

SAR TEST REPORT

Equipment Under Test :	GSM 850/1900MHz mobile phone with BT
Model No. :	C7Ca
Market name:	OT-C701a
FCC ID :	RAD054
Applicant :	T&A Mobile phones
Address of Applicant :	4/F, No.2966, Jinke Rd, Zhangjiang High-Tech Park, Pudong Shanghai 201203. P. R. China
Date of Receipt :	2007.03.8
Date of Test :	2007.03.15 – 200.04.10
Date of Issue :	2007.04.12

Standards:

**FCC OET Bulletin 65 supplement C,
ANSI/IEEE C95.1, C95.3, IEEE 1528-2003**

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

Remarks:

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

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS-CSTC Shanghai GSM Lab or testing done by SGS-CSTC Shanghai GSM Lab must approve SGS Shanghai GSM Lab in connection with distribution or use of the product described in this report in writing.

Tested by :

Date :

2007.04.12

Approved by :

Date :

2007.04.12

Contents

1. General Information	6
1.1 Test Laboratory	6
1.2 Details of Applicant.....	6
1.3 Description of EUT(s)	6
1.4 Test Environment	7
1.5 Operation Configuration.....	7
1.6 The SAR Measurement System	7
1.7 SAR System Verification	9
1.8 Tissue Simulant Fluid for the Frequency Band 850MHz and 1900MHZ.....	10
1.9 Test Standards and Limits.....	11
2. Summary of Results.....	13
3. Instruments List	16
4. Measurements	17
4.1LeftHandSide-Cheek-GSM850-Middle	17
GSM850-LeftHandSide-Cheek-Middle	17
4.2LeftHandSide-Tilt-GSM850-Middle	18
GSM850-LeftHandSide-Tilt-Middle	18
4.3LeftHandSide-Cheek-GSM850-Low	20
GSM850-LeftHandSide-Cheek-Low	20
4.4LeftHandSide-Cheek-GSM850-High.....	22
GSM850-LeftHandSide-Cheek-High	22
4.5LeftHandSide-GSM850-Maximum Value-SD.....	24
GSM850-LeftHandSide-Cheek-High+SD	24
4.6LeftHandSide-GSM850-Maximum Value-BT.....	26
GSM850-LeftHandSide-Cheek-High+BT	26
4.7RightHandSide-Cheek-GSM850-Middle.....	28
GSM850-RightHandSide-Cheek-Middle	28
4.8RightHandSide-Tilt-GSM850-Middle	30
GSM850-RightHandSide-Tilt-Middle	30
4.9RightHandSide-Cheek-GSM850-Low.....	32
GSM850-RightHandSide-Cheek-Low.....	32
4.10RightHandSide-Cheek-GSM850-High	34
GSM850-RightHandSide-Cheek-High	34

4.11RightHandSide-GSM850-Maximum Value-SD	36
GSM850-RightHandSide-Cheek-High+SD.....	36
4.12RightHandSide-GSM850-Maximum Value-BT	38
GSM850-RightHandSide-Cheek-High+BT.....	38
4.13Body-Worn-GSM850-GPRS-Low	40
GSM850-Body-Worn-GPRS-Low-2.0cm.....	40
4.14Body-Worn-GSM850-GPRS-Middle.....	42
GSM850-Body-Worn-GPRS-Middle-2.0cm	42
4.15Body-Worn-GSM850-GPRS-High	44
GSM850-Body-Worn-GPRS-High-2.0cm	44
4.16Body-Worn-GSM850-Maximum Value-SD	46
GSM850-Body-Worn-GPRS-Middle-2.0cm+SD	46
4.17Body-Worn-GSM850-Maximum Value-BT.....	48
GSM850-Body-Worn-GPRS-Middle-2.0cm+BT	48
4.18LeftHandSide-Cheek-PCS1900-Middle	50
PCS1900-LeftHandSide-Cheek-Middle	50
4.19LeftHandSide-Tilt-PCS1900-Middle.....	52
PCS1900-LeftHandSide-Tilt-Middle	52
4.20LeftHandSide-Cheek-PCS1900-Low	54
PCS1900-LeftHandSide-Cheek-Low	54
4.21LeftHandSide-Cheek-PCS1900-High.....	56
PCS1900-LeftHandSide-Cheek-High.....	56
4.22LeftHandSide-PCS1900-Maximum Value-SD	58
PCS1900-LeftHandSide-Cheek-High+SD	58
4.23LeftHandSide-PCS1900-Maximum Value-BT	60
PCS1900-LeftHandSide-Cheek-High+BT	60
4.24RightHandSide-Cheek-PCS1900-Middle	62
PCS1900-RightHandSide-Cheek-Middle	62
4.25RightHandSide-Tilt-PCS1900-Middle	64
PCS1900-RightHandSide-Tilt-Middle.....	64
4.26RightHandSide-Cheek-PCS1900-Low.....	66
PCS1900-RightHandSide-Cheek-Low	66
4.27RightHandSide-Cheek-PCS1900-High	68
PCS1900-RightHandSide-Cheek-High.....	68
4.28RightHandSide-PCS1900-Maximum Value-SD	70

PCS1900-RightHandSide-Cheek-High+SD	70
4.29RightHandSide-PCS1900-Maximum Value-BT	72
PCS1900-RightHandSide-Cheek-High+BT	72
4.30Body-Worn-PCS1900-GPRS-Low.....	74
PCS1900-Body-Worn-GPRS-Low-2.0cm	74
4.31Body-Worn-PCS1900-GPRS-Middle	76
PCS1900-Body-Worn-GPRS-Middle-2.0cm.....	76
4.32Body-Worn-PCS1900-GPRS-High.....	78
PCS1900-Body-Worn-GPRS-High-2.0cm	78
4.33Body-Worn-PCS1900-Maximum Value-SD	80
PCS1900-Body-Worn-GPRS-Middle-2.0cm+SD.....	80
4.34Body-Worn-PCS1900-Maximum Value-BT	82
PCS1900-Body-Worn-GPRS-Middle-2.0cm+BT.....	82
Additional Testing for the Battery-T5000572AAAA-700mAh	84
4.35LeftHandSide-Cheek-GSM850-High+BT	84
GSM850-LeftHandSide-Cheek-High+BT(700mAh)	84
4.36RightHandSide-Cheek-GSM850-High	86
GSM850-RightHandSide-Cheek-High(700mAh)	86
4.37Body-Worn-GSM850-GPRS-Middle.....	88
GSM850-Body-Worn-GPRS-Middle-2.0cm(700mAh).....	88
4.38LeftHandSide-Cheek-PCS1900-High+SD	90
PCS1900-LeftHandSide-Cheek-High+SD(700mAh).....	90
4.39RightHandSide-Cheek-PCS1900-High	92
PCS1900-RightHandSide-Cheek-High(700mAh)	92
4.40Body-Worn-PCS1900-GPRS-Middle+SD	94
PCS1900-Body-Worn-GPRS-Middle-2.0cm+SD(700mAh).....	94
Appendix	97
1. Photographs of Test Setup	97
2. Photographs of the EUT	100
3. Photographs of the battery	100
4. Photograph of the charger.....	101
5. Probe Calibration certificate	102
6. DAE Calibration certification	111
7. Dipole Calibration certification	116
8. Uncertainty analysis.....	134

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 5 of 135

9. Phantom description..... 135

1. General Information

1.1 Test Laboratory

GSM Lab

SGS-CSTC Standards Technical Services Co.Ltd Shanghai Branch
9F,the 3rd Building, No.889, Yishan Rd, Xuhui District, Shanghai, China

Zip code: 200233

Telephone: +86 (0) 21 6495 1616

Fax: +86 (0) 21 5450 0149

Internet: <http://www.cn.sgs.com>

1.2 Details of Applicant

Name: T&A Mobile phones

Address: 4/F, No.2966, Jinke Rd, Zhangjiang High-Tech Park,
Pudong Shanghai 201203. P. R. China

1.3 Description of EUT(s)

Brand name	ALCATEL	
Model No.	C7Ca	
Market Name	OT-C701a	
Serial No.	IMEI: 011073000003040	
Sample Status	Production	
Battery Type	Lithium-Ion	T5001418AAAA - 750mAh T5000572AAAA - 700mAh
Antenna Type	Inner Antenna	
Operation Mode	GSM850/PCS1900	
Modulation Mode	GMSK	
Frequency range	GSM850	Tx: 824~849 MHz Rx: 869~894 MHz
		Tx: 1850~1910 MHz Rx: 1930~1990 MHz
Maximum RF Conducted Power	GSM850: 32.2dBm, PCS1900: 29.2dBm	
GPRS	Multi-Slot Class 10 uplink 2TS	

1.4 Test Environment

Ambient temperature: 22.0° C

Tissue Simulating Liquid: 22° C

Relative Humidity: 45%~55%

1.5 Operation Configuration

Configuration 1: GSM 850, LeftHandSide Cheek & 15 ° Tilt Position

Configuration 2: GSM 850, RightHandSide Cheek & 15 ° Tilt Position

Configuration 3: GSM 850, GPRS,BodyWorn (2.0 cm between EUT and phantom)

Configuration 4: PCS 1900, LeftHandSide Cheek & 15 ° Tilt Position

Configuration 5: PCS 1900, RightHandSide Cheek & 15 ° Tilt Position

Configuration 6: PCS 1900, GPRS,BodyWorn (2.0 cm between EUT and phantom)

1.6 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 3088 E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|E_i|^2) / \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant.

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

- A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software. An arm extension for accommodation the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.

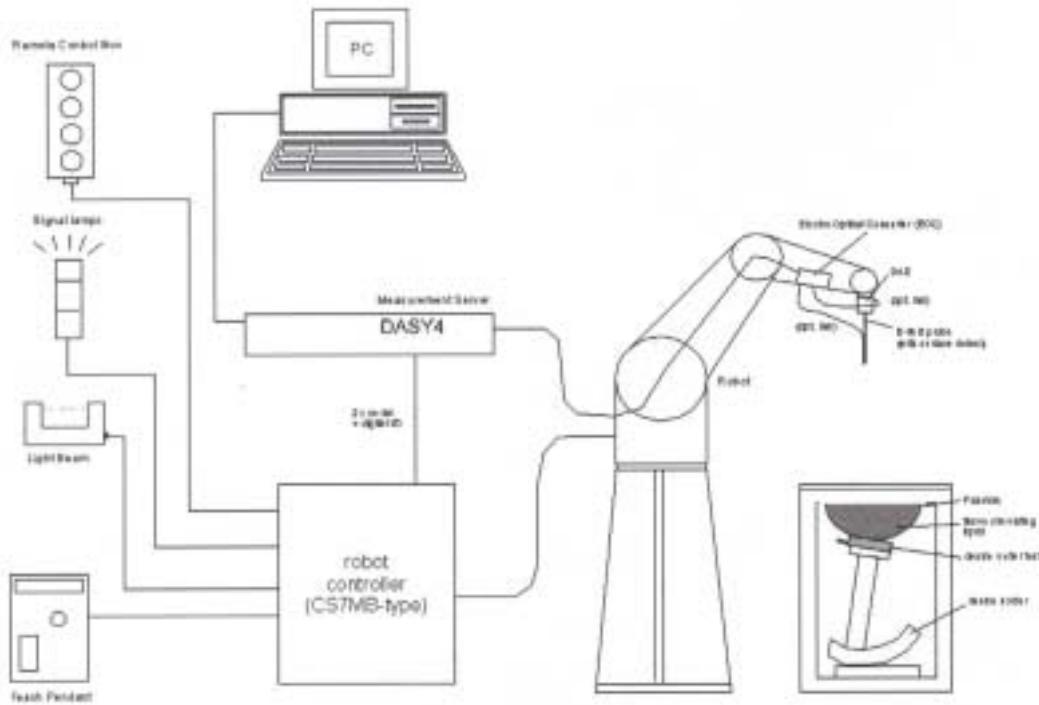


Fig. a SAR System Configuration

- 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.
- 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, right-hand and body-worn usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.

- Validation dipole kits allowing to validating the proper functioning of the system.

1.7 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 +/- 10% from the target SAR values. These tests were done at 900MHz and 1900MHz. 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 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the ambient temperature of the laboratory was in the range 22°C, the relative humidity was in the range 60% 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.

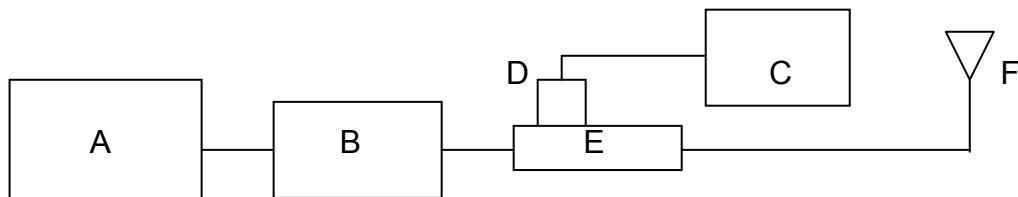


Fig. b the microwave circuit arrangement used for SAR system verification

- Agilent Model E4438C Signal Generator
- Mini-Circuit Model ZHL-42 Preamplifier
- Agilent Model E4416A Power Meter
- Agilent Model 8481H Power Sensor
- HT CP6100 20N Dual directional coupler
- Reference dipole antenna

Validation Kit	Frequency MHz	Target SAR 1g (250mW)	Target SAR 10g (250mW)	Measured SAR 1g	Measured SAR 10g	Measured Date
D900V2 SN184	900 Head	2.72	1.75	2.83	1.81	2007-03-23
D900V2 SN184	900 Head	2.72	1.75	2.81	1.79	2007-04-10
D900V2 SN184	900 Body	2.75	1.79	2.69	1.72	2007-03-16
D900V2 SN184	900 Body	2.75	1.79	2.71	1.74	2007-04-10
D1900V2 SN5d028	1900 Head	9.36	4.96	9.12	4.83	2007-03-22
				9.15	4.86	2007-03-27
D1900V2 SN5d028	1900 Head	9.36	4.96	9.22	4.85	2007-04-10
D1900V2 SN5d028	1900 Body	9.5	5.05	9.61	5.09	2007-03-19
D1900V2 SN5d028	1900 Body	9.5	5.05	9.64	5.11	2007-04-10

Table 1. Result System Validation

1.8 Tissue Simulant Fluid for the Frequency Band 850MHz and 1900MHz

The dielectric properties for this body-simulant fluid were measured by using the HP Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with Agilent E5071B Network Analyzer (300 KHz-8500 MHz). The Conductivity (σ) and Permittivity (ρ) are listed in Table 2. For the SAR measurement given in this report. The temperature variation of the Tissue Simulant Fluid was 22°C.

Frequency (MHz)	Tissue Type	Limit/Measured	Permittivity (ρ)	Conductivity (σ)	Simulated Tissue Temp (°C)
-----------------	-------------	----------------	-------------------------	---------------------------	----------------------------

850	Head	Recommended Limit	41.5±5%	0.90±5%	20-24
		Measured, 2007-03-23	41.8	0.87	22.5
		Measured, 2007-04-09	41.7	0.86	22.8
	Body	Recommended Limit	55.2±5%	0.97±5%	20-24
		Measured, 2007-03-16	56.2	0.939	22.5
		Measured, 2007-04-10	55.8	0.941	22.1
	Head	Recommended Limit	40.0±5%	1.40±5%	20-24
		Measured, 2007-03-22	39.15	1.445	22.3
		Measured, 2007-03-27	39.17	1.441	22.1
		Measured, 2007-04-09	39.18	1.438	22.4
	Body	Recommended Limit	53.3±5%	1.52±5%	20-24
		Measured, 2007-03-19	51.74	1.566	22.6
		Measured, 2007-04-09	52.68	1.557	21.7

Table 2. Dielectric parameters for the Frequency Band 850MHz&1900MHZ

1.9 Test Standards and Limits

According to FCC 47 CFR §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, 3KHz to 300GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical & Electronics Engineers, Inc., New York, New York 10071.

Human Exposure	Uncontrolled Environment General Population
Spatial Peak SAR (Brain)	1.60 mW/g (averaged over a mass of 1g)

Table 3. RF Exposure Limits

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 12 of 135

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.

2. Summary of Results

GSM850 SAR (T5001418AAAA - 750mAh)

Mode	Test Configuration		SAR, Averaged over 1g(W/kg)			Temperature ()	Verdict
	Channel/Power(dBm)		Low/32.2	Middle/32.2	High/32.1		
GSM850	Left	Cheek	0.269	0.414	0.582	22	Pass
		Tilt	-	0.192	-	22	Pass
		Worst Case With SD	-	-	0.600	22	Pass
		Worst Case With BT	-	-	0.750	22	Pass
	Right	Cheek	0.449	0.588	0.780	22	Pass
		Tilt	-	0.237	-	22	Pass
		Worst Case With SD	-	-	0.759	22	Pass
		Worst Case With BT	-	-	0.747	22	Pass
	Body	GPRS	0.786	1.07	0.998	22	Pass
		Worst Case With SD	-	0.975	-	22	Pass
		Worst Case With BT	-	0.989	-	22	Pass

PCS1900 SAR(T5001418AAAA - 750mAh)

Mode	Test Configuration		SAR, Averaged over 1g(W/kg)			Temperature ()	Verdict
	Channel/Power(dBm)		Low/29.2	Middle/29.2	High/29.3		
PCS1900	Left	Cheek	0.595	0.758	0.807	22	Pass
		Tilt	-	0.208	-	22	Pass
		Worst Case With SD	-	-	0.825	22	Pass
		Worst Case With BT	-	-	0.748	22	Pass
	Right	Cheek	0.604	0.729	0.761	22	Pass
		Tilt	-	0.243	-	22	Pass

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 14 of 135

		Worst Case With SD	-	-	0.703	22	Pass
		Worst Case With BT	-	-	0.685	22	Pass
Body	GPRS	0.393	0.412	0.348	22	Pass	
		-	0.551	-	22	Pass	
	Worst Case With SD	-	0.408	-	22	Pass	
	Worst Case With BT	-	-	-	22	Pass	

Maximum Values (T5001418AAAA - 750mAh)

Frequency Band(MHz)	EUT position	Output Power (dBm)	1g Average (W/Kg)	Power Drift (dB)	Temperature ()	Verdict
GSM850	LeftHandSide,Cheek,High+BT	32.1	0.750	0.048	22	PASS
	RightHandSide,Cheek, High	32.1	0.780	-0.127	22	PASS
	GPRS,BodyWorn,Middle	32.2	1.07	-0.031	22	PASS
PCS1900	LeftHandSide,Cheek, High+SD	29.3	0.825	0.073	22	PASS
	RightHandSide,Cheek, High	29.3	0.761	-0.028	22	PASS
	GPRS,BodyWorn, Middle+SD	29.2	0.551	-0.246	22	PASS

Maximum Values With Battery-T5000572AAAA - 700mAh

Frequency Band(MHz)	EUT position	Output Power (dBm)	1g Average (W/Kg)	Power Drift (dB)	Temperature ()	Verdict
GSM850	LeftHandSide,Cheek,High+BT	32.1	0.678	-0.187	22	PASS
	RightHandSide,Cheek, High	32.1	0.772	-0.118	22	PASS
	GPRS,BodyWorn,Middle	32.2	0.979	-0.114	22	PASS
PCS1900	LeftHandSide,Cheek, High+SD	29.3	0.809	-0.233	22	PASS
	RightHandSide,Cheek, High	29.3	0.628	-0.123	22	PASS
	GPRS,BodyWorn, Middle+SD	29.2	0.427	-0.153	22	PASS

Note:

1. In GSM850 band, the low, middle and high channels are CH128/824.2MHz, CH189/836.4MHz and CH251/848.8MHz separately.
2. In PCS1900 band, the low, middle and high channels are CH512/1805.2MHz, CH661/1880.0MHz and

CH810/1909.8MHz separately.

3. The conducted output power is identical with both battery type T5000572AAAA - 700mAh and T5001418AAAA - 750mAh
4. For the Bodyworn measurements the sample was only placed with the antenna toward the phantom since this position delivers the highest SAR values.
5. For the Bodyworn measurements, the distance from the sample to the phantom is 2.0 cm.
6. For all the tests, the maximum absolute value of the power drift which is under the GSM850-LeftHandSide-Cheek-High+SD configuration is 0.277dB.

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 16 of 135

3. Instruments List

Instrument	Model	Serial number	NO.	Date of last Calibration
Desktop PC	COMPAQ EVO	N/A	GSM-SAR-025	N/A
Dasy 4 software	V 4.7 build 44	N/A	GSM-SAR-001	N/A
Probe	ES3DV3	3088	GSM-SAR-034	2006.12.12
DAE	DAE3	569	GSM-SAR-023	2006.12.08
900MHz system validation dipole	D900V2	184	GSM-SAR-017	2006.12.06
1900MHz system validation dipole	D1900V2	5d028	GSM-SAR-020	2006.12.12
Phantom	SAM 12	TP-1283	GSM-SAR-005	N/A
Robot	RX90L	F03/5V32A1/A01	GSM-SAR-028	N/A
Dielectric probe kit	85070D	US01440168	GSM-SAR-016	2006.12.19
Agilent network analyzer	E5071B	MY42100549	GSM-SAR-007	2006.12.19
Agilent signal generator	E4438	14438CATO-19719	GSM-SAR-008	2006.12.19
Mini-Circuits preamplifier	ZHL-42	D041905	GSM-SAR-033	2006.04.19
Agilent power meter	E4416A	GB41292095	GSM-SAR-010	2006.12.19
Agilent power sensor	8481H	MY41091234	GSM-SAR-011	2006.12.19
HT CP6100 20N Coupling	6100	SCP301480120	GSM-SAR-012	2006.12.19
R&S Universal radio communication tester	CMU200	103633	GSM-AUD-002	2006.12.19

4. Measurements

4.1 LeftHandSide-Cheek-GSM850-Middle

Date/Time: 2007-3-23 14:34:03

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Cheek-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.883 \text{ mho/m}$; $\epsilon_r = 41.9$; $\mu_r = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Mid/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.452 mW/g

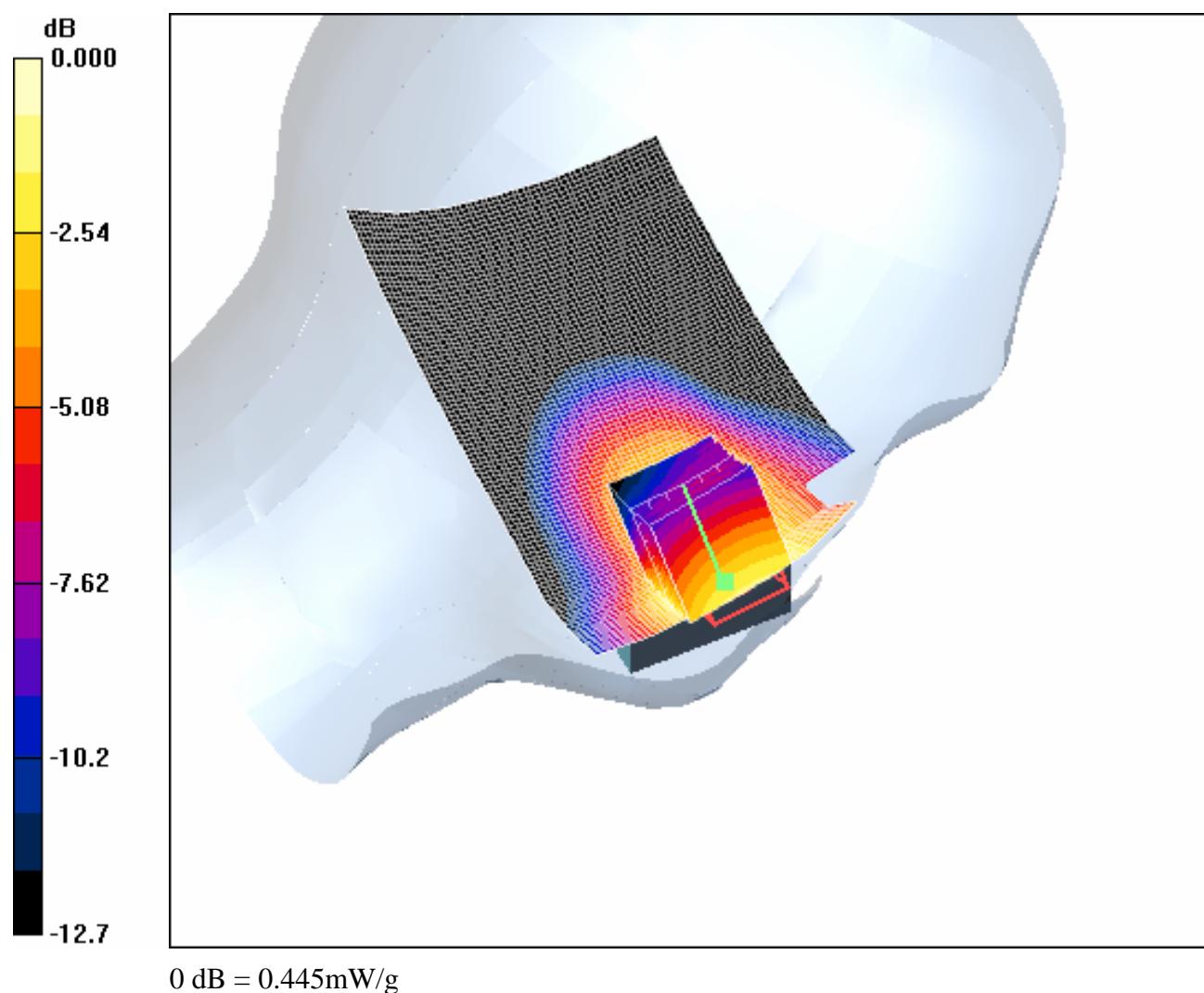
Cheek position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.15 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.605 W/kg

SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.283 mW/g

Maximum value of SAR (measured) = 0.445 mW/g



4.2 LeftHandSide-Tilt-GSM850-Middle

Date/Time: 2007-3-23 14:02:25

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Tilt-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 19 of 135

Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.883 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilt position - Mid/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.206 mW/g

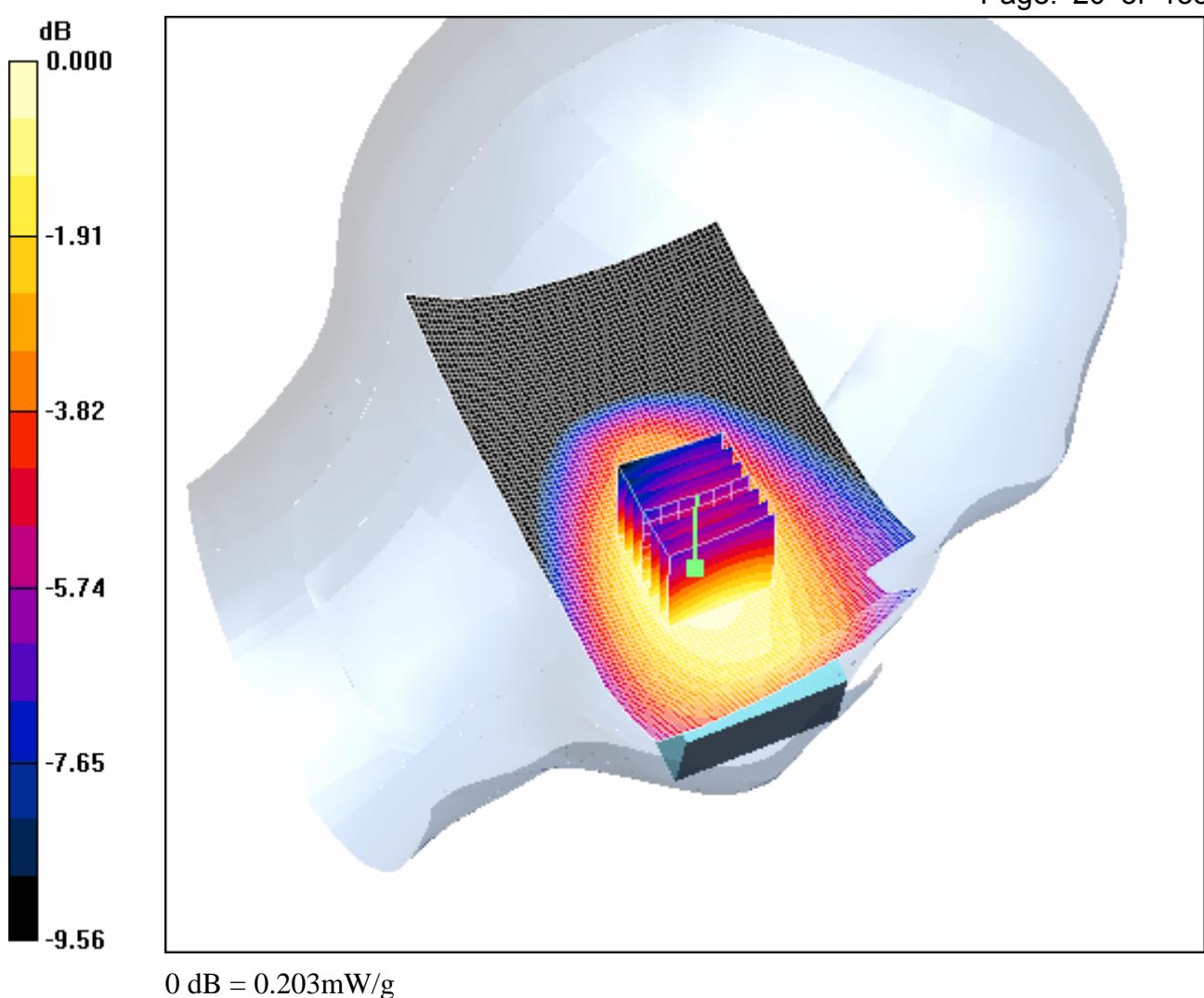
Tilt position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.53 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 0.241 W/kg

SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.203 mW/g



4.3 LeftHandSide-Cheek-GSM850-Low

Date/Time: 2007-3-23 15:00:48

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Cheek-Low

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 824.2 \text{ MHz}$; $\sigma = 0.864 \text{ mho/m}$; $\epsilon_r = 42.1$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.298 mW/g

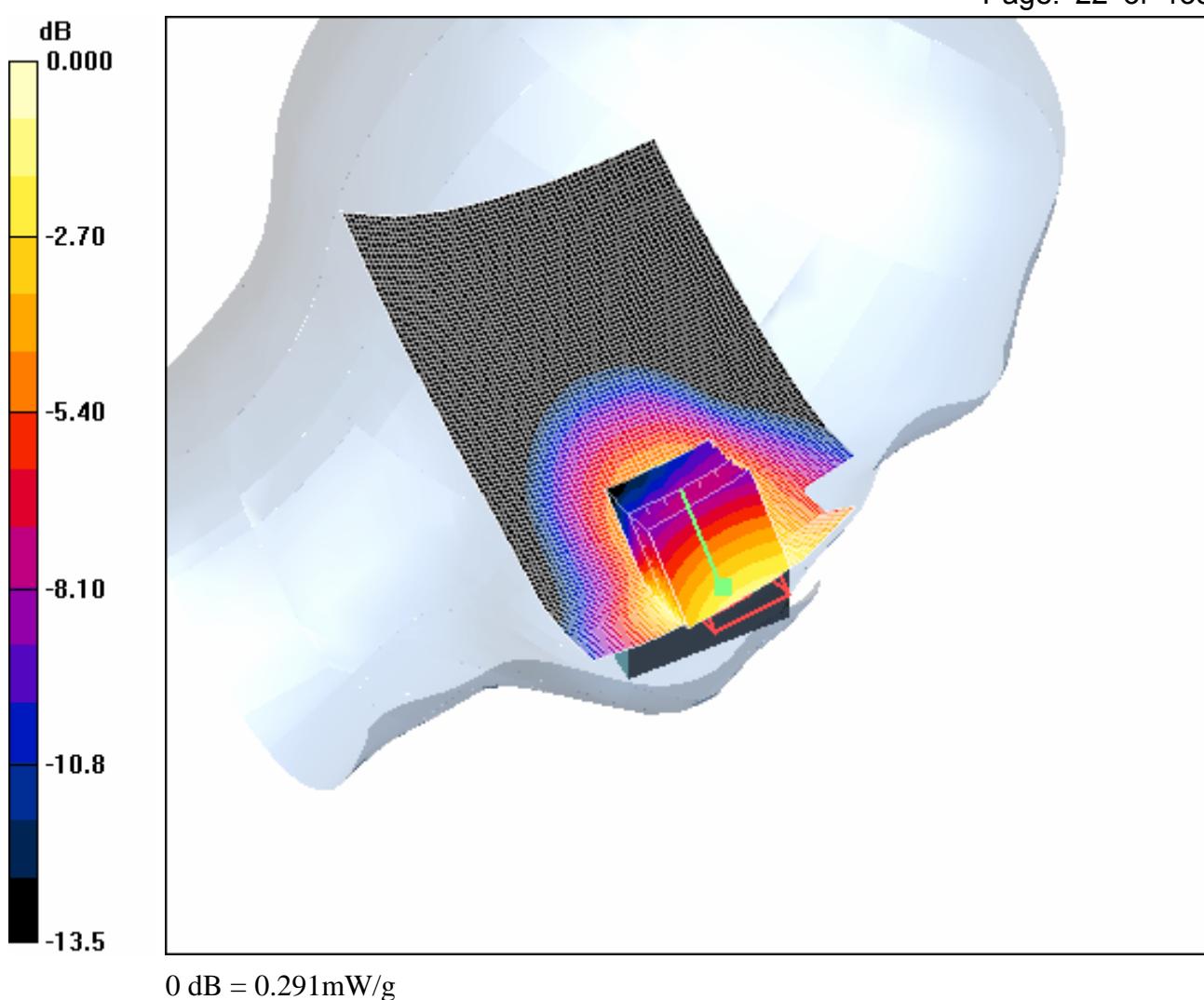
Cheek position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.72 V/m; Power Drift = 0.102 dB

Peak SAR (extrapolated) = 0.397 W/kg

SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.184 mW/g

Maximum value of SAR (measured) = 0.291 mW/g



4.4 LeftHandSide-Cheek-GSM850-High

Date/Time: 2007-3-23 15:24:57

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Cheek-High

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 0.901 \text{ mho/m}$; $\epsilon_r = 41.8$; $\mu_r = 1$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.630 mW/g

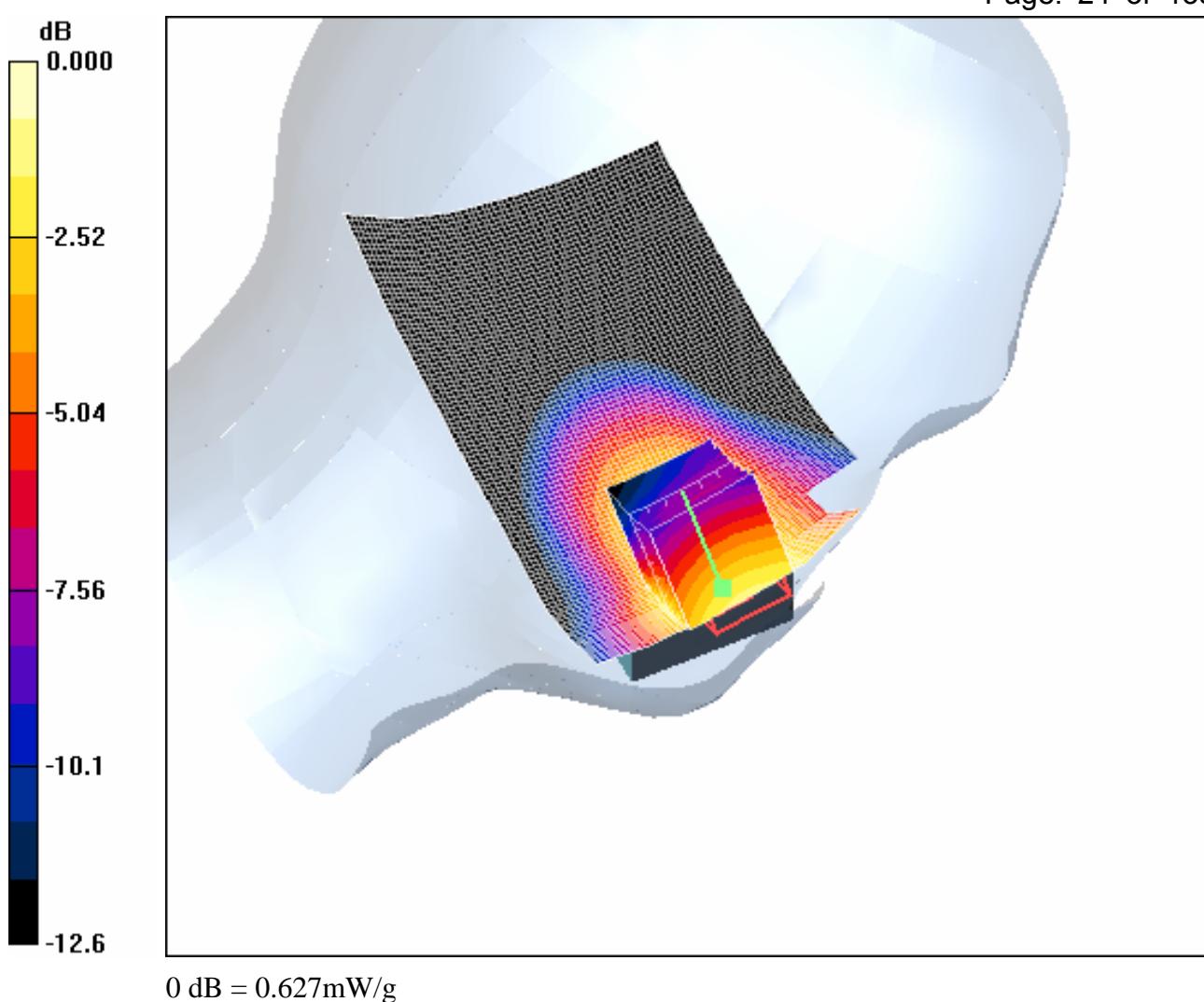
Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.93 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 0.863 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.397 mW/g

Maximum value of SAR (measured) = 0.627 mW/g



4.5 LeftHandSide-GSM850-Maximum Value-SD

Date/Time: 2007-3-23 16:02:25

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Cheek-High+SD

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.901$ mho/m; $\epsilon_r = 41.8$; $\mu_r = 1$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+SD/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.687 mW/g

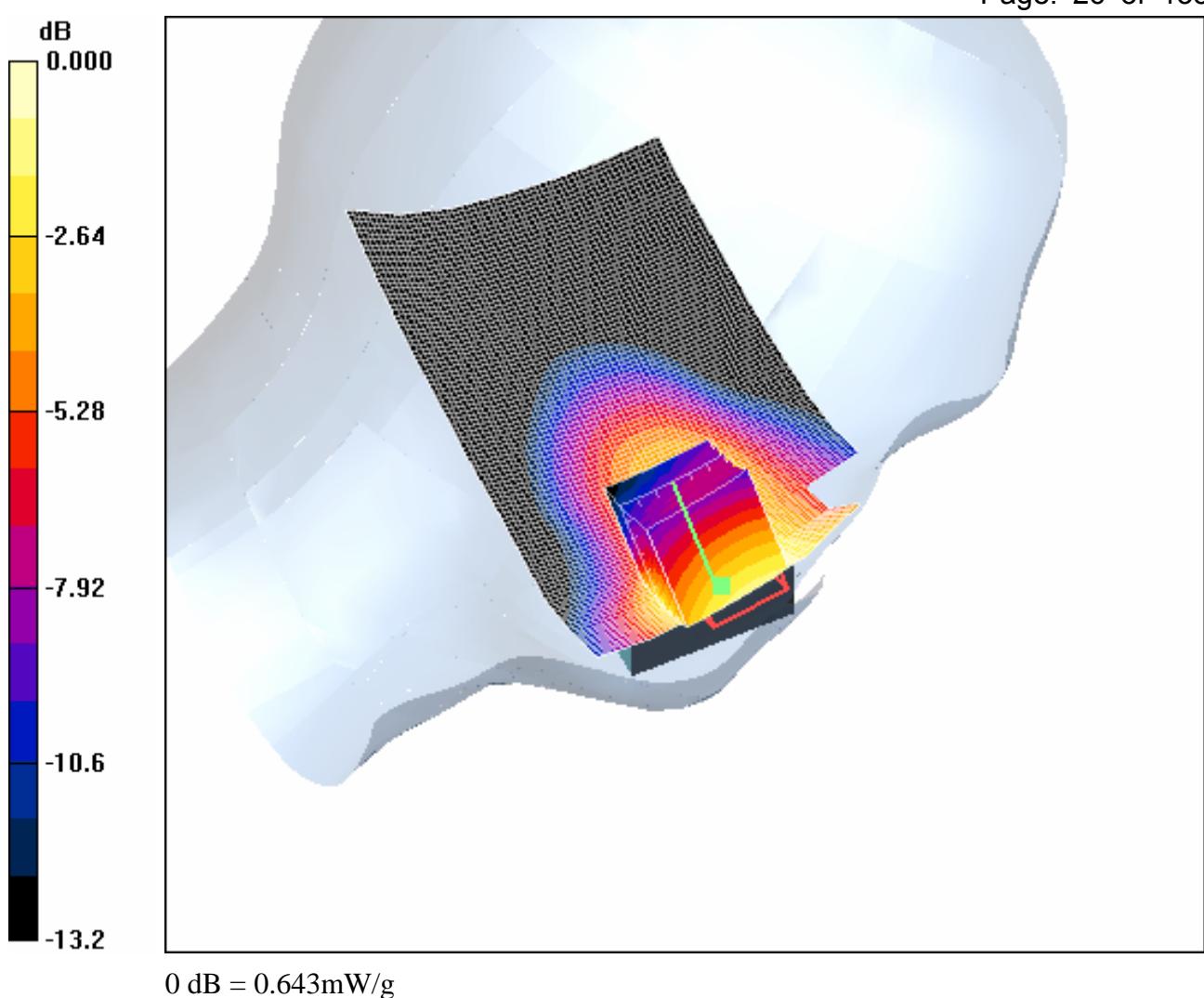
Cheek position - High+SD/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.48 V/m; Power Drift = 0.277 dB

Peak SAR (extrapolated) = 0.849 W/kg

SAR(1 g) = 0.600 mW/g; SAR(10 g) = 0.418 mW/g

Maximum value of SAR (measured) = 0.643 mW/g



4.6 LeftHandSide-GSM850-Maximum Value-BT

Date/Time: 2007-4-11 15:38:55

Test Laboratory: SGS-GSM

GSM850-LeftHandSide-Cheek-High+BT

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.901$ mho/m; $\epsilon_r = 41.8$; $\mu_r = 1$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+BT/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.803 mW/g

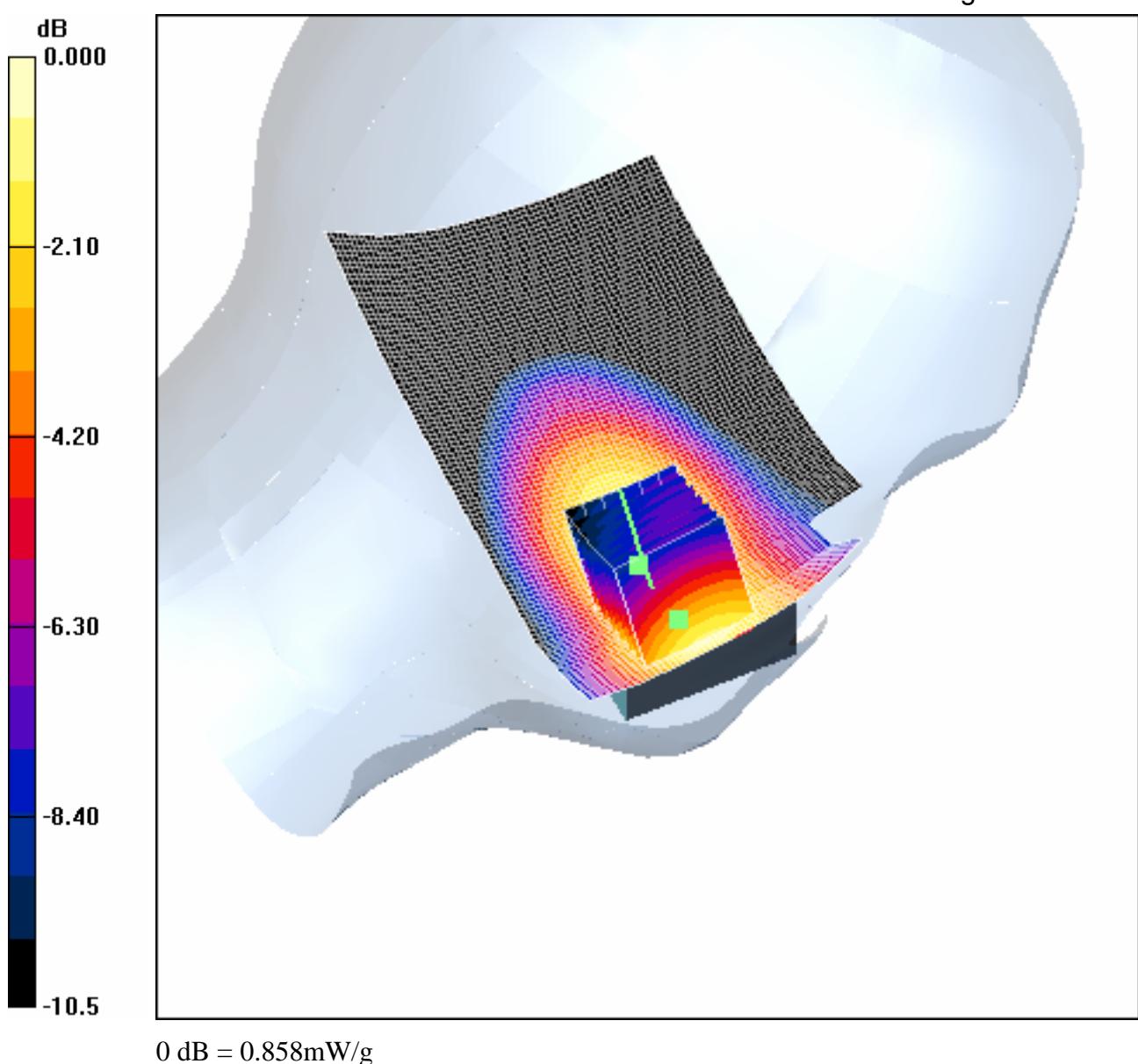
Cheek position - High+BT/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.6 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 1.90 W/kg

SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.526 mW/g

Maximum value of SAR (measured) = 0.858 mW/g



0 dB = 0.858mW/g

4.7RightHandSide-Cheek-GSM850-Middle

Date/Time: 2007-3-23 17:33:51

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Cheek-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 29 of 135

Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.883 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.638 mW/g

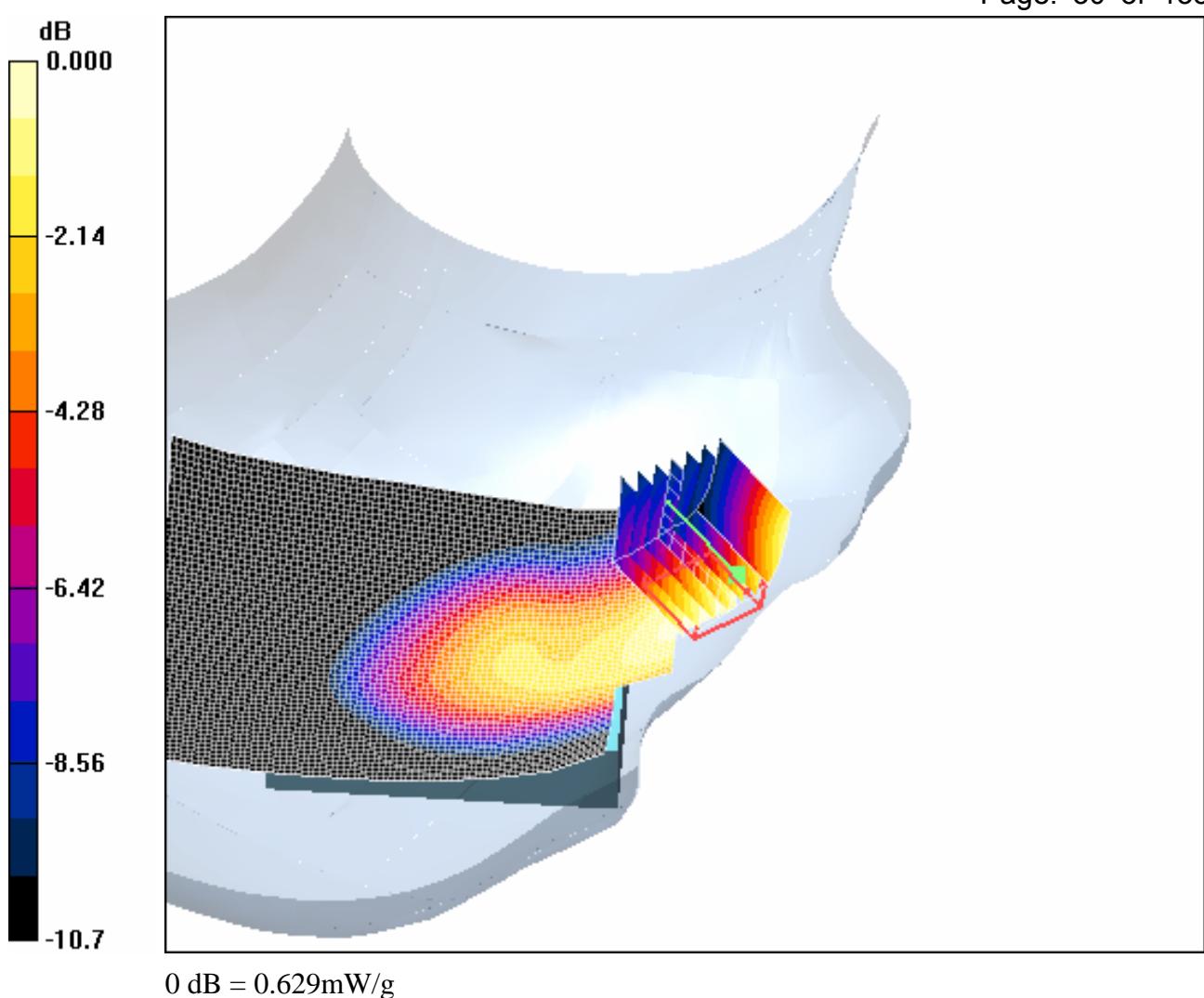
Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.31 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.852 W/kg

SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.403 mW/g

Maximum value of SAR (measured) = 0.629 mW/g



4.8 RightHandSide-Tilt-GSM850-Middle

Date/Time: 2007-3-23 17:03:07

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Tilt-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.883$ mho/m; $\epsilon_r = 41.9$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.255 mW/g

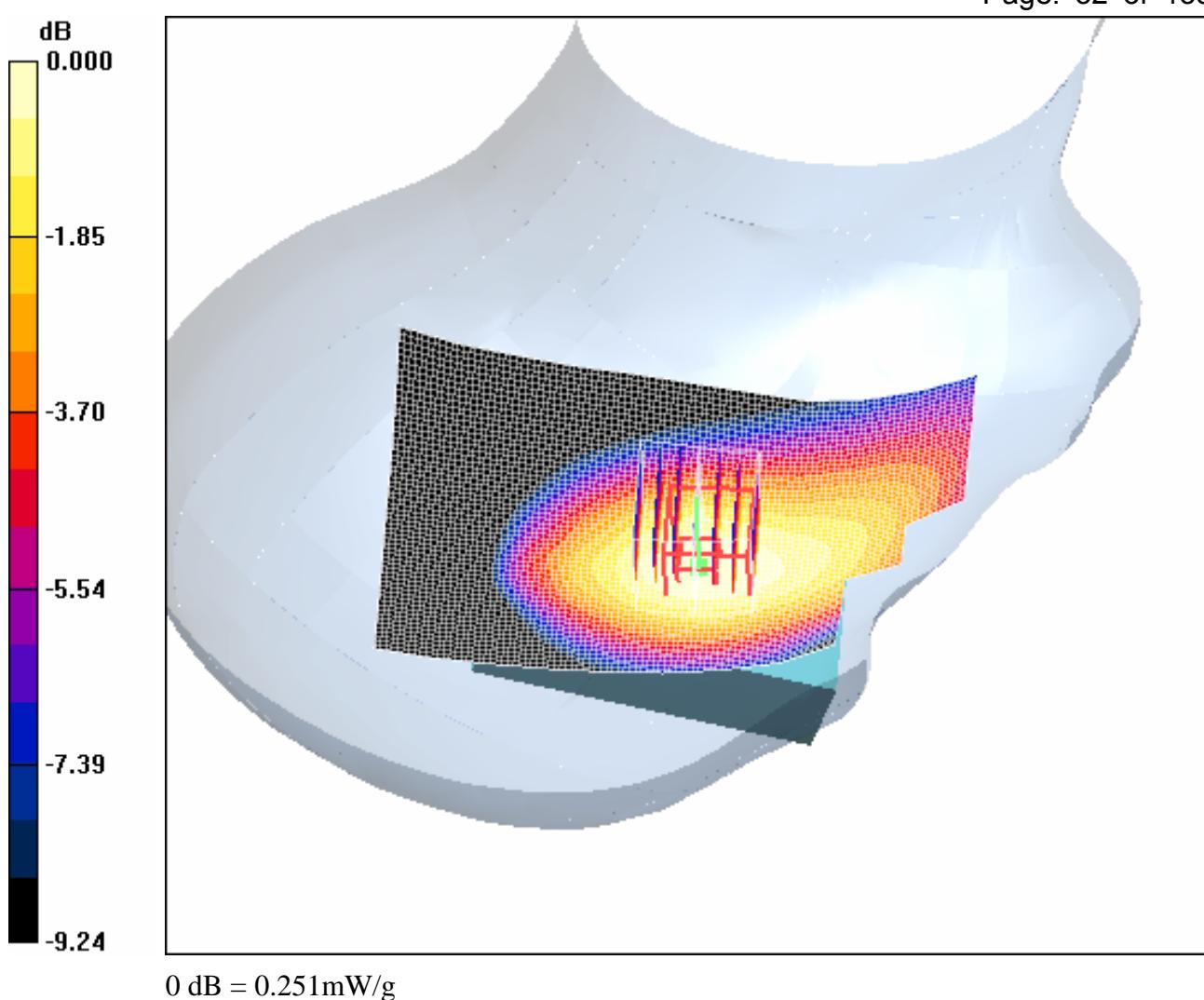
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.51 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.299 W/kg

SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.251 mW/g



4.9 RightHandSide-Cheek-GSM850-Low

Date/Time: 2007-3-23 20:04:15

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Cheek-Low

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 824.2 \text{ MHz}$; $\sigma = 0.864 \text{ mho/m}$; $\epsilon_r = 42.1$; $\mu_r = 1$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.488 mW/g

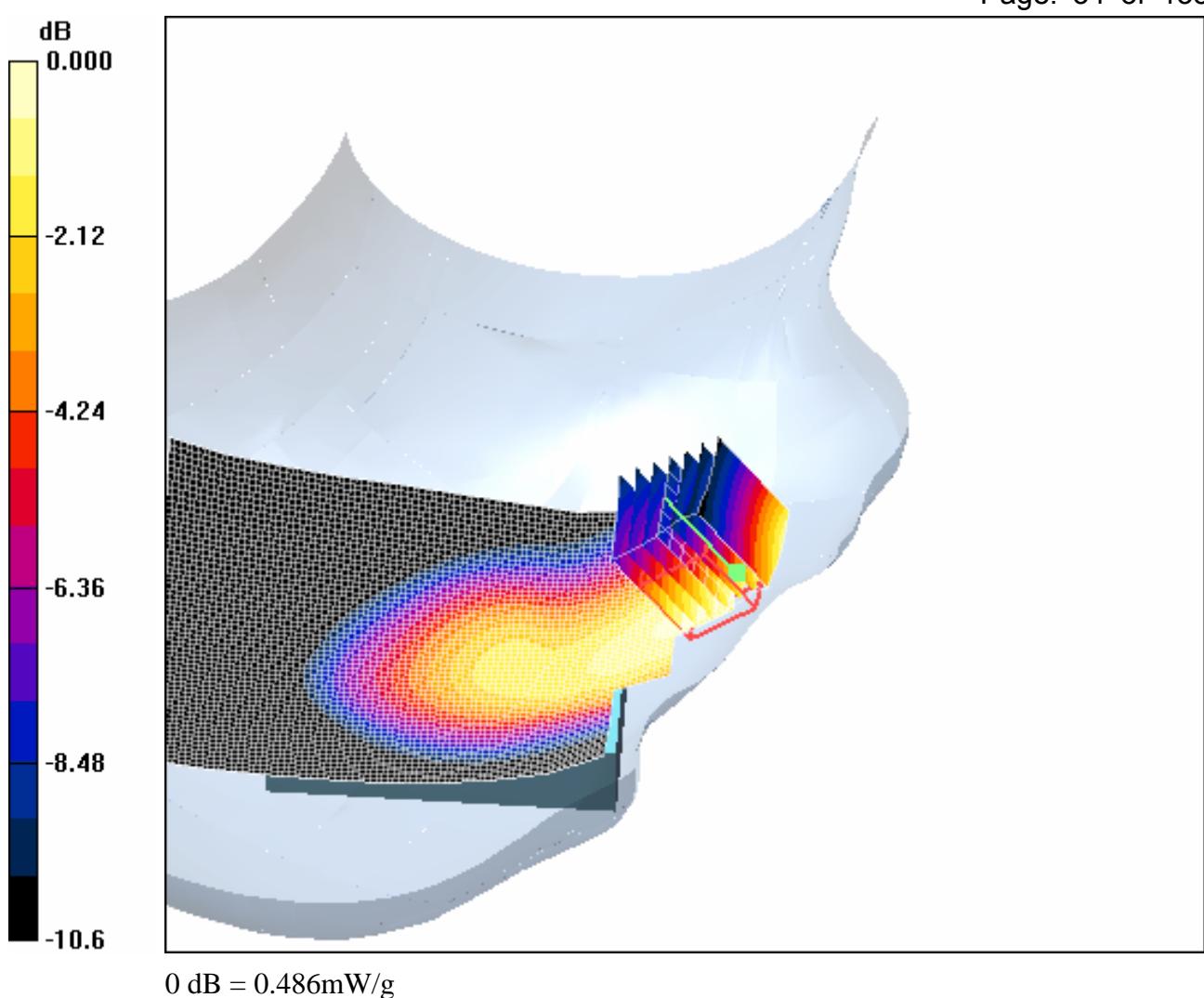
Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.29 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 0.658 W/kg

SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 0.486 mW/g



4.10 RightHandSide-Cheek-GSM850-High

Date/Time: 2007-3-23 18:47:28

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Cheek-High

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 0.901 \text{ mho/m}$; $\epsilon_r = 41.8$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.855 mW/g

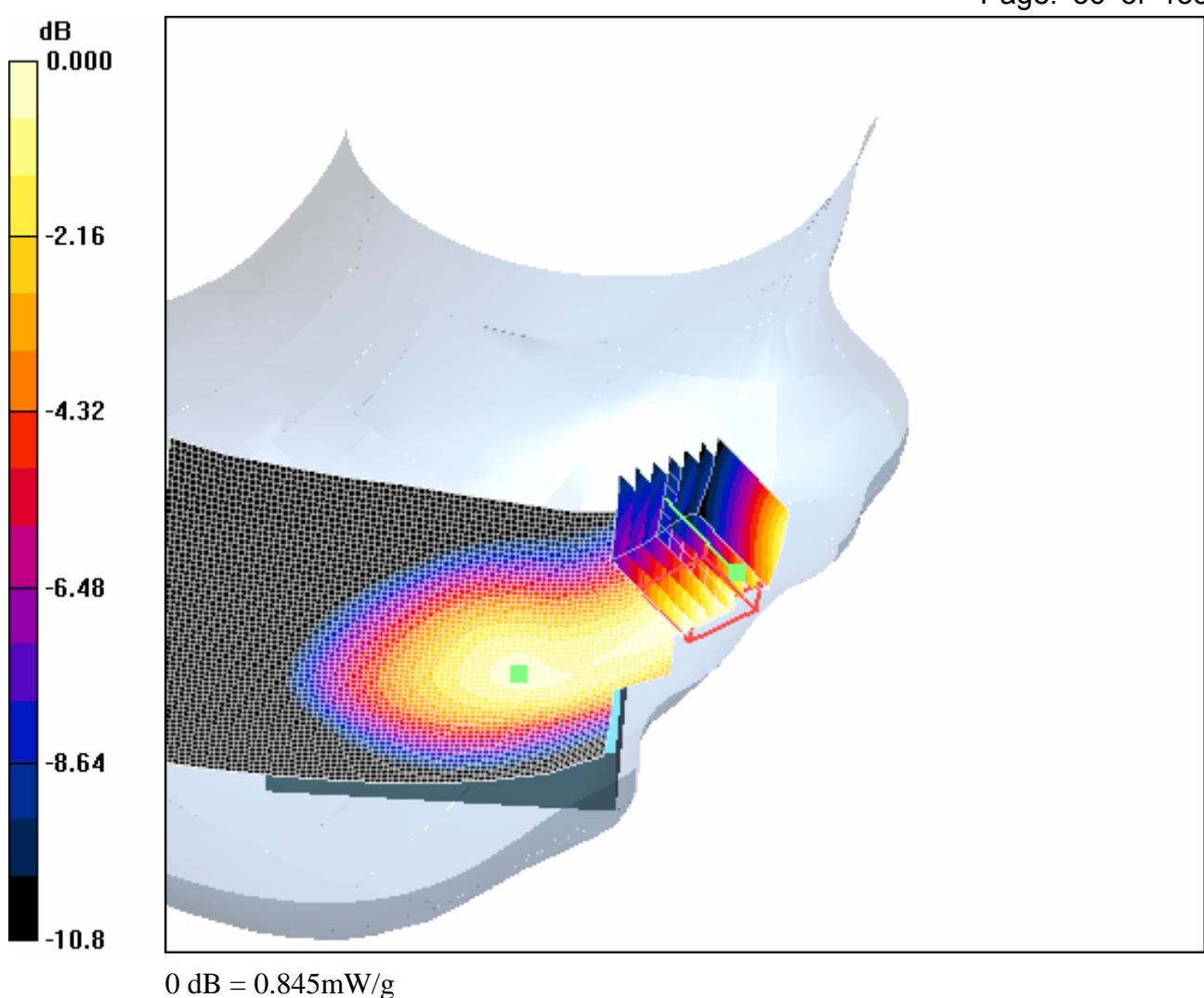
Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.531 mW/g

Maximum value of SAR (measured) = 0.845 mW/g



4.11 RightHandSide-GSM850-Maximum Value-SD

Date/Time: 2007-3-23 21:23:38

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Cheek-High+SD

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 0.901 \text{ mho/m}$; $\epsilon_r = 41.8$; $\mu_r = 1$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High +SD 2/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.821 mW/g

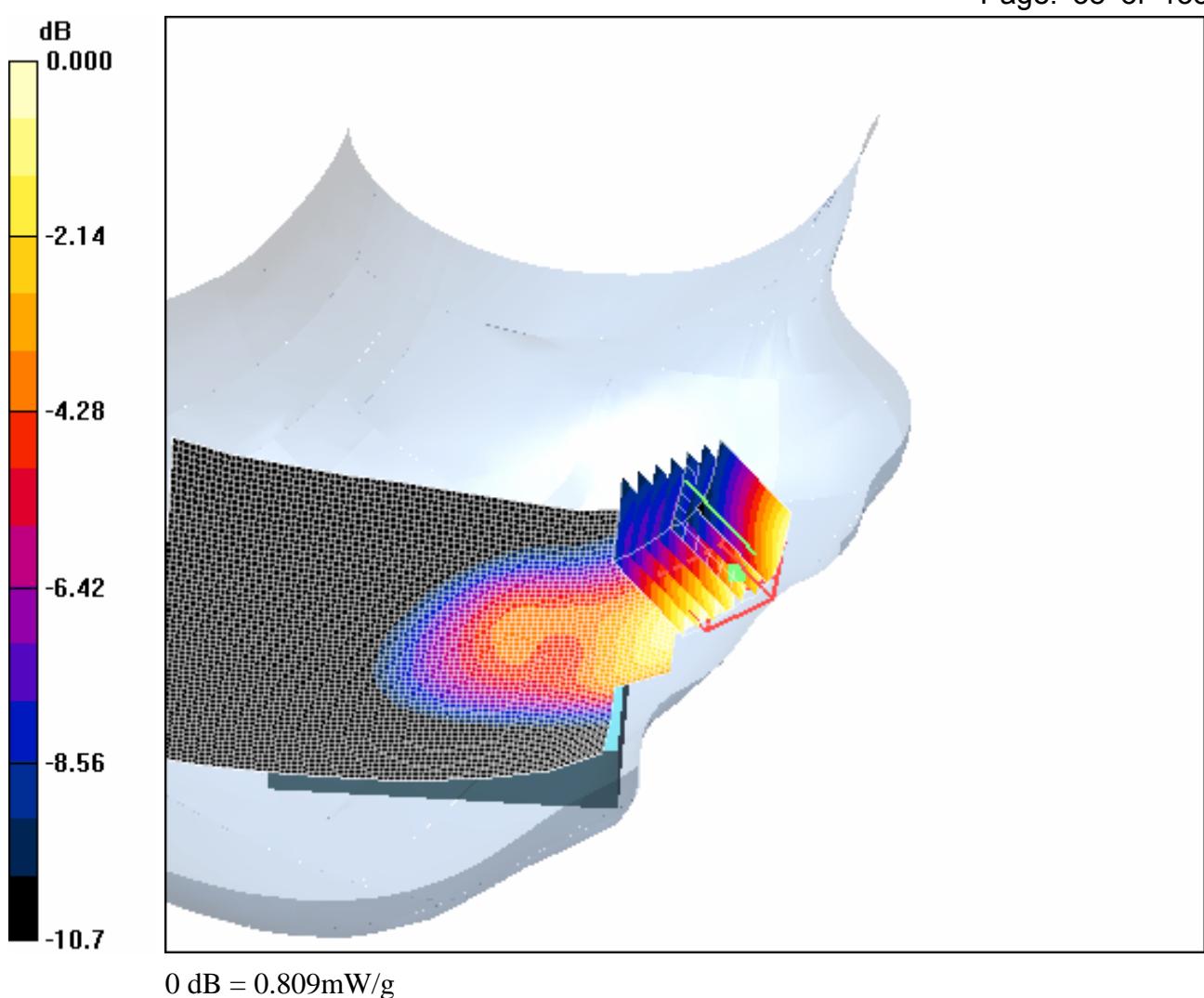
Cheek position - High +SD 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.10 V/m; Power Drift = 0.148 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.759 mW/g; SAR(10 g) = 0.508 mW/g

Maximum value of SAR (measured) = 0.809 mW/g



4.12 RightHandSide-GSM850-Maximum Value-BT

Date/Time: 2007-3-23 21:57:30

Test Laboratory: SGS-GSM

GSM850-RightHandSide-Cheek-High+BT

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850-Head Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 0.901 \text{ mho/m}$; $\epsilon_r = 41.8$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(6, 6, 6); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High +BT/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.809 mW/g

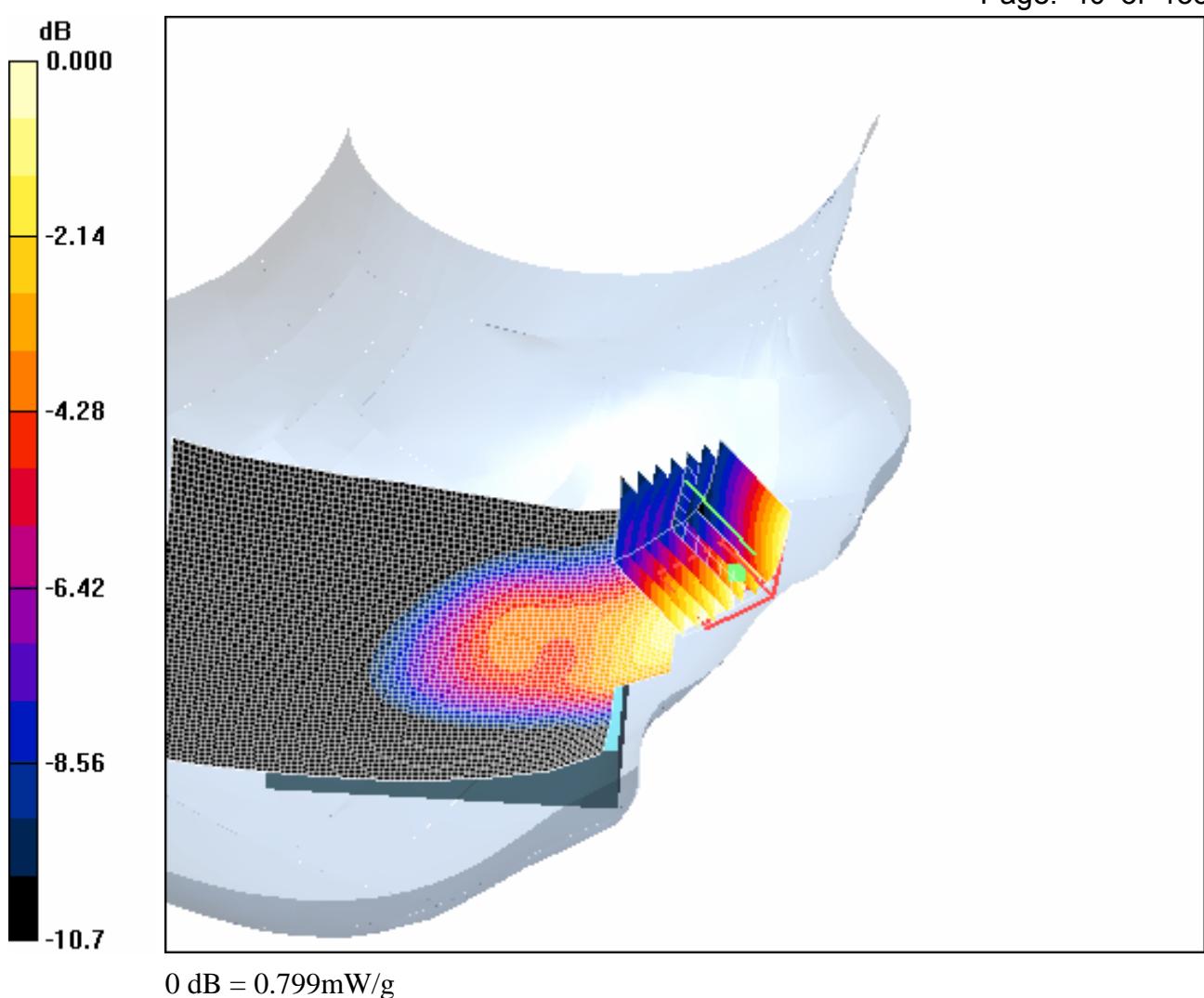
Cheek position - High +BT/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.36 V/m; Power Drift = 0.163 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.747 mW/g; SAR(10 g) = 0.503 mW/g

Maximum value of SAR (measured) = 0.799 mW/g



4.13 Body-Worn-GSM850-GPRS-Low

Date/Time: 2007-3-16 11:26:34

Test Laboratory: SGS-GSM

GSM850-Body-Worn-GPRS-Low-2.0cm

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GPRS Mode; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium: 850-Body Medium parameters used: $f = 824.2 \text{ MHz}$; $\sigma = 0.924 \text{ mho/m}$; $\epsilon_r = 56.2$; $\epsilon_i = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.92, 5.92, 5.92); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn - Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.893 mW/g

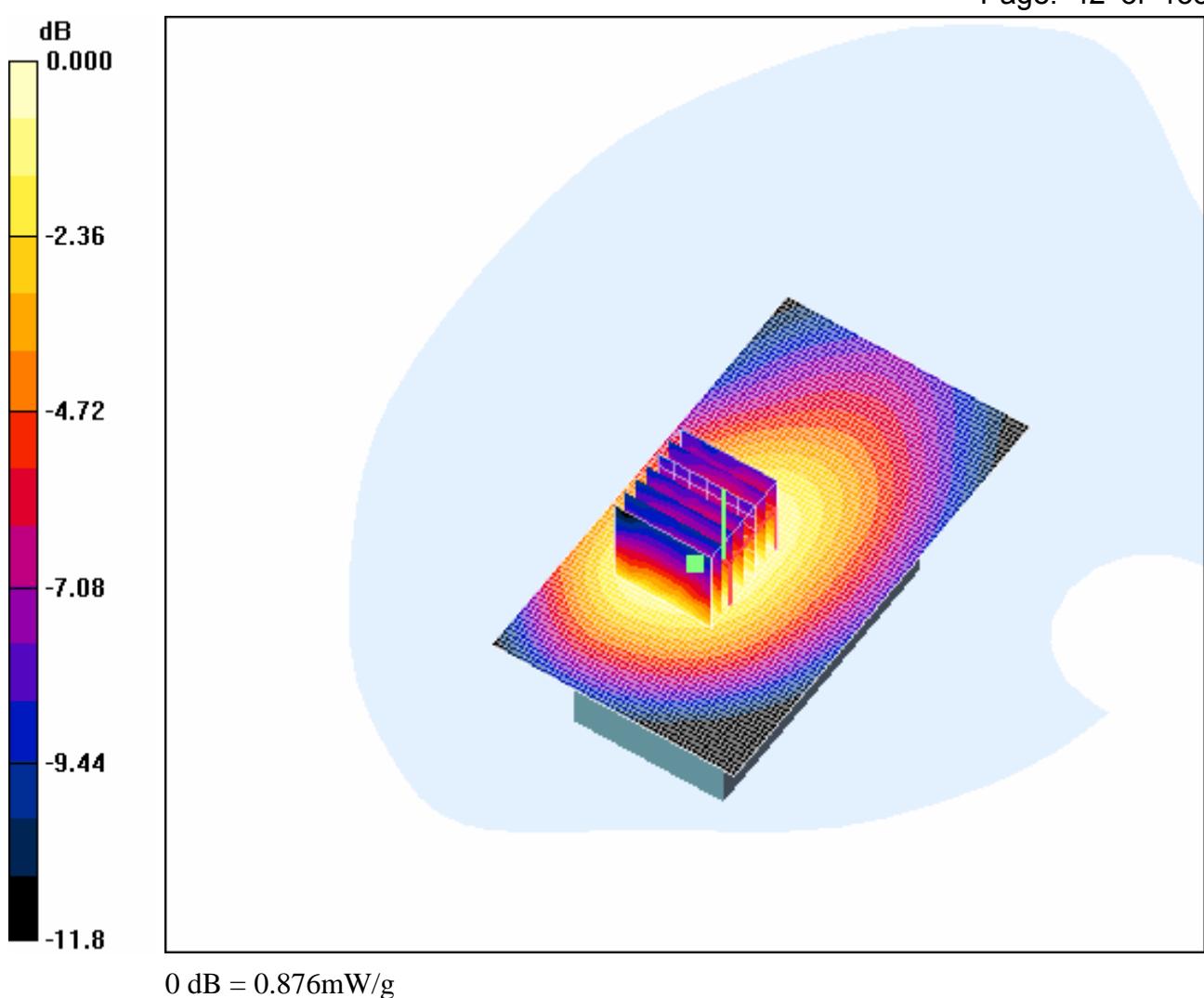
Body Worn - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.786 mW/g; SAR(10 g) = 0.539 mW/g

Maximum value of SAR (measured) = 0.876 mW/g



4.14 Body-Worn-GSM850-GPRS-Middle

Date/Time: 2007-4-10 17:08:24

Test Laboratory: SGS-GSM

GSM850-Body-Worn-GPRS-Middle-2.0cm

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GPRS Mode; Frequency: 836.4 MHz; Duty Cycle: 1:4

Medium: 850-Body Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.942 \text{ mho/m}$; $\epsilon_r = 56.2$; $\epsilon_i = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.92, 5.92, 5.92); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn - Middle 2/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.15 mW/g

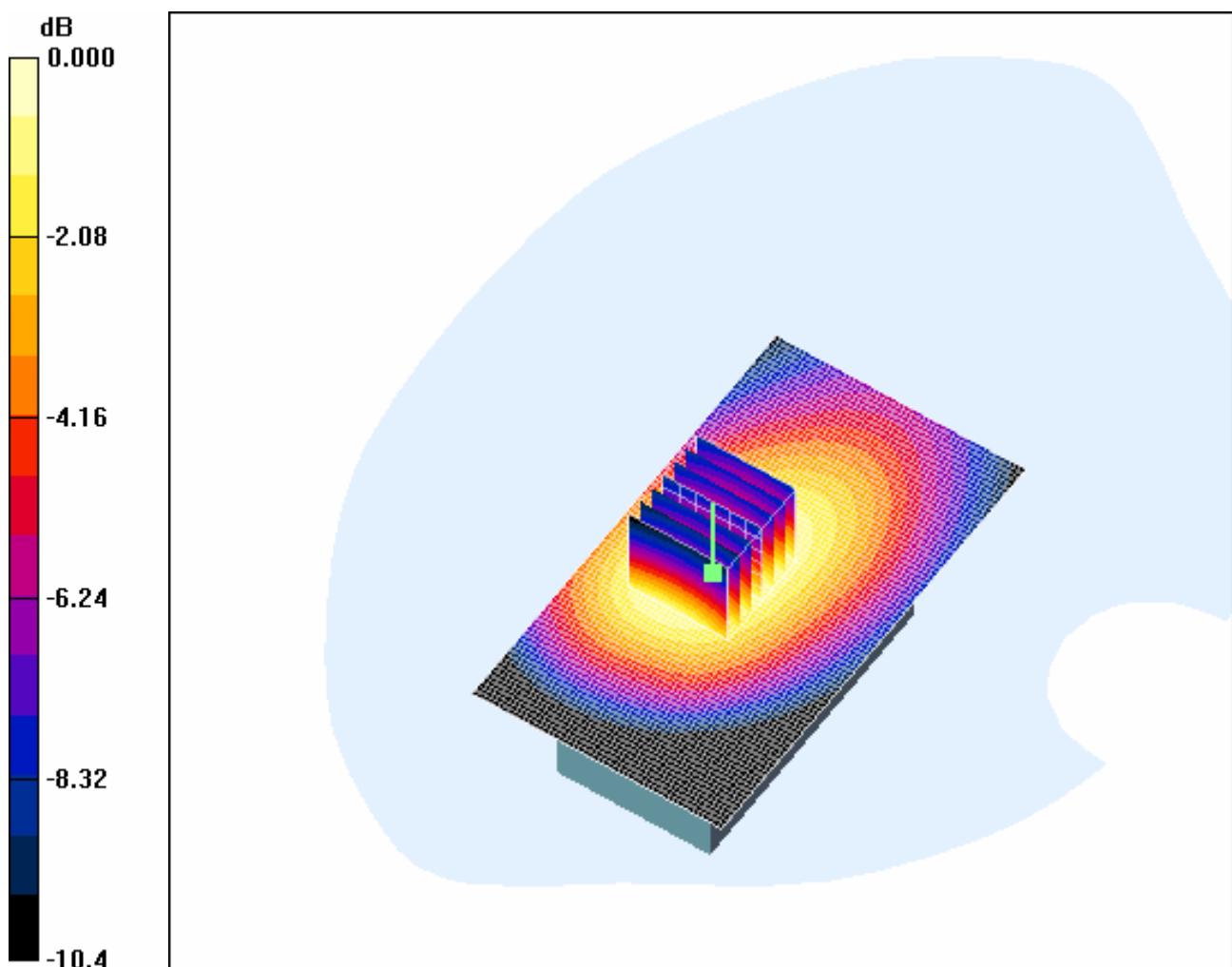
Body Worn - Middle 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.1 V/m; Power Drift = -0.031 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.752 mW/g

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



0 dB = 1.14mW/g

4.15 Body-Worn-GSM850-GPRS-High

Date/Time: 2007-3-16 14:17:03

Test Laboratory: SGS-GSM

GSM850-Body-Worn-GPRS-High-2.0cm

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Order No: GSM10212817-2

Date: Apr. 12, 2007

Page: 45 of 135

Communication System: GSM850-GPRS Mode; Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium: 850-Body Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 0.955 \text{ mho/m}$; $\epsilon_r = 56.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.92, 5.92, 5.92); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn - High 2/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.08 mW/g

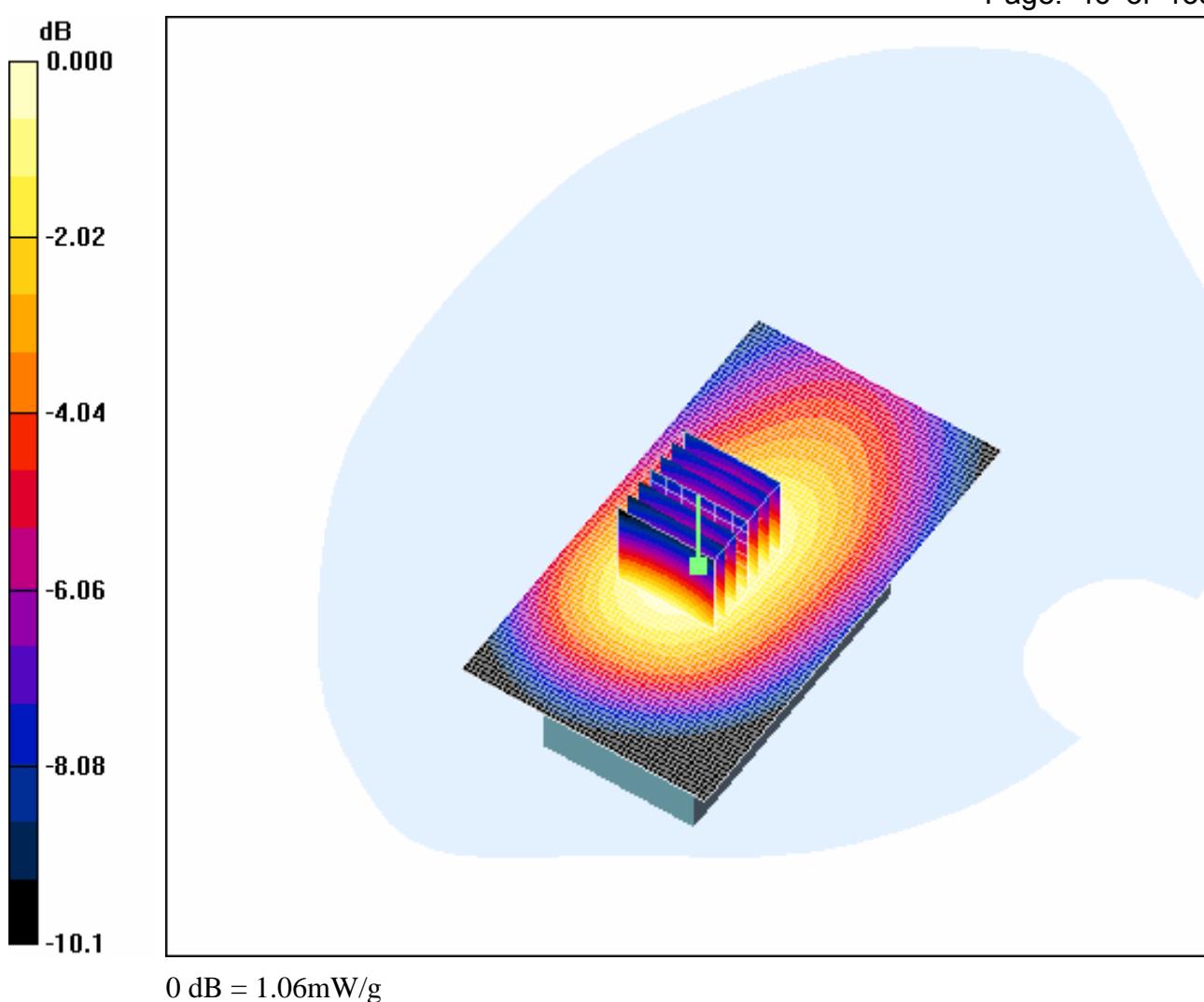
Body Worn - High 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.4 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.998 mW/g; SAR(10 g) = 0.707 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



4.16 Body-Worn-GSM850-Maximum Value-SD

Date/Time: 2007-3-16 15:13:37

Test Laboratory: SGS-GSM

GSM850-Body-Worn-GPRS-Middle-2.0cm+SD

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GPRS Mode; Frequency: 836.4 MHz; Duty Cycle: 1:4

Medium: 850-Body Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.942 \text{ mho/m}$; $\epsilon_r = 56.2$; $\mu_r = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.92, 5.92, 5.92); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn - Middle+SD/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.04 mW/g

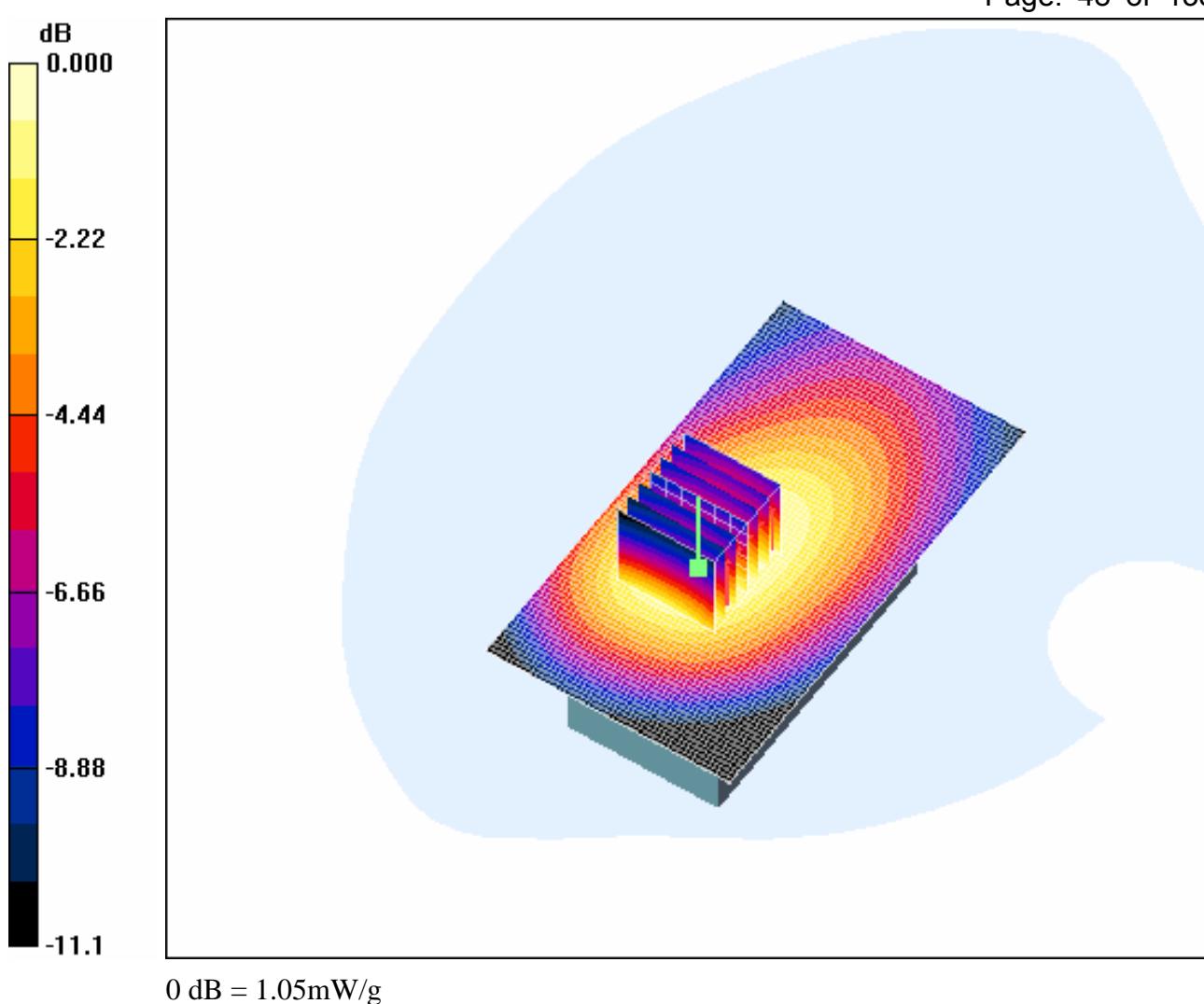
Body Worn - Middle+SD/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.1 V/m; Power Drift = -0.109 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.975 mW/g; SAR(10 g) = 0.685 mW/g

Maximum value of SAR (measured) = 1.05 mW/g



4.17 Body-Worn-GSM850-Maximum Value-BT

Date/Time: 2007-3-16 15:42:13

Test Laboratory: SGS-GSM

GSM850-Body-Worn-GPRS-Middle-2.0cm+BT

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: GSM850-GPRS Mode; Frequency: 836.4 MHz; Duty Cycle: 1:4

Medium: 850-Body Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 0.942 \text{ mho/m}$; $\epsilon_r = 56.2$; $\epsilon_i = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.92, 5.92, 5.92); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn - Middle+BT/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.05 mW/g

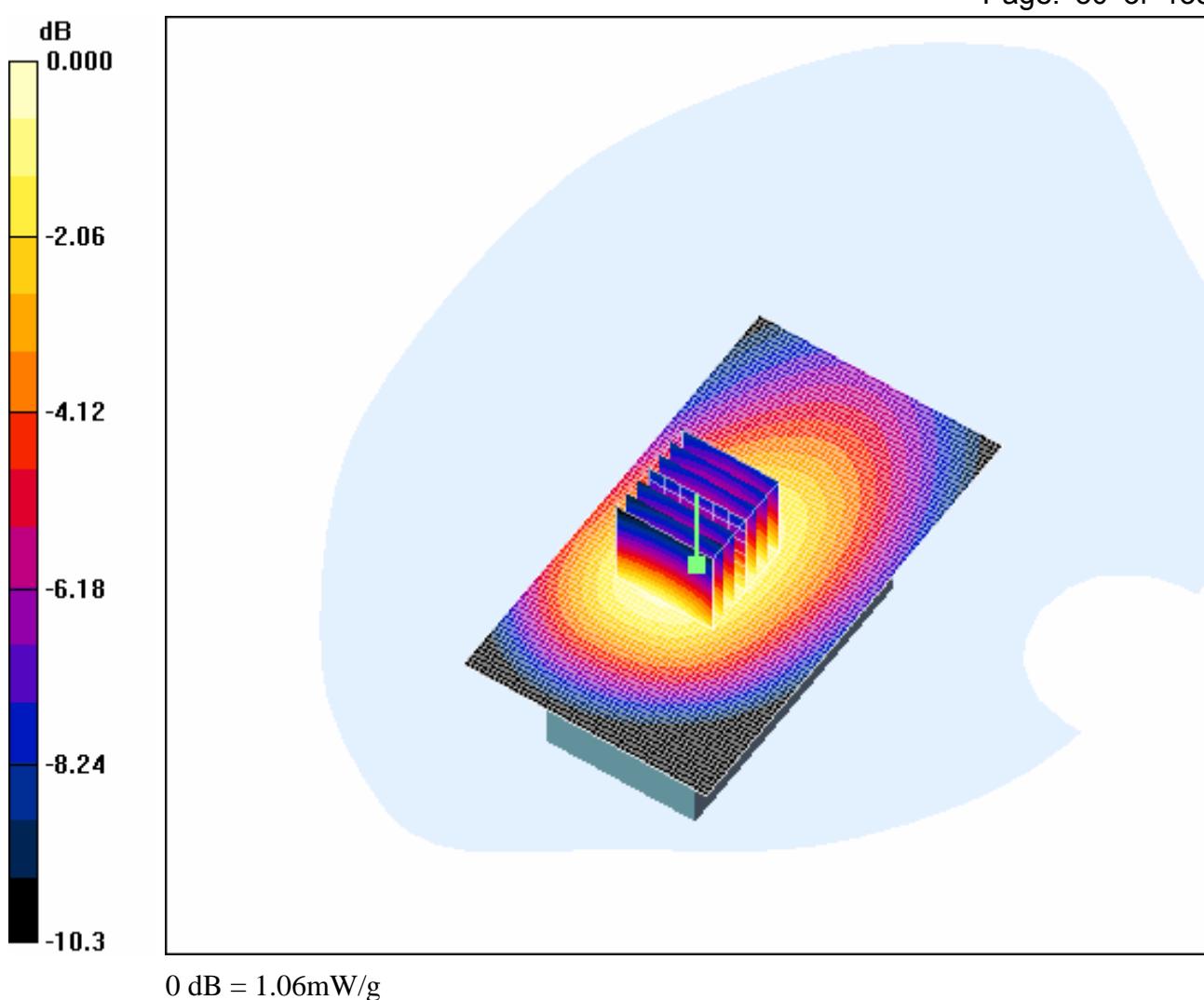
Body Worn - Middle+BT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.7 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.989 mW/g; SAR(10 g) = 0.695 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



4.18 LeftHandSide-Cheek-PCS1900-Middle

Date/Time: 2007-3-22 14:40:06

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Cheek-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.2$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.865 mW/g

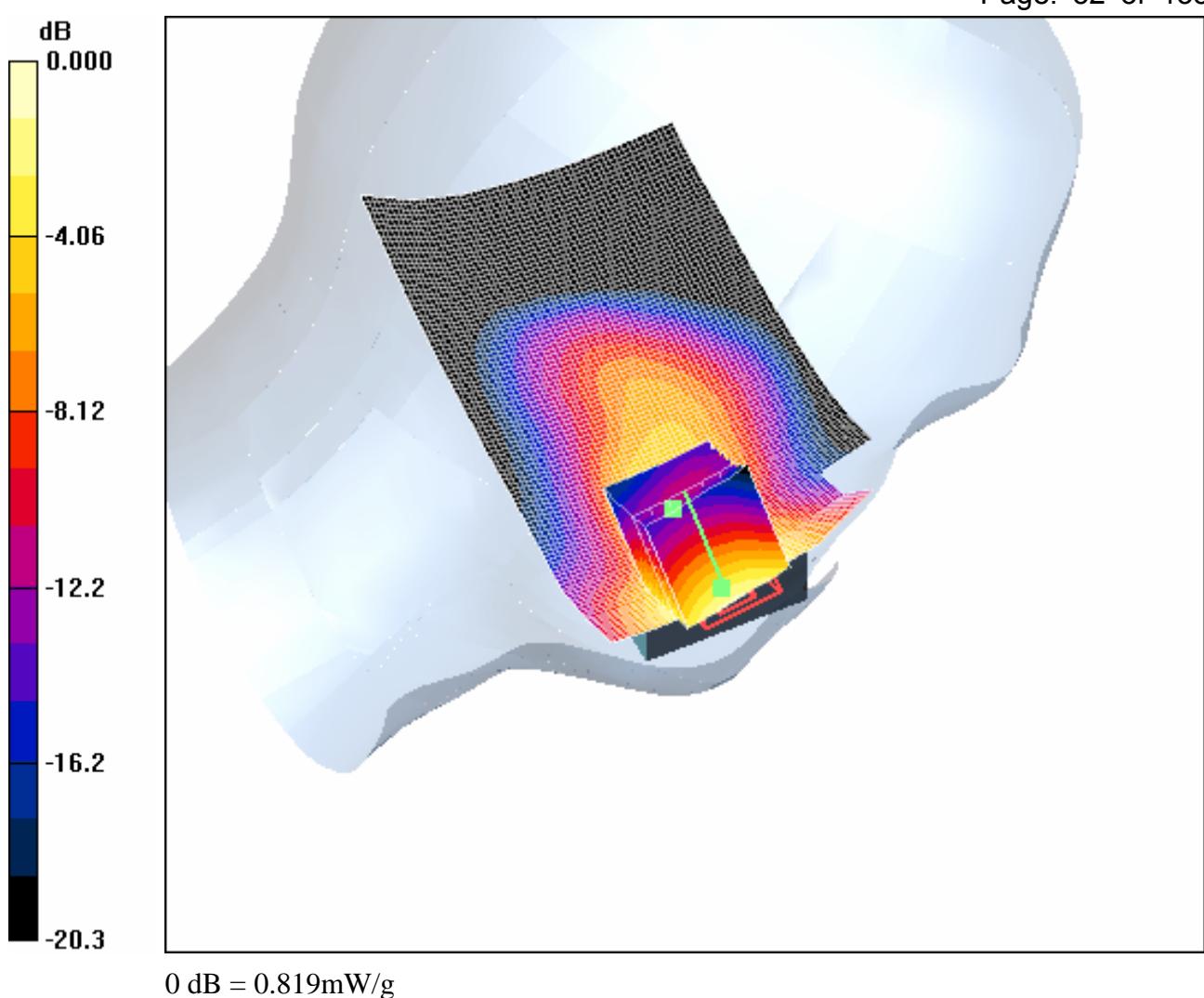
Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.96 V/m; Power Drift = -0.159 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.758 mW/g; SAR(10 g) = 0.456 mW/g

Maximum value of SAR (measured) = 0.819 mW/g



4.19 LeftHandSide-Tilt-PCS1900-Middle

Date/Time: 2007-3-22 14:09:36

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Tilt-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.2$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.237 mW/g

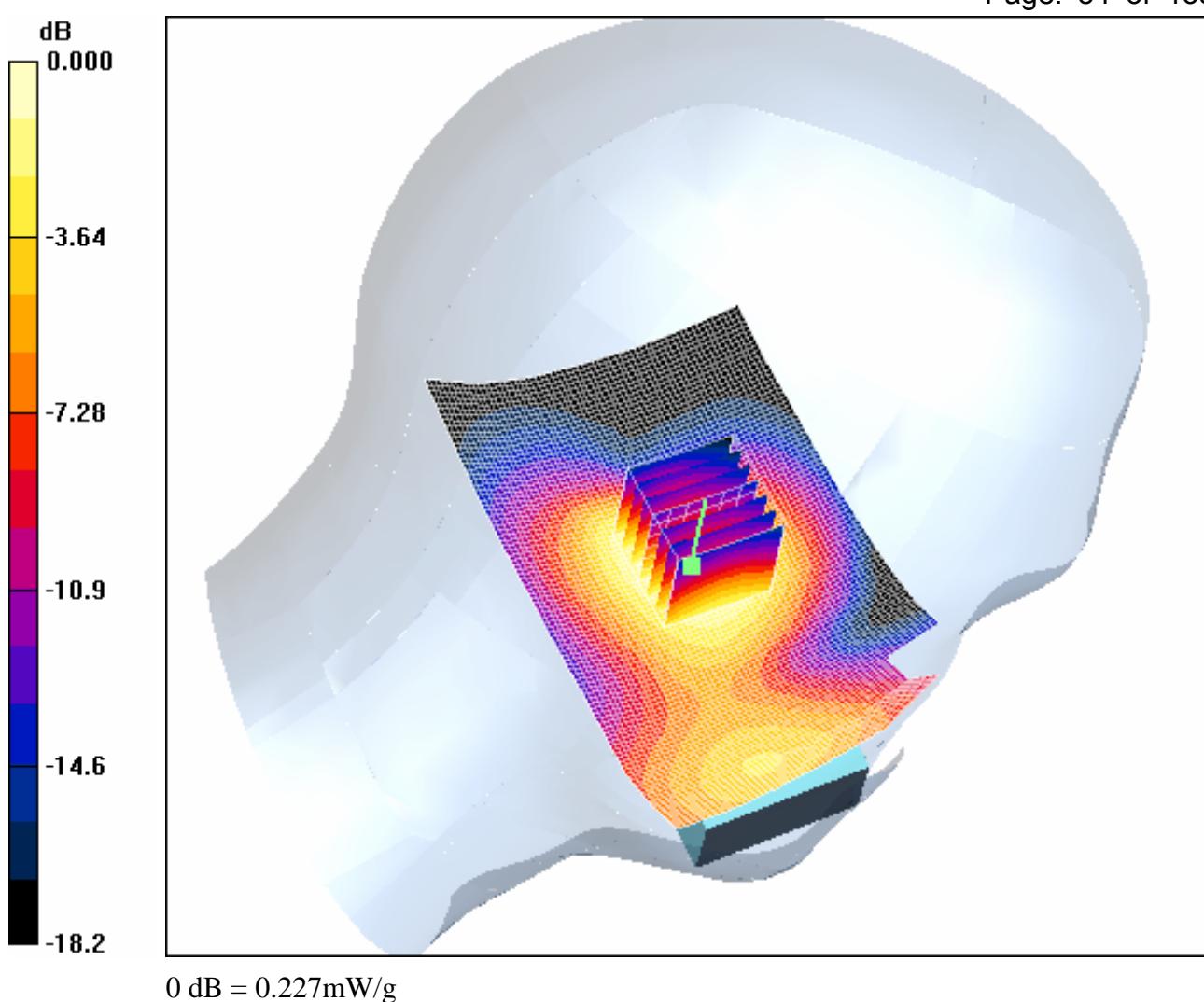
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.79 V/m; Power Drift = -0.086 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.124 mW/g

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



4.20 LeftHandSide-Cheek-PCS1900-Low

Date/Time: 2007-3-22 15:07:46

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Cheek-Low

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.37 \text{ mho/m}$; $\epsilon_r = 39.3$; $\epsilon_i =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.665 mW/g

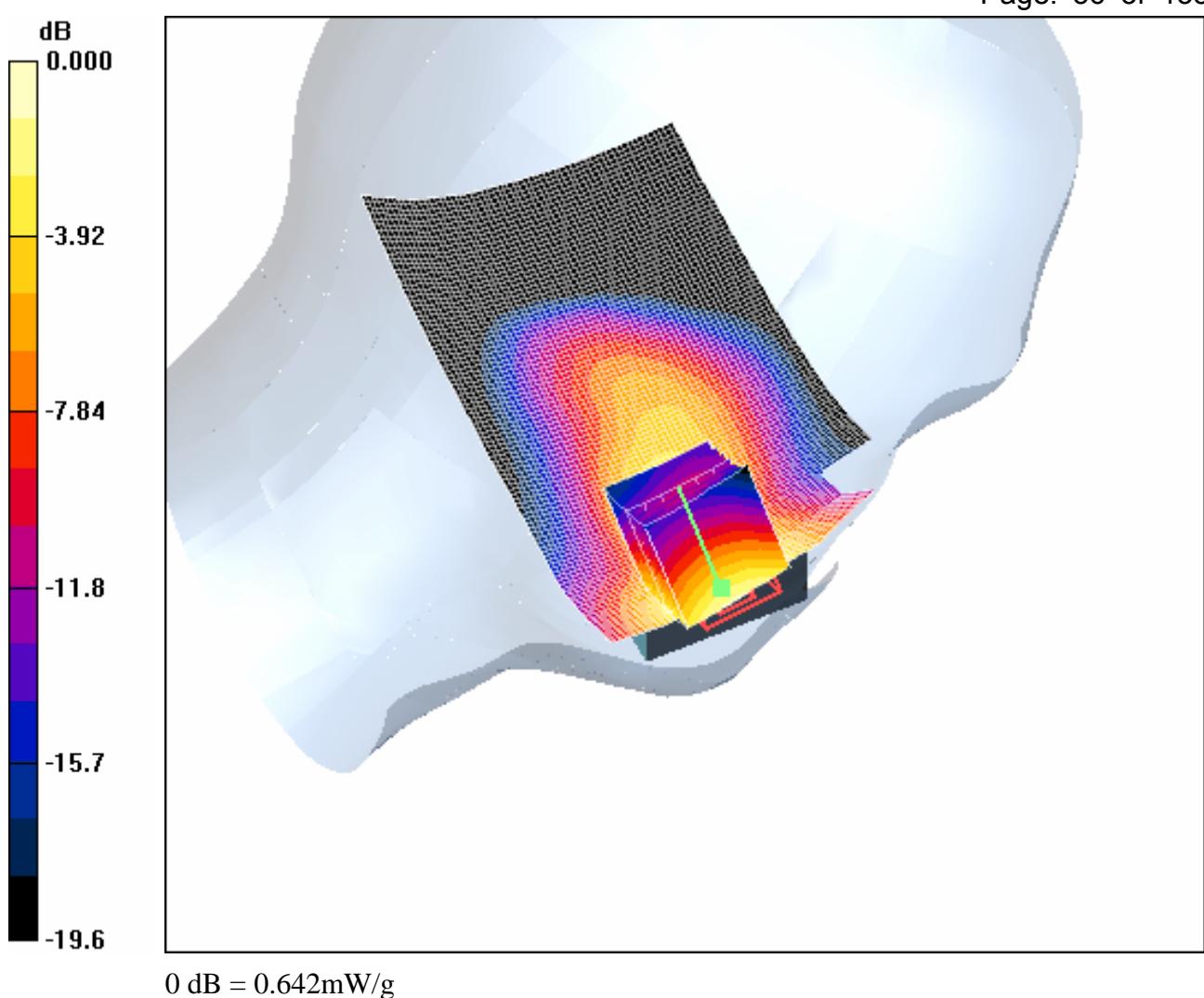
Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.57 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.930 W/kg

SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.361 mW/g

Maximum value of SAR (measured) = 0.642 mW/g



4.21 LeftHandSide-Cheek-PCS1900-High

Date/Time: 2007-3-22 15:36:09

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Cheek-High

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.923 mW/g

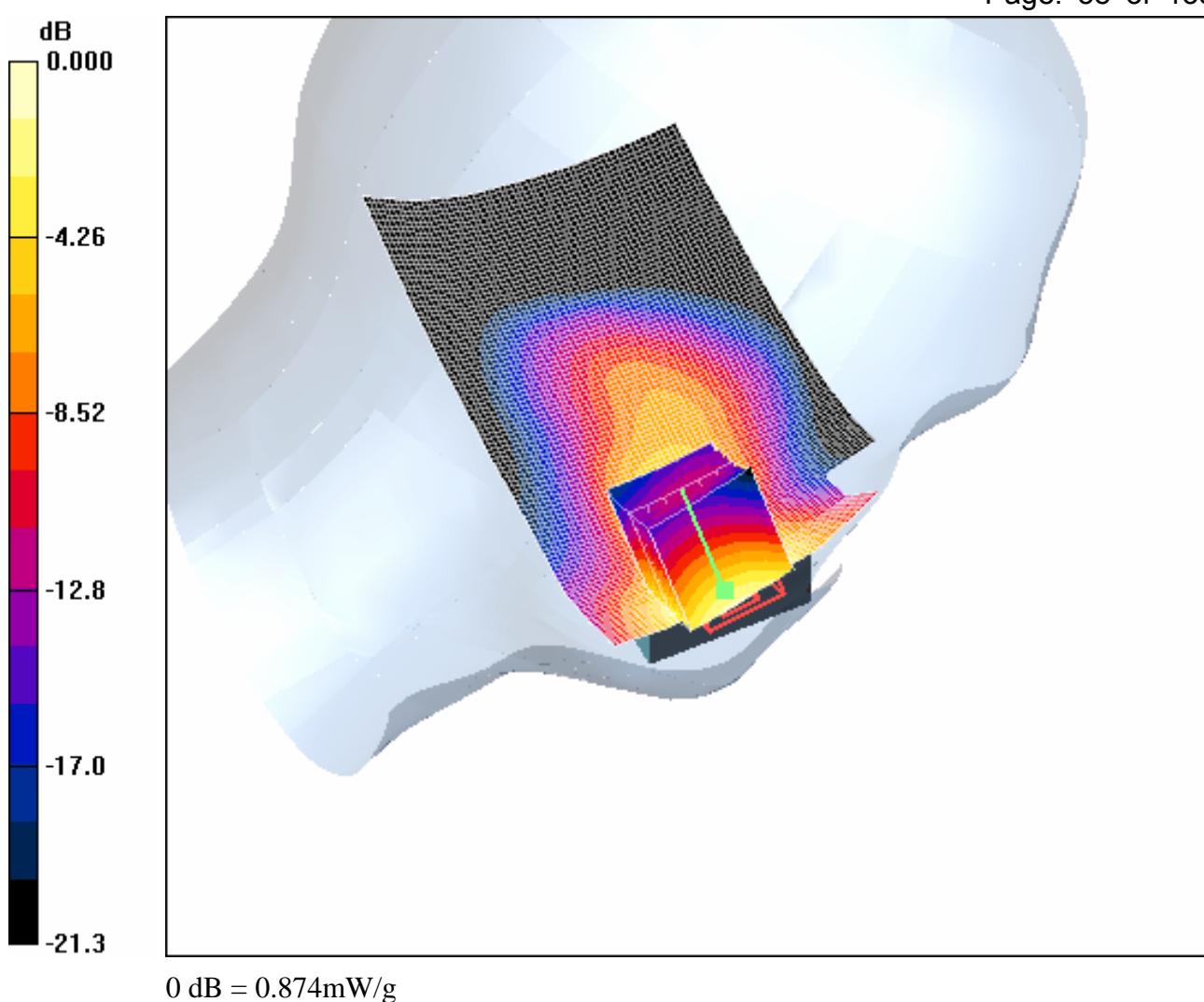
Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.49 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.807 mW/g; SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.874 mW/g



4.22 LeftHandSide-PCS1900-Maximum Value-SD

Date/Time: 2007-3-22 16:36:35

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Cheek-High+SD

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+SD/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.959 mW/g

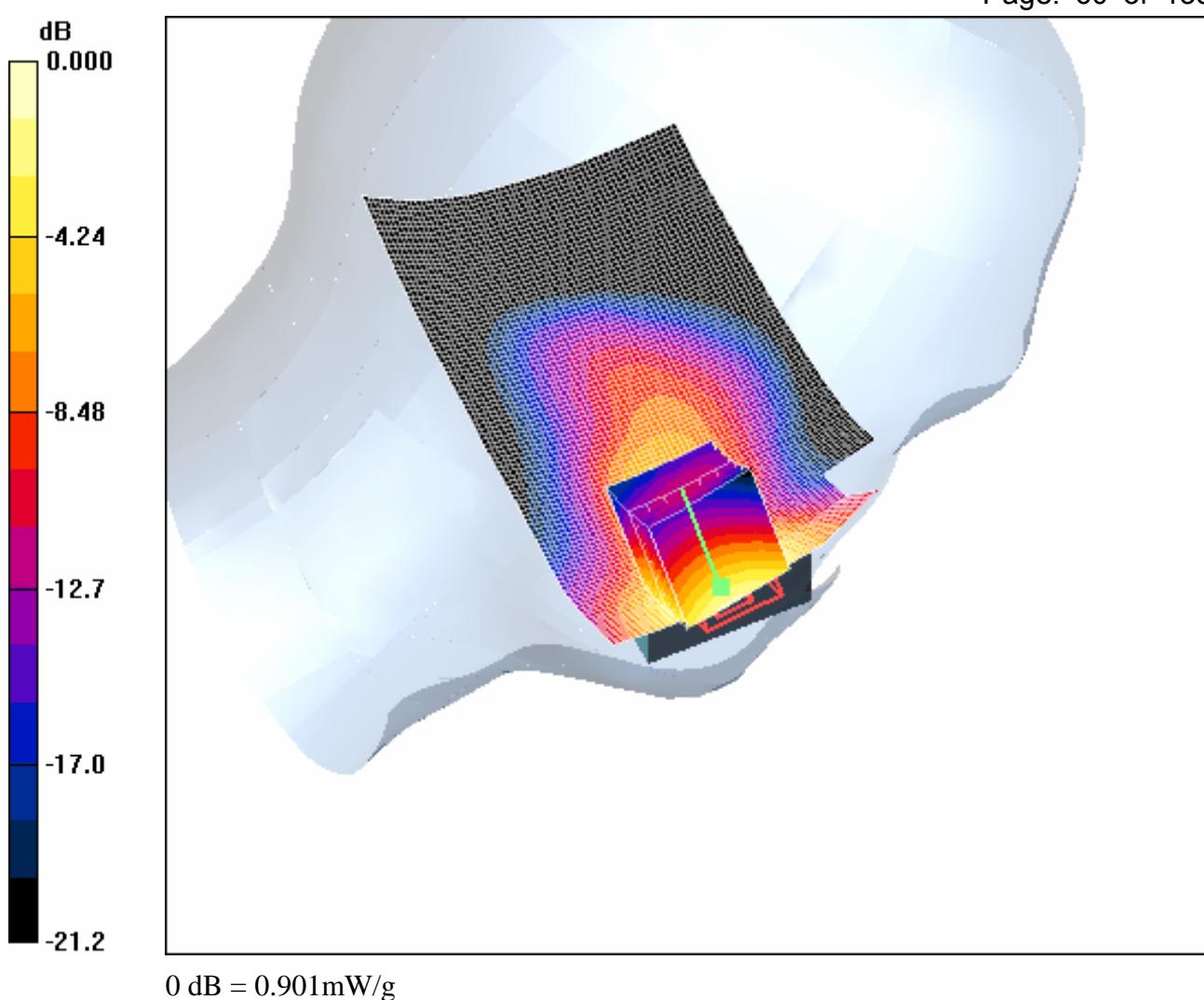
Cheek position - High+SD/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.02 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.825 mW/g; SAR(10 g) = 0.490 mW/g

Maximum value of SAR (measured) = 0.901 mW/g



4.23 LeftHandSide-PCS1900-Maximum Value-BT

Date/Time: 2007-3-22 18:15:12

Test Laboratory: SGS-GSM

PCS1900-LeftHandSide-Cheek-High+BT

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\eta =$

1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+BT/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.843 mW/g

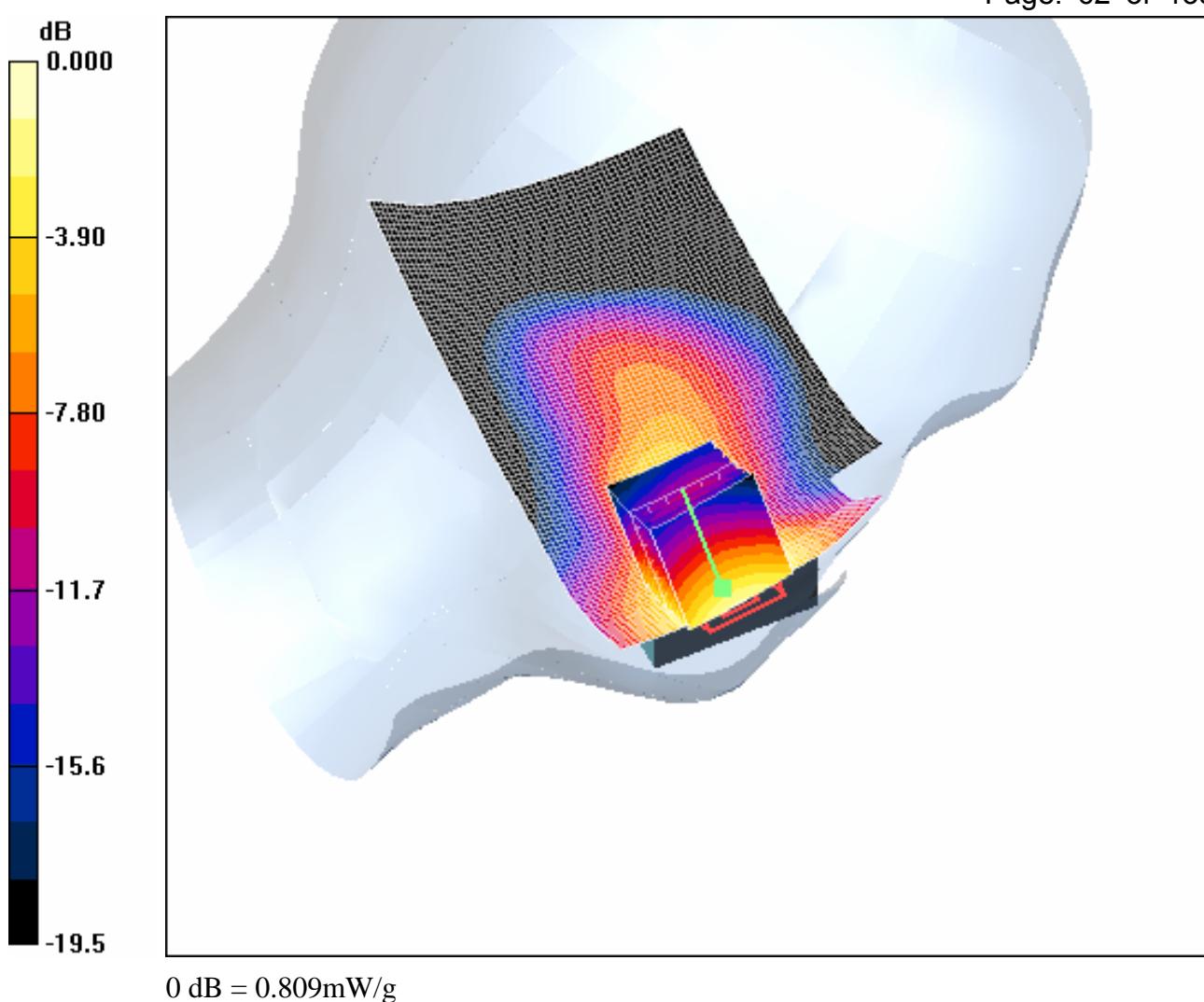
Cheek position - High+BT/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.80 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.446 mW/g

Maximum value of SAR (measured) = 0.809 mW/g



4.24RightHandSide-Cheek-PCS1900-Middle

Date/Time: 2007-3-27 9:52:06

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Cheek-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 39.2$; $\epsilon_i =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.794 mW/g

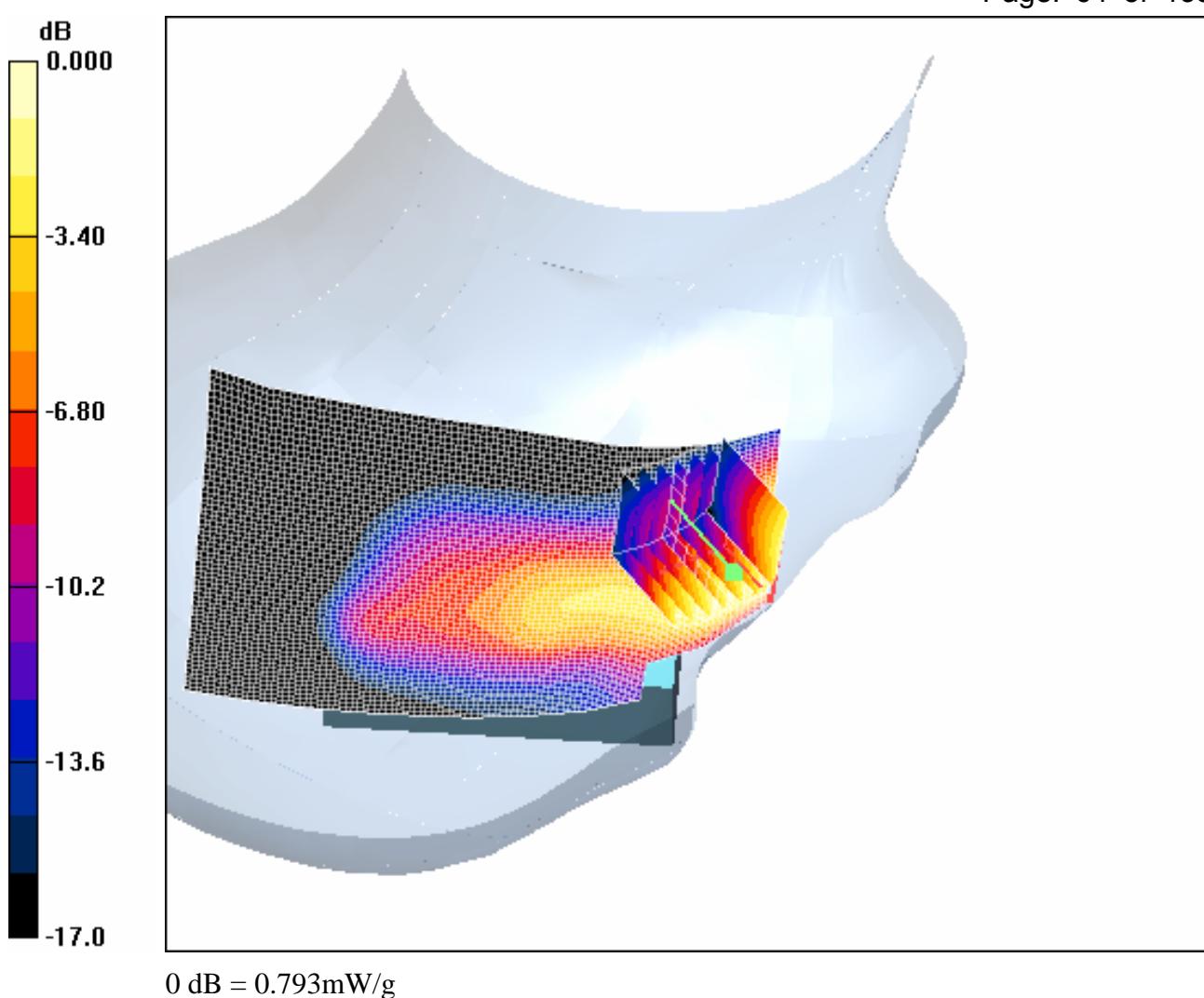
Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.03 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.729 mW/g; SAR(10 g) = 0.453 mW/g

Maximum value of SAR (measured) = 0.793 mW/g



4.25 RightHandSide-Tilt-PCS1900-Middle

Date/Time: 2007-3-27 11:35:35

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Tilt-Middle

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.2$; $\epsilon_i =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

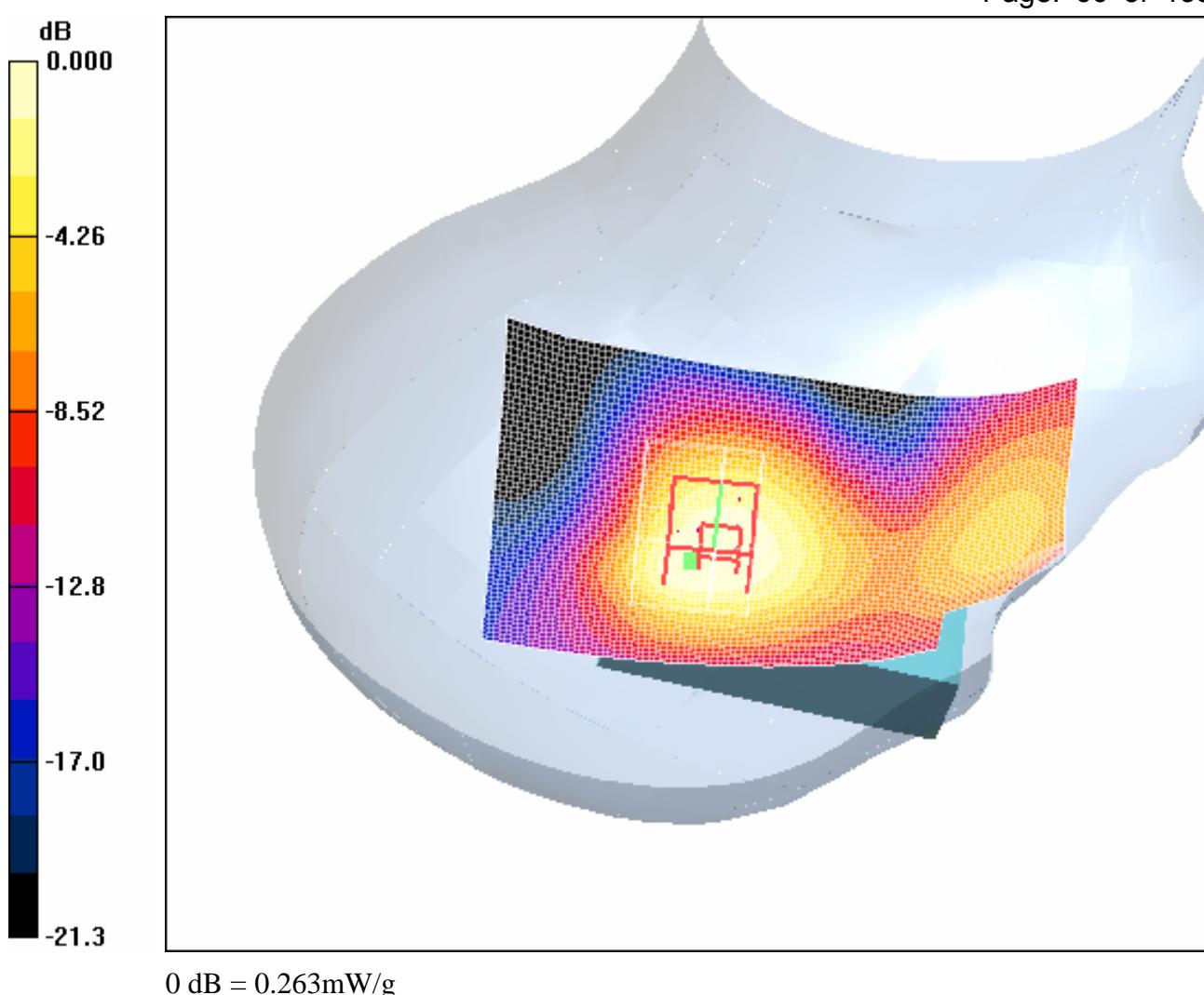
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.051 dB

Peak SAR (extrapolated) = 0.374 W/kg

SAR(1 g) = 0.243 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.263 mW/g



4.26 RightHandSide-Cheek-PCS1900-Low

Date/Time: 2007-3-27 10:19:33

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Cheek-Low

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ mho/m}$; $\epsilon_r = 39.2$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.652 mW/g

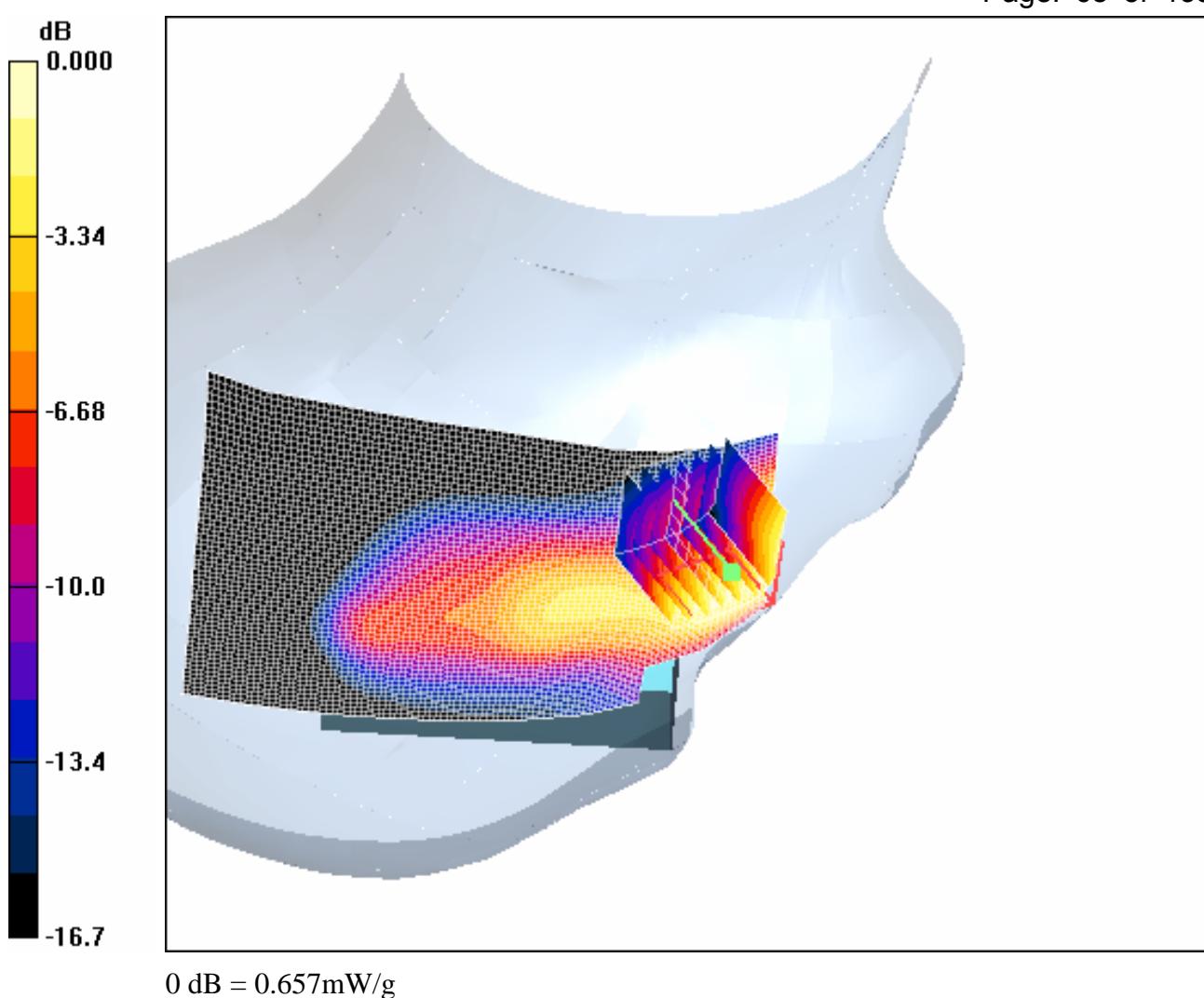
Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.74 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.870 W/kg

SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.378 mW/g

Maximum value of SAR (measured) = 0.657 mW/g



4.27 RightHandSide-Cheek-PCS1900-High

Date/Time: 2007-3-27 10:45:49

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Cheek-High

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.822 mW/g

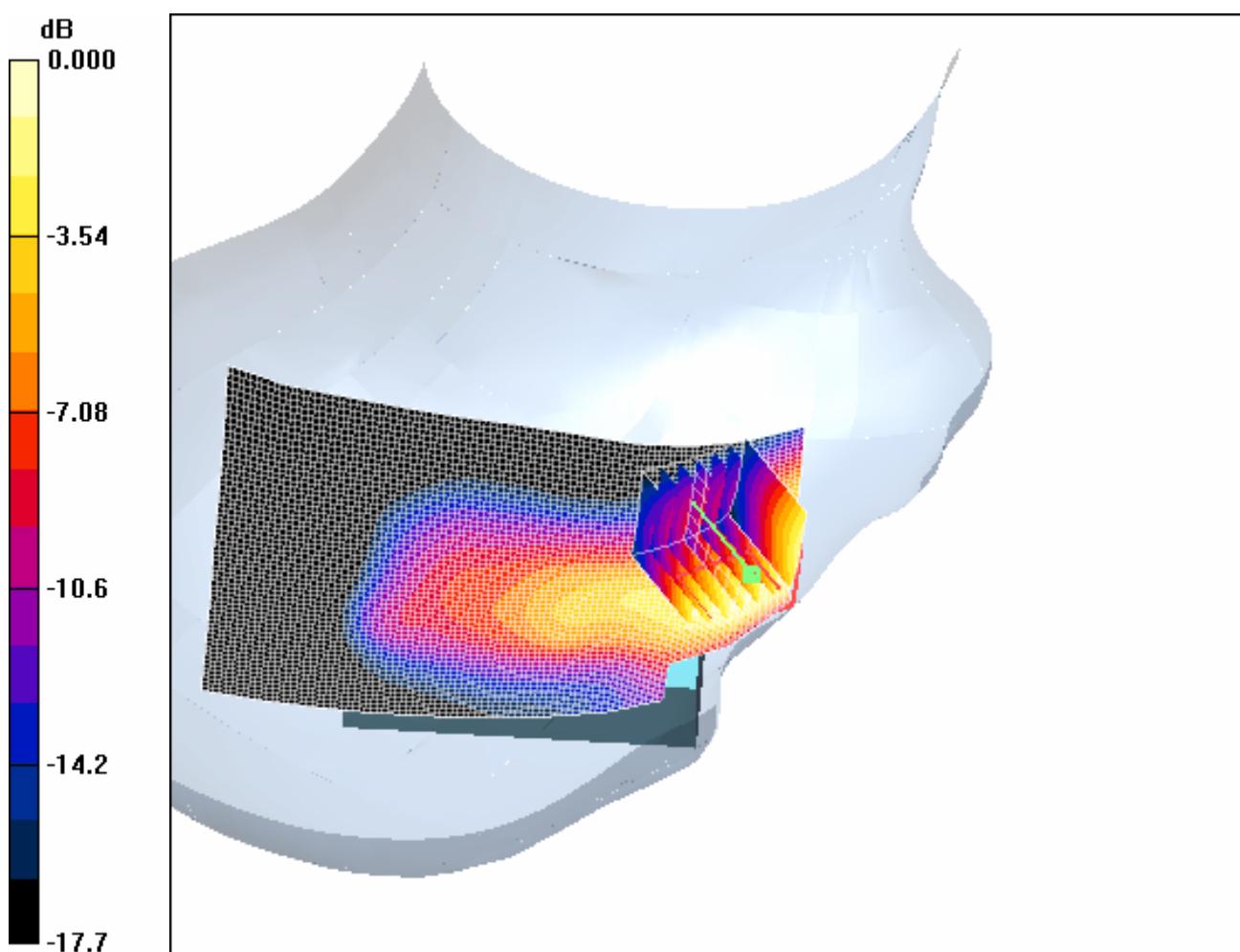
Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.02 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.761 mW/g; SAR(10 g) = 0.469 mW/g

Maximum value of SAR (measured) = 0.830 mW/g



0 dB = 0.830mW/g

4.28RightHandSide-PCS1900-Maximum Value-SD

Date/Time: 2007-3-27 12:01:44

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Cheek-High+SD

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\mu_r = 1$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+SD/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.758 mW/g

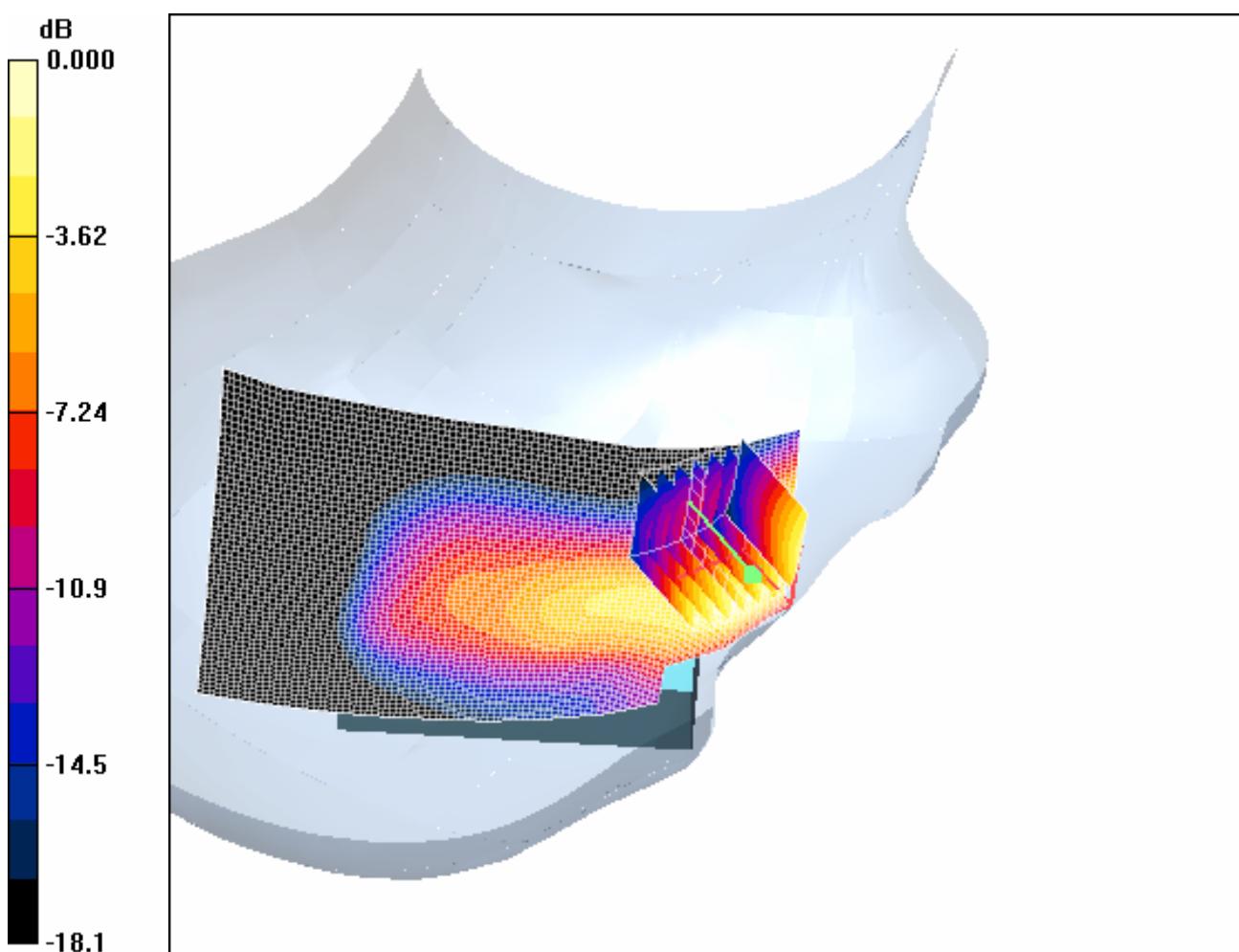
Cheek position - High+SD/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.18 V/m; Power Drift = -0.223 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.434 mW/g

Maximum value of SAR (measured) = 0.764 mW/g



0 dB = 0.764mW/g

4.29 RightHandSide-PCS1900-Maximum Value-BT

Date/Time: 2007-3-27 12:30:09

Test Laboratory: SGS-GSM

PCS1900-RightHandSide-Cheek-High+BT

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GSM Mode; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: PCS1900-Head Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 39.1$; $\eta =$

1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.07, 5.07, 5.07); Calibrated: 2006-12-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2006-12-8
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek position - High+BT/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.748 mW/g

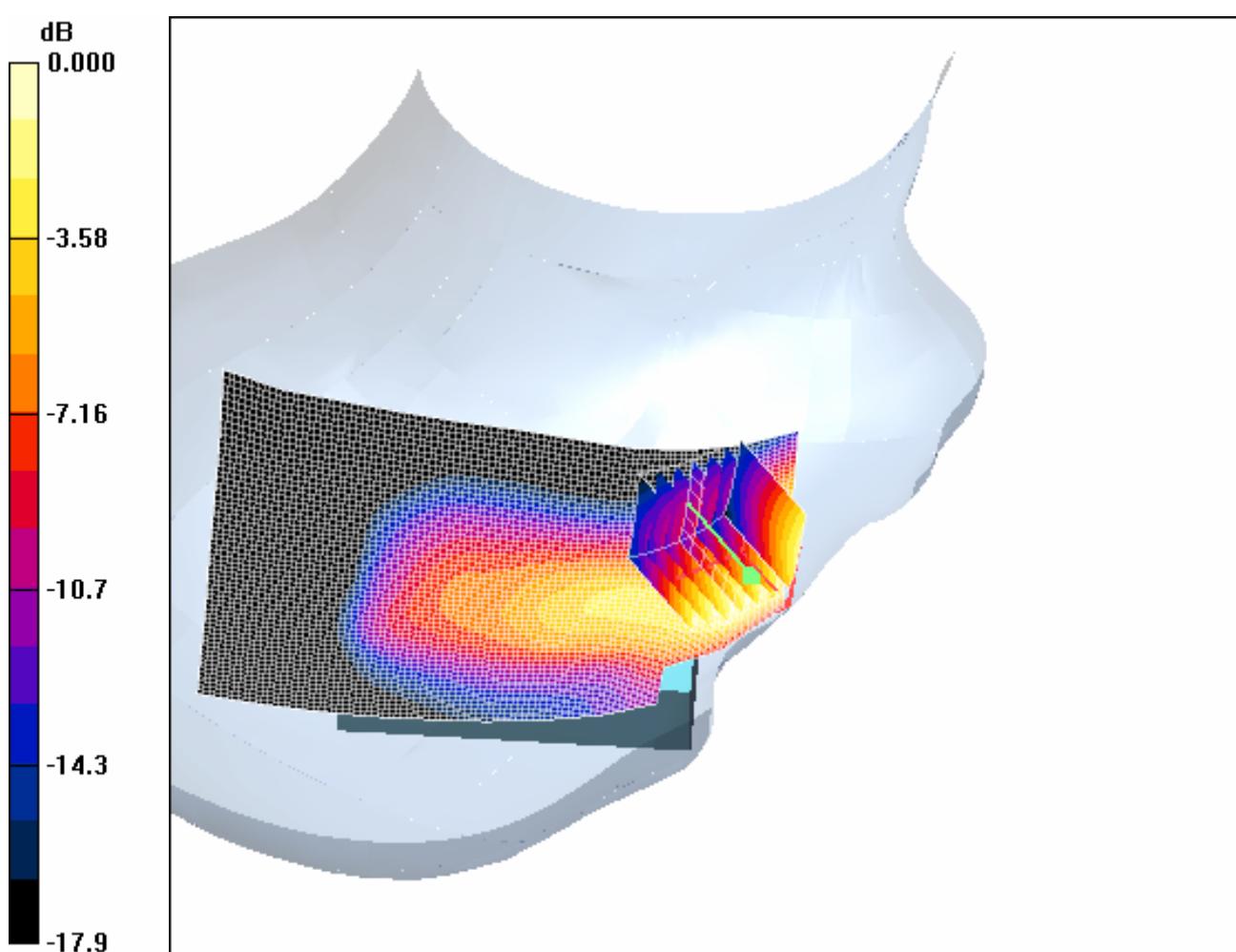
Cheek position - High+BT/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.21 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.993 W/kg

SAR(1 g) = 0.685 mW/g; SAR(10 g) = 0.425 mW/g

Maximum value of SAR (measured) = 0.742 mW/g



0 dB = 0.742mW/g

4.30 Body-Worn-PCS1900-GPRS-Low

Date/Time: 2007-3-19 20:22:56

Test Laboratory: SGS-GSM

PCS1900-Body-Worn-GPRS-Low-2.0cm

DUT: GSM10212817-body; Type: body; Serial: 011073000003040

Communication System: PCS1900-GPRS Mode; Frequency: 1850.2 MHz; Duty Cycle: 1:4

Medium: 1900-Body Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\tau = 50.9$; $\epsilon = 1000$