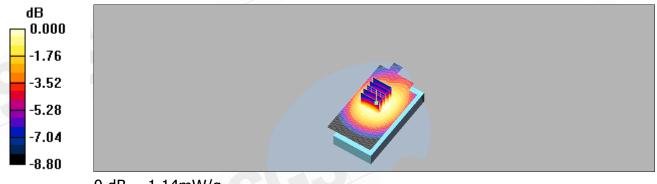
dz=5mm

Reference Value = 9.42 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.811 mW/g

Maximum value of SAR (measured) = 1.14 mW/g



0 dB = 1.14 mW/g

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# BODY\_CH251\_repeated with headset (PCH)

#### DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.19 mW/g

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

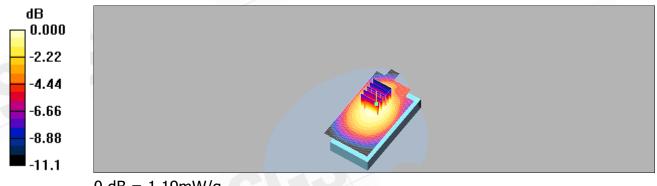
dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 q) = 1.12 mW/q; SAR(10 q) = 0.803 mW/q

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



0 dB = 1.19 mW/g

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# BODY\_CH251\_repeated with headset (Foster)

DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.23 mW/g

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

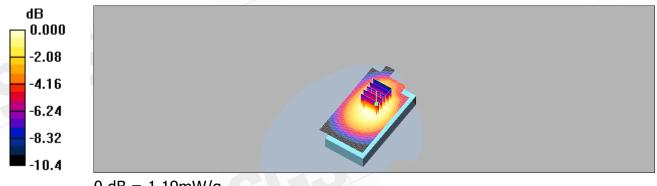
dz=5mm

Reference Value = 10.3 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.817 mW/g

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



0 dB = 1.19 mW/g

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# BODY\_CH251\_repeated with Memory card

DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.44 mW/g

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

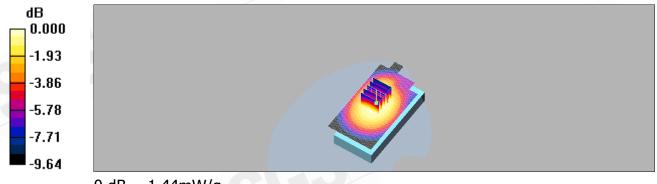
dz=5mm

Reference Value = 13.7 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.983 mW/g

Maximum value of SAR (measured) = 1.44 mW/g



0 dB = 1.44 mW/g

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### BODY\_CH251\_repeated with EGPRS mode

DUT: V02S002;

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz;  $\sigma = 0.989$  mho/m;  $\epsilon_r =$ 

52.9;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.572 mW/g

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

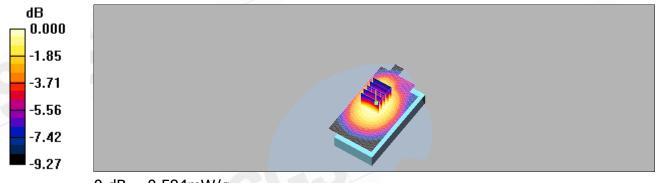
dz=5mm

Reference Value = 7.84 V/m; Power Drift = 0.147 dB

Peak SAR (extrapolated) = 0.718 W/kg

SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.406 mW/g

Maximum value of SAR (measured) = 0.584 mW/g



0 dB = 0.584 mW/g

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## Re Cheek\_CH512\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $\varepsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.383 mW/g

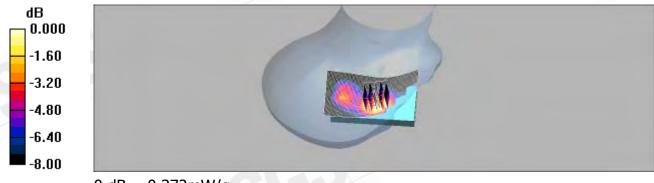
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.73 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 0.512 W/kg

SAR(1 g) = 0.347 mW/g; SAR(10 g) = 0.219 mW/g

Maximum value of SAR (measured) = 0.372 mW/g



0 dB = 0.372 mW/g

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# Re Cheek\_CH661\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.441 mW/g

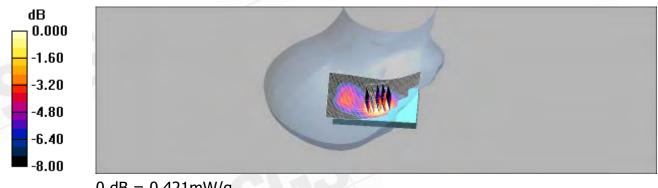
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.67 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.586 W/kg

SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.249 mW/g

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



0 dB = 0.421 mW/g

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### Re Cheek\_CH810\_Slider off

### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.396 mW/g

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

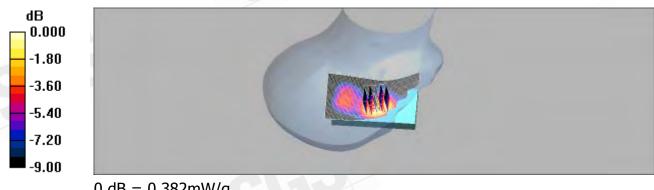
dz=5mm

Reference Value = 8.73 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.530 W/kg

SAR(1 g) = 0.356 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 0.382 mW/g



0 dB = 0.382 mW/g

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### Le Cheek\_CH512\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $ε_r = 39.1$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

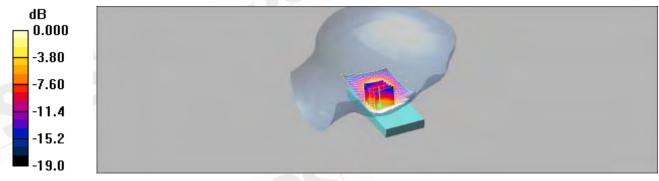
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.643 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.12 V/m; Power Drift = -0.114 dB Peak SAR (extrapolated) = 0.837 W/kg

SAR(1 g) = 0.559 mW/g; SAR(10 g) = 0.345 mW/g

Maximum value of SAR (measured) = 0.612 mW/g



0 dB = 0.612 mW/g

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### Le Cheek\_CH661\_Slider off

#### DUT: V02S002:

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

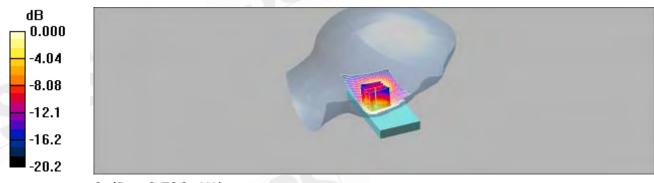
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.731 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.44 V/m; Power Drift = -0.042 dB Peak SAR (extrapolated) = 0.971 W/kg

SAR(1 g) = 0.646 mW/g; SAR(10 g) = 0.394 mW/gMaximum value of SAR (measured) = 0.706 mW/g



0 dB = 0.706 mW/g

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### Le Cheek\_CH810\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

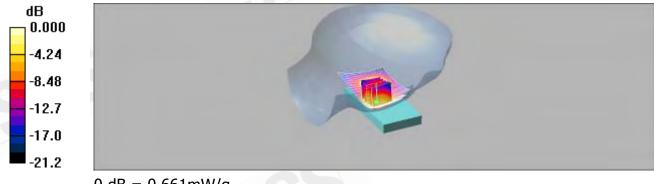
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.713 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 7.86 V/m; Power Drift = -0.018 dBPeak SAR (extrapolated) = 0.926 W/kg

SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.368 mW/g

Maximum value of SAR (measured) = 0.661 mW/g



0 dB = 0.661 mW/g

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# Re Tilt\_CH512\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $\varepsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.233 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

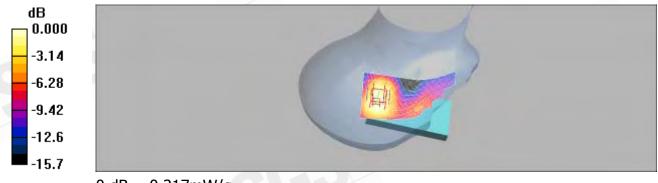
dz=5mm

Reference Value = 11.7 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.304 W/kg

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.126 mW/g

Maximum value of SAR (measured) = 0.217 mW/g



0 dB = 0.217 mW/g

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# Re Tilt\_CH661\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.263 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.245 mW/g



0 dB = 0.245 mW/g

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# Re Tilt\_CH810\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.245 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

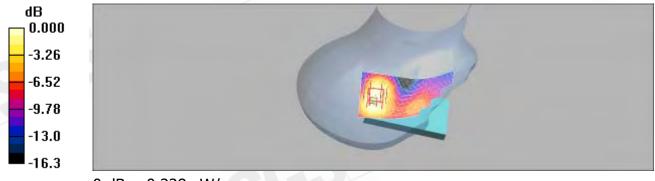
dz=5mm

Reference Value = 11.7 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 0.324 W/kg

SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.131 mW/g

Maximum value of SAR (measured) = 0.228 mW/g



0 dB = 0.228 mW/g

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## Le Tilt\_CH512\_Slider off

## DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $\varepsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

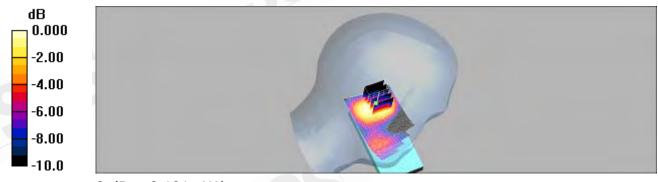
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.211 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.3 V/m; Power Drift = 0.028 dB Peak SAR (extrapolated) = 0.267 W/kg

SAR(1 g) = 0.184 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.191 mW/g



0 dB = 0.191 mW/g

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# Le Tilt\_CH661\_Slider off

#### DUT: V02S002:

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.255 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 11.0 V/m; Power Drift = -0.002 dB Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.141 mW/g

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



0 dB = 0.227 mW/g

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# Le Tilt\_CH810\_Slider off

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

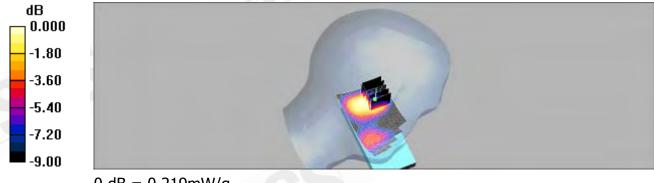
**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.238 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.4 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.304 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.129 mW/g

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



0 dB = 0.219 mW/g

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## Re Cheek\_CH512\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $\varepsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

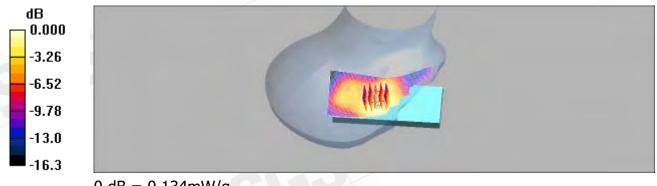
RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.135 mW/g

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

Reference Value = 7.13 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 0.182 W/kg SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.134 mW/g



0 dB = 0.134 mW/g

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# Re Cheek\_CH661\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.179 mW/g

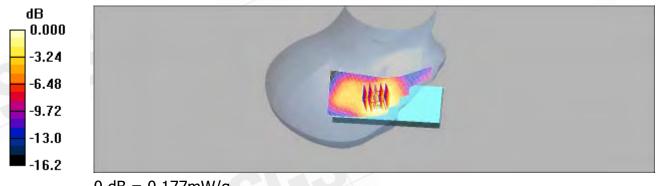
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.81 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.241 W/kg

SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.106 mW/g

Maximum value of SAR (measured) = 0.177 mW/g



0 dB = 0.177 mW/g

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# Re Cheek\_CH810\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.211 mW/g

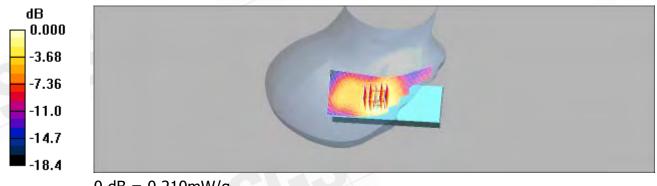
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.40 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.292 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.124 mW/g

Maximum value of SAR (measured) = 0.210 mW/g



0 dB = 0.210 mW/g

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# Le Cheek\_CH512\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $ε_r = 39.1$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

• Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

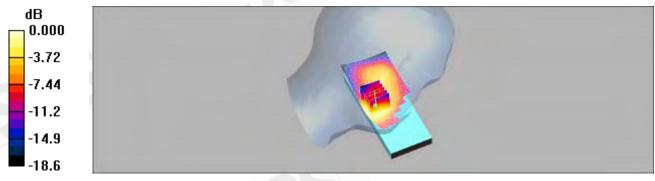
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.236 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 5.03 V/m; Power Drift = 0.109 dB Peak SAR (extrapolated) = 0.309 W/kg SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.131 mW/g

Maximum value of SAR (measured) = 0.226 mW/g



0 dB = 0.226 mW/g

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# Le Cheek\_CH661\_Slider on

#### DUT: V02S002:

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

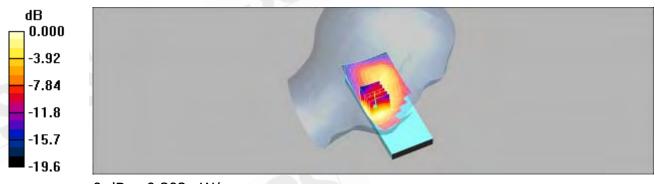
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.323 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 6.31 V/m; Power Drift = -0.018 dB Peak SAR (extrapolated) = 0.416 W/kg SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.302 mW/g



0 dB = 0.302 mW/g

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# Le Cheek\_CH810\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

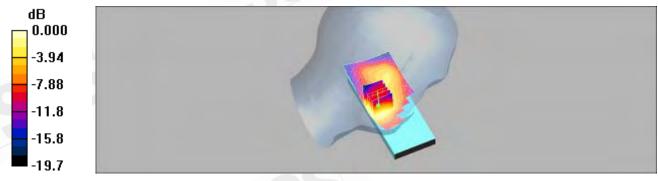
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

LEC/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.380 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 6.87 V/m; Power Drift = -0.084 dB Peak SAR (extrapolated) = 0.481 W/kg

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.345 mW/g



0 dB = 0.345 mW/g

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# Re Tilt\_CH512\_Slider on

## DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.163 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 10.0 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.212 W/kg

SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.087 mW/g

Maximum value of SAR (measured) = 0.151 mW/g



0 dB = 0.151 mW/g

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# Re Tilt\_CH661\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.199 mW/q

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 0.263 W/kg

SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.179 mW/q



0 dB = 0.179 mW/g

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# Re Tilt\_CH810\_Slider on

## DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

# **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.235 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.122 mW/g

Maximum value of SAR (measured) = 0.214 mW/g



0 dB = 0.214 mW/g

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# Le Tilt\_CH512\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.39$ 

mho/m;  $\varepsilon_r = 39.1$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

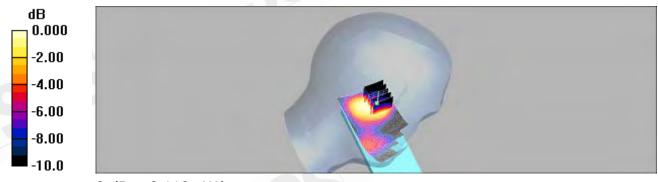
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.127 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.34 V/m; Power Drift = 0.027 dB Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.119 mW/g



0 dB = 0.119 mW/g

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# Le Tilt\_CH661\_Slider on

#### DUT: V02S002:

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1880 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

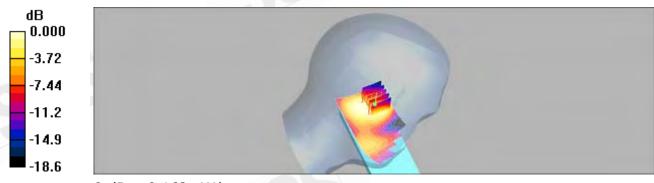
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.177 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 9.95 V/m; Power Drift = -0.044 dB Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.102 mW/gMaximum value of SAR (measured) = 0.163 mW/g



0 dB = 0.163 mW/g

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# Le Tilt\_CH810\_Slider on

#### DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900 MHz Medium parameters used: f = 1910 MHz;  $\sigma = 1.47$  mho/m;  $\epsilon_r = 1.47$  mho/m;  $\epsilon_r$ 

39.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.217 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 11.0 V/m; Power Drift = -0.041 dB Peak SAR (extrapolated) = 0.277 W/kg SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.121 mW/g

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



0 dB = 0.195 mW/g

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## BODY\_CH512

DUT: V02S002;

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.56$ 

mho/m;  $\varepsilon_r = 53.7$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 11.0 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.684 mW/g; SAR(10 g) = 0.417 mW/g

Maximum value of SAR (measured) = 0.739 mW/g

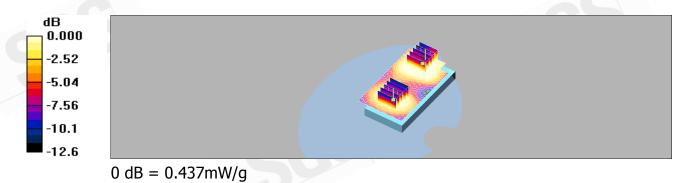
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 11.0 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.580 W/kg

SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.273 mW/g

Maximum value of SAR (measured) = 0.437 mW/g



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## BODY\_CH661

DUT: V02S002:

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:2

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz;  $\sigma = 1.59$  mho/m;  $\varepsilon_r = 53.2$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.713 mW/g

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

Reference Value = 11.2 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.397 mW/g

Maximum value of SAR (measured) = 0.694 mW/g

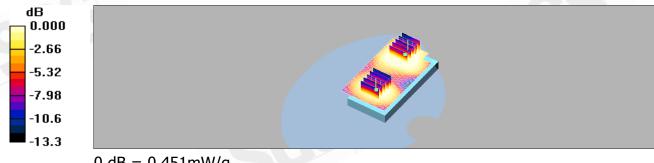
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 11.2 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 0.604 W/kg

SAR(1 g) = 0.424 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.451 mW/g



0 dB = 0.451 mW/q

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## BODY\_CH810

DUT: V02S002;

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz;  $\sigma = 1.6$  mho/m;  $\epsilon_r = 53.2$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.526 mW/g

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

Reference Value = 11.7 V/m; Power Drift = -0.199 dB

Peak SAR (extrapolated) = 0.742 W/kg

SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.306 mW/g

Maximum value of SAR (measured) = 0.510 mW/g

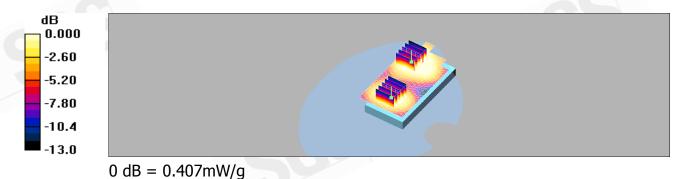
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 11.7 V/m; Power Drift = -0.199 dB

Peak SAR (extrapolated) = 0.548 W/kg

SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.249 mW/g

Maximum value of SAR (measured) = 0.407 mW/g



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# Re Cheek\_CH1312\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.679 mW/g

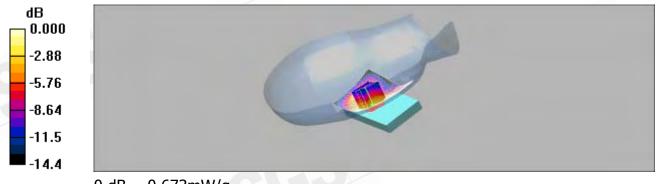
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.8 V/m; Power Drift = 0.159 dB

Peak SAR (extrapolated) = 0.887 W/kg

SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.412 mW/g

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



0 dB = 0.673 mW/g

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# Re Cheek\_CH1412\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $ε_r = 39.3$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RE Cheek/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.550 mW/g

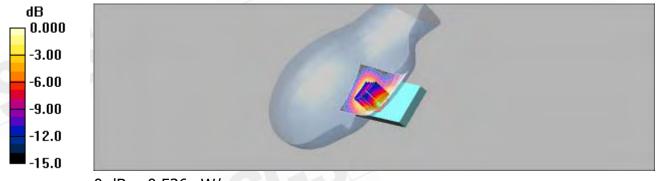
**RE Cheek/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.5 V/m; Power Drift = -0.085 dB

Peak SAR (extrapolated) = 0.717 W/kg

SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.536 mW/g



0 dB = 0.536 mW/g

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# Re Cheek\_CH1513\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

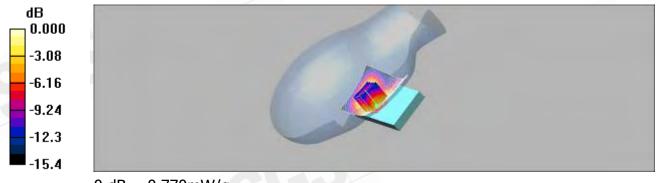
RE Cheek/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.786 mW/g

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

Reference Value = 15.2 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 1.03 W/kgSAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.462 mW/g

Maximum value of SAR (measured) = 0.770 mW/g



0 dB = 0.770 mW/g

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## Le Cheek\_CH1312\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

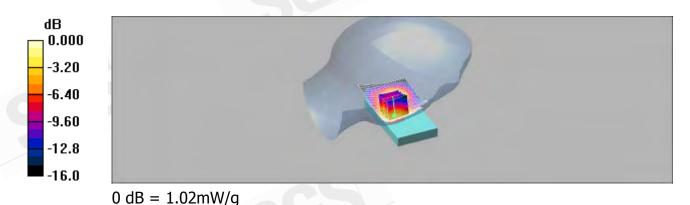
**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.03 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 12.2 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.944 mW/g; SAR(10 g) = 0.611 mW/g

Maximum value of SAR (measured) = 1.02 mW/g



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## Le Cheek\_CH1412\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $ε_r = 39.3$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

• Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

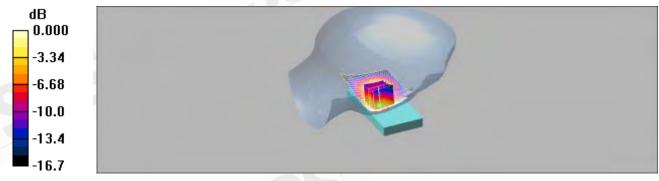
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.820 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.6 V/m; Power Drift = -0.080 dB Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.471 mW/g

Maximum value of SAR (measured) = 0.789 mW/g



0 dB = 0.789 mW/g

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## Le Cheek\_CH1513\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

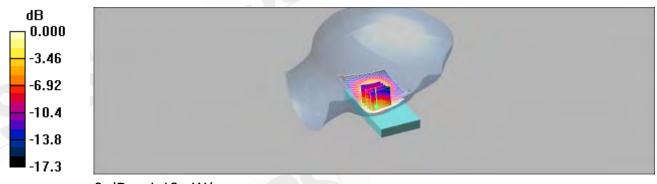
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.20 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 12.6 V/m; Power Drift = -0.128 dB Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.690 mW/gMaximum value of SAR (measured) = 1.19 mW/g



0 dB = 1.19 mW/g

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# Re Tilt\_CH1312\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.468 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 17.3 V/m; Power Drift = 0.054 dB

Peak SAR (extrapolated) = 0.605 W/kg

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.266 mW/g

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



0 dB = 0.442 mW/g

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# Re Tilt\_CH1412\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $\varepsilon_r = 39.3$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.362 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 15.2 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.473 W/kg

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.343 mW/g



0 dB = 0.343 mW/g

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# Re Tilt\_CH1513\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.611 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 19.1 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 0.816 W/kg

SAR(1 g) = 0.539 mW/g; SAR(10 g) = 0.329 mW/g

Maximum value of SAR (measured) = 0.571 mW/g



0 dB = 0.571 mW/g

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# Le Tilt\_CH1312\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

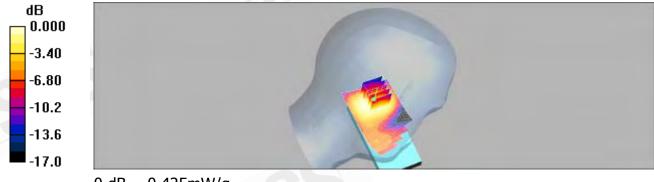
**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.453 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 15.9 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.402 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.425 mW/g



0 dB = 0.425 mW/g

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# Le Tilt\_CH1412\_Slider off

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $ε_r = 39.3$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

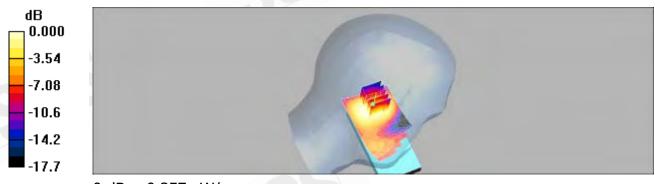
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.385 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 14.8 V/m; Power Drift = -0.023 dB Peak SAR (extrapolated) = 0.462 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.225 mW/g

Maximum value of SAR (measured) = 0.357 mW/g



0 dB = 0.357 mW/g

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# Le Tilt\_CH1513\_Slider off

## DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

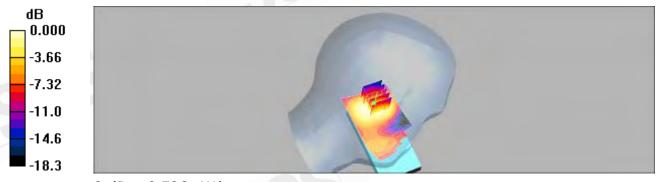
**LET/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.547 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 17.5 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 0.662 W/kg

SAR(1 g) = 0.477 mW/g; SAR(10 g) = 0.316 mW/g

Maximum value of SAR (measured) = 0.506 mW/g



0 dB = 0.506 mW/g

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# Le Cheek\_CH1513\_Slider off\_ repeated with memory card

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

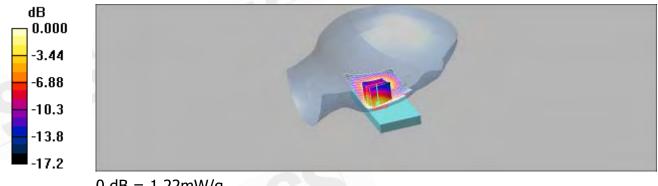
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.24 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 14.6 V/m; Power Drift = 0.021 dB Peak SAR (extrapolated) = 1.63 W/kg SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.707 mW/g

Maximum value of SAR (measured) = 1.22 mW/g



0 dB = 1.22 mW/g

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# Re Cheek\_CH1312\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.316 mW/g

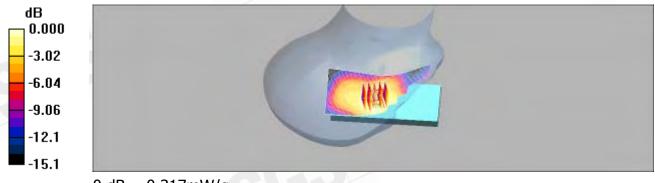
RE Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.32 V/m; Power Drift = 0.151 dB

Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.317 mW/g



0 dB = 0.317 mW/g

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# Date: 2010/9/12

# Re Cheek\_CH1412\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $\varepsilon_r = 39.3$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

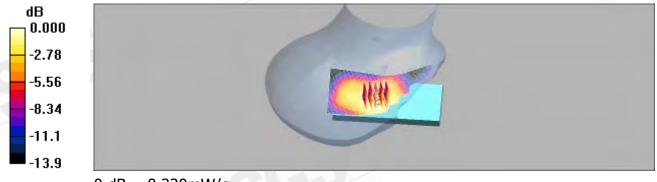
RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.222 mW/g

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

Reference Value = 7.92 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.293 W/kg SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.220 mW/g



0 dB = 0.220 mW/g

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# Re Cheek\_CH1513\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE Cheek/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.376 mW/g

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

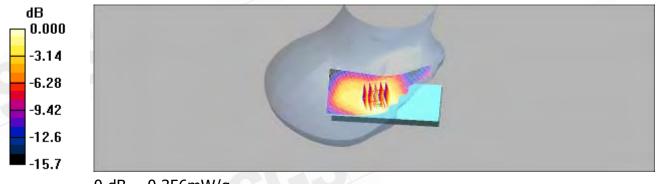
dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.478 W/kg

SAR(1 g) = 0.334 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.356 mW/g



0 dB = 0.356 mW/g

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Date: 2010/9/12

# Le Cheek\_CH1312\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

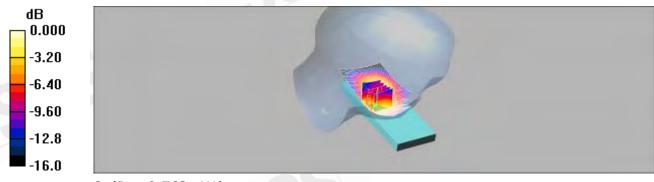
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.575 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.15 V/m; Power Drift = 0.198 dB Peak SAR (extrapolated) = 0.763 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.346 mW/g

Maximum value of SAR (measured) = 0.563 mW/g



0 dB = 0.563 mW/g

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## Le Cheek\_CH1412\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $ε_r = 39.3$ ;  $ρ = 1000 \text{ kg/m}^3$ Phantom section: Left Section

## **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

• Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

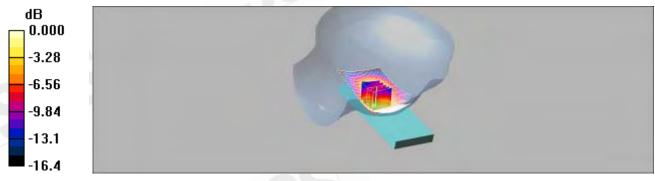
Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LEC/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.398 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 6.96 V/m; Power Drift = -0.068 dB Peak SAR (extrapolated) = 0.520 W/kg

SAR(1 g) = 0.360 mW/g; SAR(10 g) = 0.235 mW/gMaximum value of SAR (measured) = 0.384 mW/g



0 dB = 0.384 mW/g

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## Le Cheek\_CH1513\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

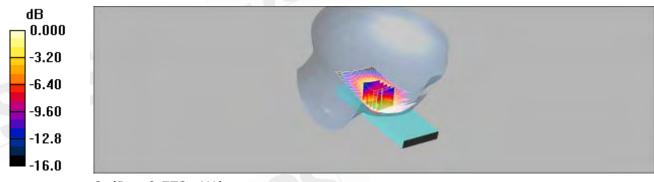
LEC/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.599 mW/g

**LEC/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 8.67 V/m; Power Drift = 0.180 dB

Peak SAR (extrapolated) = 0.759 W/kg

SAR(1 g) = 0.525 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (measured) = 0.572 mW/g



0 dB = 0.572 mW/g

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#### Re Tilt\_CH1312\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.360 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 16.0 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.450 W/kg

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.209 mW/g

Maximum value of SAR (measured) = 0.332 mW/g



0 dB = 0.332 mW/g

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#### Re Tilt\_CH1412\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $\varepsilon_r = 39.3$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Right Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.250 mW/g

**RET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

dz=5mm

Reference Value = 13.2 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.235 mW/g



0 dB = 0.235 mW/g

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#### Re Tilt\_CH1513\_Slider on

DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

#### **DASY4 Configuration:**

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

• Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**RET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.428 mW/g

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

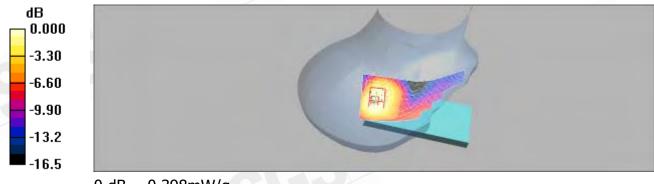
dz=5mm

Reference Value = 17.2 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.542 W/kg

SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.241 mW/g

Maximum value of SAR (measured) = 0.398 mW/g



0 dB = 0.398 mW/g

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# Date: 2010/9/12

#### Le Tilt\_CH1312\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.32$ 

mho/m;  $\varepsilon_r = 39.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

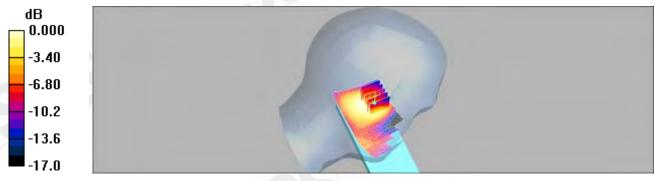
**LET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.393 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 12.8 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 0.492 W/kg

SAR(1 g) = 0.355 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.371 mW/g



0 dB = 0.371 mW/g

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## Le Tilt\_CH1412\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.34$ 

mho/m;  $\varepsilon_r = 39.3$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Left Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.255 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 10.8 V/m; Power Drift = -0.113 dB Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.153 mW/gMaximum value of SAR (measured) = 0.241 mW/g

dΒ 0.000 -3.44-6.88-10.3-13.8 -17.2

0 dB = 0.241 mW/g

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# Le Tilt\_CH1513\_Slider on

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1753 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.2;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

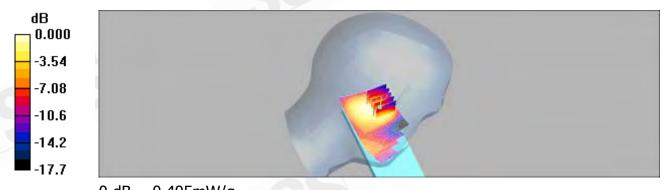
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**LET/Area Scan (51x111x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.419 mW/g

**LET/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 14.0 V/m; Power Drift = 0.023 dB Peak SAR (extrapolated) = 0.543 W/kg

SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.256 mW/g

Maximum value of SAR (measured) = 0.405 mW/g



0 dB = 0.405 mW/g

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#### BODY\_CH1312

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1712.4 MHz;  $\sigma = 1.42$ 

mho/m;  $\varepsilon_r = 52.4$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.63, 4.63, 4.63); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.08 mW/g

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

Reference Value = 16.3 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.984 mW/g; SAR(10 g) = 0.600 mW/g

Maximum value of SAR (measured) = 1.06 mW/g

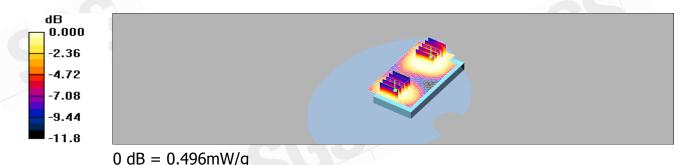
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 16.3 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.657 W/kg

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.321 mW/g

Maximum value of SAR (measured) = 0.496 mW/g



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#### BODY\_CH1412

#### DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz;  $\sigma = 1.43$ 

mho/m;  $\varepsilon_r = 52.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.63, 4.63, 4.63); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.770 mW/g

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

Reference Value = 14.8 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.431 mW/g

Maximum value of SAR (measured) = 0.776 mW/g

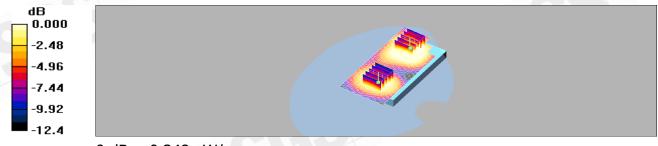
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 14.8 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 0.464 W/kg

SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.221 mW/g

Maximum value of SAR (measured) = 0.348 mW/g



0 dB = 0.348 mW/q

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#### BODY\_CH1513

DUT: V02S002;

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1753 MHz;  $\sigma = 1.45$  mho/m;  $\epsilon_r = 51.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Probe: ES3DV3 - SN3172; ConvF(4.63, 4.63, 4.63); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.982 mW/g

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

Reference Value = 17.3 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.901 mW/g; SAR(10 g) = 0.543 mW/g

Maximum value of SAR (measured) = 0.979 mW/g

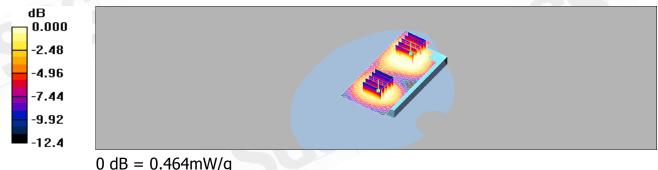
BODY/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm,

Reference Value = 17.3 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 0.621 W/kg

SAR(1 g) = 0.437 mW/g; SAR(10 g) = 0.296 mW/g

Maximum value of SAR (measured) = 0.464 mW/g



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# BODY\_WLAN802.11 b\_CH1

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2412 MHz;  $\sigma = 1.97$  mho/m;  $\varepsilon_r = 53.5$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.133 mW/g

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

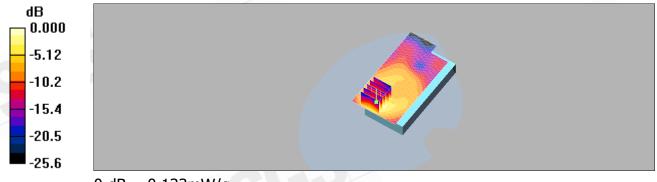
dz=5mm

Reference Value = 5.89 V/m; Power Drift = -0.106 dB

Peak SAR (extrapolated) = 0.235 W/kg

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.059 mW/g

Maximum value of SAR (measured) = 0.133 mW/g



0 dB = 0.133 mW/g

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# BODY\_WLAN802.11 b\_CH6

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2437 MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.168 mW/g

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

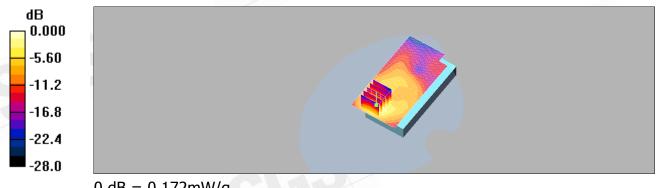
dz=5mm

Reference Value = 6.82 V/m; Power Drift = -0.001 dB

Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.075 mW/g

Maximum value of SAR (measured) = 0.172 mW/g



0 dB = 0.172 mW/g

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#### BODY\_WLAN802.11 b\_CH11

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.187 mW/g

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

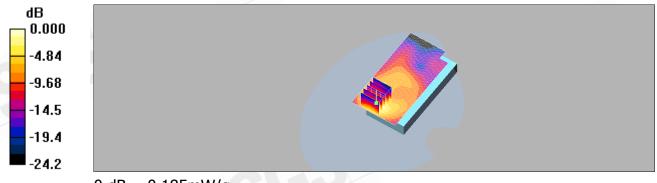
dz=5mm

Reference Value = 6.82 V/m; Power Drift = 0.170 dB

Peak SAR (extrapolated) = 0.325 W/kg

SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.079 mW/g

Maximum value of SAR (measured) = 0.185 mW/g



0 dB = 0.185 mW/g

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# BODY\_WLAN802.11 b\_CH11\_repeated for EUT front to phantom

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.032 mW/g

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

dz=5mm

Reference Value = 3.10 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.058 W/kg

SAR(1 g) = 0.030 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.032 mW/g



0 dB = 0.032 mW/g

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#### BODY\_WLAN802.11 b\_CH11\_repeated with headset

DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.171 mW/g

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

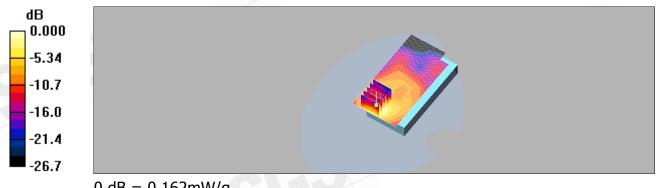
dz=5mm

Reference Value = 6.84 V/m; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.296 W/kg

SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.071 mW/g

Maximum value of SAR (measured) = 0.162 mW/g



0 dB = 0.162 mW/g

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## Date: 2010/9/15

## BODY\_WLAN802.11 b\_CH11\_repeated with Bluetooth active

DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.129 mW/g

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

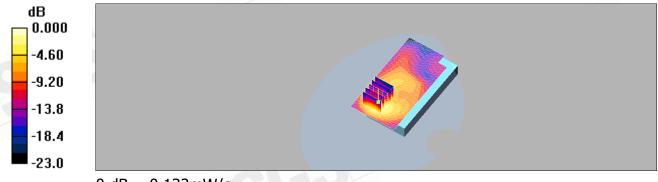
dz=5mm

Reference Value = 6.24 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.132 mW/g



0 dB = 0.132 mW/g

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## BODY\_WLAN802.11 b\_CH11\_repeated with Memory card

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.150 mW/g

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

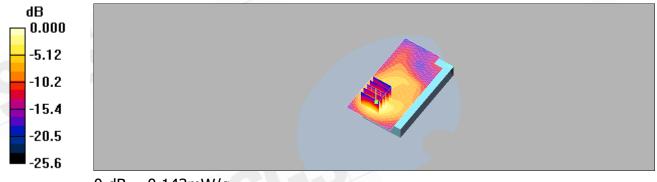
dz=5mm

Reference Value = 5.91 V/m; Power Drift = 0.183 dB

Peak SAR (extrapolated) = 0.263 W/kg

SAR(1 g) = 0.132 mW/g; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.143 mW/g



0 dB = 0.143 mW/g

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# BODY\_WLAN802.11 g\_CH1

DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2412 MHz;  $\sigma = 1.97$  mho/m;  $\varepsilon_r = 53.5$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.105 mW/g

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

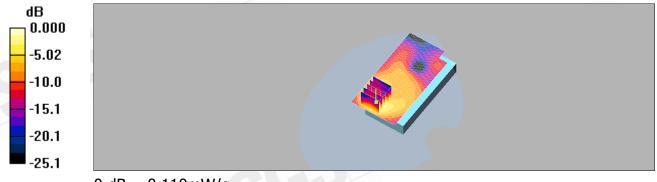
dz=5mm

Reference Value = 5.37 V/m; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 0.193 W/kg

SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.110 mW/g



0 dB = 0.110 mW/g

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## BODY\_WLAN802.11 g\_CH6

#### DUT: V02S002:

Communication System: Wireless LAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2437 MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

BODY/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.110 mW/g

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

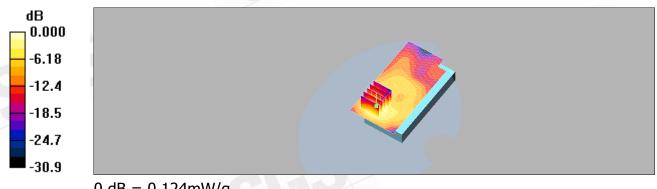
dz=5mm

Reference Value = 5.22 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.124 mW/g



0 dB = 0.124 mW/g

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## BODY\_WLAN802.11 g\_CH11

#### DUT: V02S002;

Communication System: Wireless LAN; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Muscle 2450 Medium parameters used: f = 2462 MHz;  $\sigma = 2.04$  mho/m;  $\epsilon_r = 53.4$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**BODY/Area Scan (51x101x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.141 mW/g

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

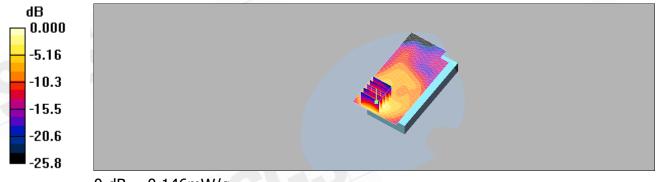
dz=5mm

Reference Value = 5.89 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 0.257 W/kg

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.062 mW/g

Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146 mW/g

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# 5. System Verification

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Date: 2010/9/12

#### DUT: Dipole 835 MHz;

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

Medium: Head 900 MHz Medium parameters used: f = 835 MHz;  $\sigma = 0.903$  mho/m;  $\varepsilon_r = 42$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.85, 5.85, 5.85); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.55 mW/g

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

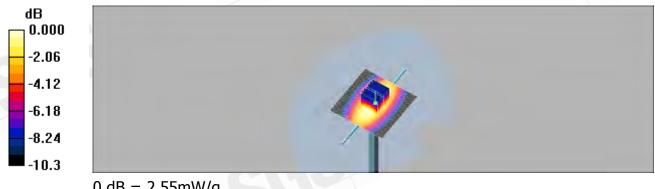
dy=5mm, dz=5mm

Reference Value = 53.0 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.55 mW/g



0 dB = 2.55 mW/q

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#### DUT: Dipole 835 MHz;

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

Medium: Muscle 900 MHz Medium parameters used: f = 835 MHz;  $\sigma = 0.974$  mho/m;  $\epsilon_r =$ 

53.1;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.84 mW/g

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

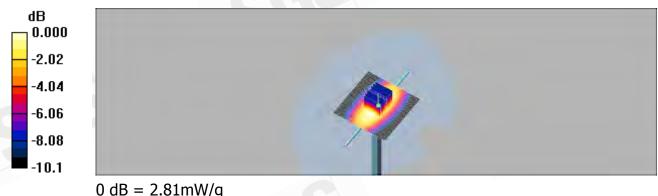
dy=5mm, dz=5mm

Reference Value = 53.8 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 3.83 W/kg

SAR(1 g) = 2.61 mW/g; SAR(10 g) = 1.73 mW/g

Maximum value of SAR (measured) = 2.81 mW/g



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#### DUT: Dipole 1750 MHz;

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: Head 1800 MHz Medium parameters used: f = 1750 MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r =$ 

39.3;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(5.04, 5.04, 5.04); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 10.2 mW/g

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

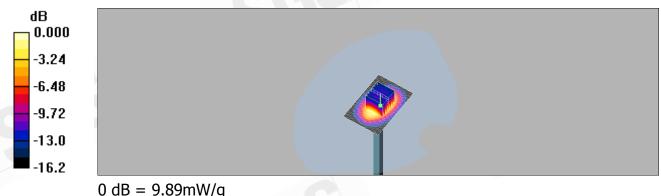
dy=5mm, dz=5mm

Reference Value = 84.6 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 8.88 mW/g; SAR(10 g) = 4.72 mW/g

Maximum value of SAR (measured) = 9.89 mW/g



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#### DUT: Dipole 1750 MHz;

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1750 MHz;  $\sigma = 1.45$  mho/m;  $\epsilon_r = 51.9$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.63, 4.63, 4.63); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW /Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 10.9 mW/g

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

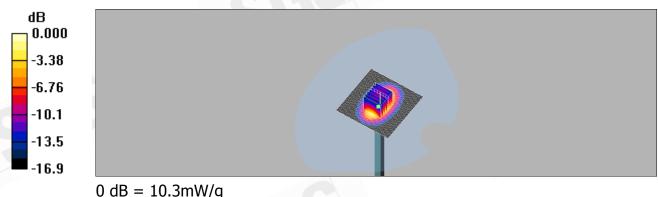
dy=5mm, dz=5mm

Reference Value = 84.6 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 9.18 mW/g; SAR(10 g) = 4.91 mW/g

Maximum value of SAR (measured) = 10.3 mW/g



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#### DUT: Dipole 1900 MHz;

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

Medium: Head 1900MHz Medium parameters used: f = 1900 MHz;  $\sigma = 1.45$  mho/m;  $\epsilon_r = 39$ ;

 $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.89, 4.89, 4.89); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mw/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 13.3 mW/g

Pin=250mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 88.5 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 20.2 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.13 mW/g

Maximum value of SAR (measured) = 11.4 mW/g



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Date: 2010/9/10

#### DUT: Dipole 1900 MHz;

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

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1900 MHz;  $\sigma = 1.6$ 

mho/m;  $\varepsilon_r = 53.2$ ;  $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 14.2 mW/g

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

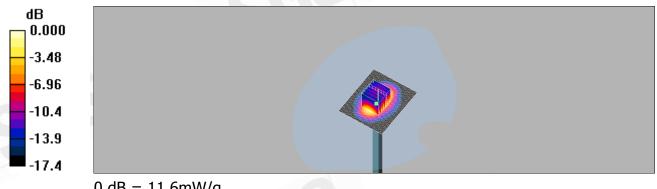
dy=5mm, dz=5mm

Reference Value = 85.6 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.42 mW/g

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



0 dB = 11.6 mW/q

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#### DUT: Dipole 2450 MHz;

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M 2450 Medium parameters used: f = 2450 MHz;  $\sigma = 2.03$  mho/m;  $\varepsilon_r = 53.4$ ;  $\rho =$ 

 $1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### **DASY4** Configuration:

Probe: ES3DV3 - SN3172; ConvF(4.11, 4.11, 4.11); Calibrated: 2010/5/21

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2010/8/18

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 17.9 mW/g

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

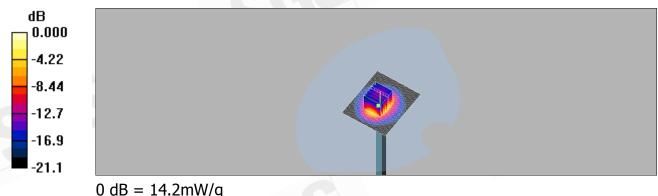
dy=5mm, dz=5mm

Reference Value = 83.1 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 23.6 W/kg

SAR(1 g) = 12.9 mW/g; SAR(10 g) = 5.96 mW/g

Maximum value of SAR (measured) = 14.2 mW/g



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# 6. DAE & Probe Calibration certificate

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





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Certificate No: DAE4-547\_Aug10

SGS-TW **CALIBRATION CERTIFICATE** DAE4 - SD 000 D04 BJ - SN: 547 Object QA CAL-06.v22 Calibration procedure(s) Calibration procedure for the data acquisition electronics (DAE) August 18, 2010 Calibration date: 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) ID# Cal Date (Certificate No.) Scheduled Calibration **Primary Standards** Keithley Multimeter Type 2001 SN: 0810278 Oct-10 1-Oct-09 (No: 9055) Secondary Standards Check Date (in house) Scheduled Check Calibrator Box V1.1 SE UMS 006 AB 1004 07-Jun-10 (in house check) In house check: Jun-11 Function Signature Calibrated by: Dominique Steffen Technician Fin Bomholt R&D Director Approved by: Balillio Issued: August 18, 2010 This calibration certificate shall not be reproduced except in full without written approval of the laboratory

Certificate No: DAE4-547\_Aug10

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SGS-TW (Auden)

Accreditation No.: SCS 108 Certificate No: ES3-3172 May10

CALIBRATIO	N CERTIFICATE
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Object ES3DV3 - SN:3172

QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2 Calibration procedure(s)

Calibration procedure for dosimetric E-field probes

May 21, 2010 Calibration date

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%.

Power sensor E4412A MY41495277 1-Apr-10 (No. 217-01136) Apr-11 Power sensor E4412A MY41498087 1-Apr-10 (No. 217-01136) Apr-11 Reference 3 dB Attenuator SN: S5054 (3c) 30-Mar-10 (No. 217-01159) Mar-11 Reference 30 dB Attenuator SN: S5058 (20b) 30-Mar-10 (No. 217-01161) Mar-11 Reference 30 dB Attenuator SN: S5129 (30b) 30-Mar-10 (No. 217-01160) Mar-11 Reference Probe ES3DV2 SN: 3013 30-Dec-09 (No. E33-3013_Dec09) Dec-10 DAE4 SN: 660 20-Apr-10 (No. DAE4-660_Apr10) Apr-11  Secondary Standards ID # Check Date (in house) Scheduled Check RF generator HP 8648C US3642U01700 4-Aug-99 (in house check Oct-09) In house check: Oct- Network Analyzer HP 8753E US37390585 18-Oct-01 (in house check Oct-09)  Name Function Signature	Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power sensor E4412A         MY41498087         1-Apr-10 (No. 217-01136)         Apr-11           Reference 3 dB Attenuator         SN: S5054 (3c)         30-Mar-10 (No. 217-01159)         Mar-11           Reference 20 dB Attenuator         SN: S5056 (20b)         30-Mar-10 (No. 217-01161)         Mar-11           Reference 30 dB Attenuator         SN: S5129 (30b)         30-Mar-10 (No. 217-01160)         Mar-11           Reference Probe ES3DV2         SN: 3013         30-Dec-09 (No. ES3-3013_Dec09)         Dec-10           DAE4         SN: 660         20-Apr-10 (No. DAE4-660_Apr10)         Apr-11           Secondary Standards         ID #         Check Date (in house)         Scheduled Check           RF generator HP 8648C         US3642U01700         4-Aug-99 (in house check Oct-09)         In house check: Oct-Network Analyzer HP 8753E           Name         Function         Signature	Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
SN: S5054 (3c)   30-Mar-10 (No. 217-01159)   Mar-11	Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
SN: S5086 (20b)   30-Mar-10 (No. 217-01161)   Mar-11	Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Name   Name	Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Seference Probe ES3DV2	Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
DAE4         SN: 660         20-Apr-10 (No. DAE4-660_Apr10)         Apr-11           Secondary Standards         ID #         Check Date (in house)         Scheduled Check           RF generator HP 8648C         US3642U01700         4-Aug-99 (in house check Oct-09)         In house check: Oct-Network Analyzer HP 8753E           US37390585         18-Oct-01 (in house check Oct-09)         In house check: Oct-Network Analyzer HP 8753E           Name         Function         Signature	Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Secondary Standards ID# Check Date (in house) Scheduled Check RF generator HP 8648C US3642U01700 4-Aug-99 (in house check Oct-09) In house check: Oct- Network Analyzer HP 8753E US37390585 18-Oct-01 (in house check Oct-09) In house check: Oct- Name Function Signature	Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
RF generator HP 8648C         US3642U01700         4-Aug-99 (in house check Oct-09)         In house check: Oct-09           Network Analyzer HP 8753E         US37390585         18-Oct-01 (in house check Oct-09)         In house check: Oct-01 (in house check Oct-09)           Name         Function         Signature	DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11
Network Analyzer HP 8753E US37390585 18-Oct-01 (in house check Oct-09) In house check: Oct1  Name Function Signature	Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Name Function Signature	RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
	Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10
Calibrated by: Katja Pokovic Technical Manager		Name	Function	Signature
y / //	Calibrated by:	Katja Pokovic	Technical Manager	28 Kl
				X /A
Approved by: Niels Kuster Quality Manager	Approved by:	Niels Kuster	Quality Manager	1/655

Certificate No: ES3-3172\_May10

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#### Glossary:

tissue simulating liquid NORMx,y,z sensitivity in free space sensitivity in TSL / NORMx,y,z ConvF DCP diode compression point

crest factor (1/duty\_cycle) of the RF signal modulation dependent linearization parameters CF A. B. C

Polarization φ φ rotation around probe axis

Polarization 9 9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

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

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

Absorption Rate (SAR) if the Futural Fleat Month Vision Continuous Techniques", December 2003 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  $\vartheta=0$  (f  $\leq 900$  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 with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- 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
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset. The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

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ES3DV3 SN:3172

May 21, 2010

# Probe ES3DV3

SN:3172

Manufactured: January 23, 2008 Last calibrated: May 27, 2009 Recalibrated: May 21, 2010

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

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ES3DV3 SN:3172

May 21, 2010

#### DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

#### **Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μV/(V/m)²) <sup>A</sup>	1.37	1.19	0.97	± 10.1%
DCP (mV) <sup>B</sup>	93.9	92.5	93.2	

#### **Modulation Calibration Parameters**

UID	Communication System Name	PAR		A dB	B dBuV	С	VR mV	Unc <sup>E</sup> (k=2)
10000	cw	0.00	X	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

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%.

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A The uncertainties of NormX,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>&</sup>lt;sup>8</sup> Numerical linearization parameter, uncertainty not required.

E Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.



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May 21, 2010

#### DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] <sup>C</sup>	Permittivity	Conductivity	ConvF X C	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	$0.90 \pm 5\%$	5.85	5.85	5.85	0.76	1.14 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	$0.97 \pm 5\%$	5.75	5.75	5.75	0.87	1.08 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	$1.37 \pm 5\%$	5.04	5.04	5.04	0.31	1.82 ± 11.0%
1900	± 50 / ± 100	$40.0 \pm 5\%$	$1.40 \pm 5\%$	4.89	4.89	4.89	0.50	1.46 ± 11.0%
2000	± 50 / ± 100	40.0 ± 5%	$1.40 \pm 5\%$	4.73	4.73	4.73	0.49	1.44 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.32	4.32	4.32	0.42	1.70 ± 11.0%

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.

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ES3DV3 SN:3172

May 21, 2010

#### DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] <sup>C</sup>	Permittivity	Conductivity	ConvF X Co	nvFY C	onvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.84	5.84	5.84	0.81	1.19 ± 11.0%
900	$\pm 50 / \pm 100$	$55.0 \pm 5\%$	$1.05 \pm 5\%$	5.75	5.75	5.75	0.73	1.24 ± 11.0%
1750	± 50 / ± 100	$53.4 \pm 5\%$	$1.49 \pm 5\%$	4.63	4.63	4.63	0.39	1.75 ± 11.0%
1900	± 50 / ± 100	$53.3 \pm 5\%$	1.52 ± 5%	4.45	4.45	4.45	0.32	2.36 ± 11.0%
2000	± 50 / ± 100	$53.3 \pm 5\%$	1.52 ± 5%	4.47	4.47	4.47	0.32	2.44 ± 11.0%
2450	± 50 / ± 100	$52.7 \pm 5\%$	1.95 ± 5%	4.11	4.11	4.11	0.82	1.17 ± 11.0%
2600	± 50 / ± 100	$52.5 \pm 5\%$	$2.16 \pm 5\%$	3.99	3.99	3.99	0.95	1.09 ± 11.0%
3500	± 50 / ± 100	$51.3 \pm 5\%$	3.31 ± 5%	3.28	3.28	3.28	1.00	1.28 ± 13.1%

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

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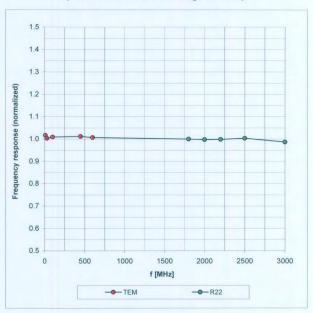


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#### Frequency Response of E-Field

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



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

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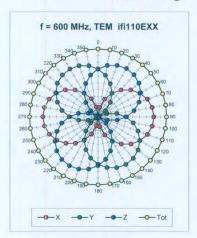
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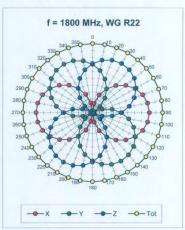


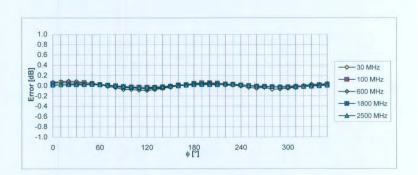
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#### Receiving Pattern ( $\phi$ ), $\vartheta = 0^{\circ}$







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

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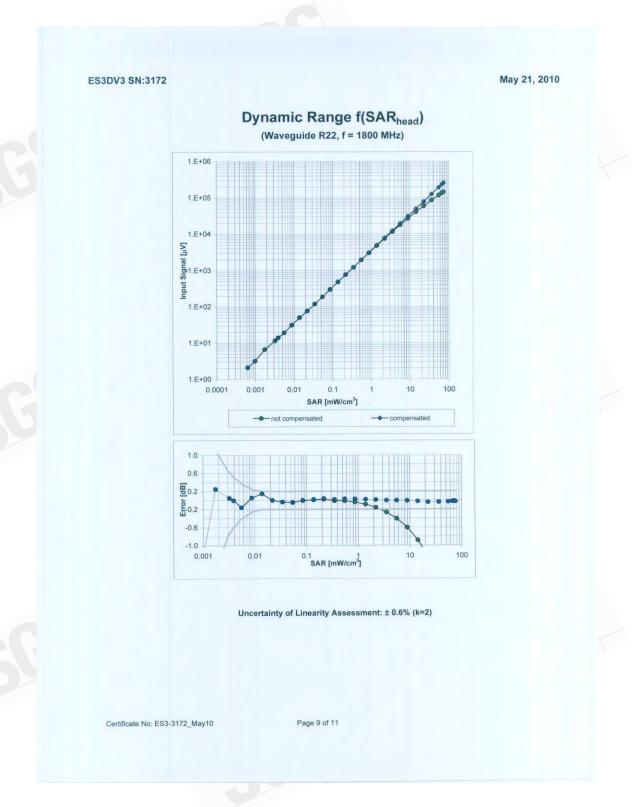
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