SAR TEST REPORT

Eequipment Under Test :	GSM 850&GSM1900MHz MOBILE PHONE
FCC ID :	RAD028
Model No. :	VLE5
Market Name :	OT-E260a
Applicant :	TCL&Alcatel Mobile Phones
Address of Applicant :	30/F, Times Square, 500 Zhangyang RD. Shanghai 200122, P.R.China
Date of Receipt :	2005.12.21
Date of Test :	2005.12.21 – 2005.12.30
Date of Issue :	2006.01.04

Standards:

FCC OET Bulletin 65 supplement C,
ANSI/IEEE C95.1, C95.3, IEEE 1528-2002

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 :	Will Ni	Date :	2006.01.04
Approved by :	Zhiang Yuen	Date :	2006.01.04

Contents

1. General Information

1.1 Test Laboratory

GSM Lab
SGS-CSTC Standards Technical Services Co.Ltd Shanghai Branch
9F,the 3rd Building, No.899, Yishan Rd, Xuhui District, Shanghai, China
Zip code: 200233
Telephone: +86 (0) 21 6495 1616
Fax: +86 (0) 21 6495 3679
Internet: http://www.cn.sgs.com

1.2 Details of Applicant

Name: TCL&Alcatel Mobile Phones
Address: 30/F, Times Square, 500 Zhangyang RD. Shanghai 200122, P.R.China

1.3 Description of EUT(s)

Brand name	Alcatel	
Model No.	VLE5	
Market Name	OT-E260a	
Serial No.	IMEI:01076100000001-3	
Battery Type	Lithium-Ion, 4.2Volt	
Antenna Type	Inner Antenna	
Operation Mode	GSM850/GSM1900	
Modulation Mode	GMSK	
Frequency range	GSM850	Tx: 824~849 MHz
		Rx: 869~894 MHz
	GSM1900	Tx: 1850~1910 MHz
		Rx: 1930~1990 MHz
Maximum RF Conducted Power	GSM850: 33dBm, GSM1900: 30dBm	

1.4 Test Environment

Ambient temperature: 22.0° C

Tissue Simulating Liquid: 22° C

Relative Humidity: 38%

1.5 Operation Configuration

Slide off & Slide on

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

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

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

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

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

Configuration 6: GSM 1900, BodyWorn (2.0cm 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= $\sigma (|Ei|^2)/ \rho$ 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.

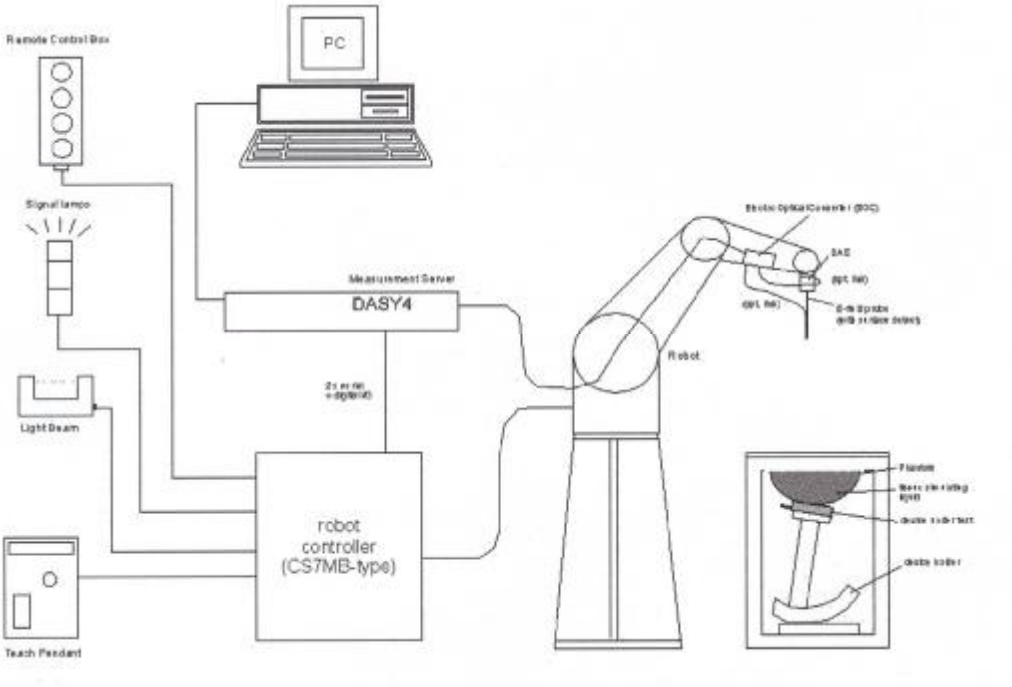


Fig. a SAR System Configuration

- 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 validate 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 850MHz 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.

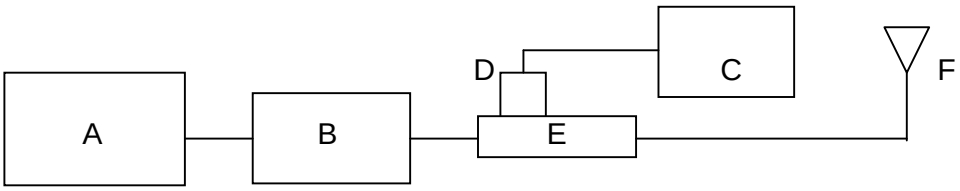


Fig. b the microwave circuit arrangement used for SAR system verification

A. Agilent Model E4438C Signal Generator
B. Mini-Circuits preamplifier ZHL-42
C. Agilent Model E4416A Power Meter

D. Agilent Model 8481H Power Sensor

E. HT CP6100 20N Dual directional coupler

F. Reference dipole antenna

Validation Kit	Frequency (MHz)	Target SAR 1g (250mW)	Target SAR 10g (250mW)	Measured SAR 1g	Measured SAR 10g	Measured Date
ES3DV3 SN3088	900 Head	2.60	1.67	2.56	1.65	2005-12-21
ES3DV3 SN3088	900 Head	2.60	1.67	2.50	1.61	2005-12-27
ES3DV3 SN3088	900 Body	2.69	1.74	2.63	1.70	2005-12-21
ES3DV3 SN3088	900 Body	2.69	1.74	2.76	1.78	2005-12-22
ES3DV3 SN3088	1900 Head	9.89	5.16	9.80	5.09	2005-12-21
ES3DV3 SN3088	1900 Head	9.89	5.16	9.79	5.02	2005-12-28
ES3DV3 SN3088	1900 Body	9.81	5.22	9.73	5.17	2005-12-26

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	Measured, 2005-12-21	41.67	0.91	21.8
		Recommended Limit	41.5±5%	0.90±5%	20-24
	Body	Measured, 2005-12-21	55.62	0.98	21.8
		Recommended Limit	55.2±5%	0.97±5%	20-24
1900	Head	Measured, 2005-12-21	40.12	1.46	22.0
		Recommended Limit	40.0±5%	1.40±5%	20-24
	Body	Measured, 2005-12-26	51.51	1.54	22.0
		Recommended Limit	53.3±5%	1.52±5%	20-24

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 evalutation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specifice absorption rate (SAR) in Section 4.2 of “IEEE Standard for Safty Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3KHz to 300GHz,” ANSI/IEEE C95.1-1992, Conpyright 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 W/Kg (averaged over a mass of 1g)

Table 3. RF Exposure Limits

Notes:

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

2. Summary of Results

Frequency Band(MHz)	EUT Status	EUT position	Conducted Output Power(dBm)	1g Average (W/Kg)	Power Drift (dB)	Amb. Temp (℃)	Verdict
GSM 850	Slide off	LeftHandSide Cheek, Low Channel	32.6	*0.725*	-0.296	22	PASS
		LeftHandSide Cheek, Mid Channel	32.6	0.572	0.561	22	PASS
		LeftHandSide Cheek, High Channel	32.6	0.517	0.030	22	PASS
		LeftHandSide Tilt, Low Channel	32.6	0.451	-0.005	22	PASS
		LeftHandSide Tilt, Mid Channel	32.6	0.486	0.001	22	PASS
		LeftHandSide Tilt, High Channel	32.6	0.370	-0.016	22	PASS
		RightHandSide Cheek, Low Channel	32.6	0.623	-0.074	22	PASS
		RightHandSide Cheek, Mid Channel	32.6	0.677	0.116	22	PASS
		RightHandSide Cheek, High Channel	32.6	0.530	0.013	22	PASS
		RightHandSide Tilt, Low Channel	32.6	0.437	0.127	22	PASS
		RightHandSide Tilt, Mid Channel	32.6	0.504	-0.016	22	PASS
		RightHandSide Tilt, High Channel	32.6	0.379	0.020	22	PASS
		BodyWorn, Low Channel	32.6	*0.779*	-0.147	22	PASS
		BodyWorn, Mid Channel	32.6	0.705	-0.151	22	PASS
		BodyWorn, High Channel	32.6	0.517	-0.051	22	PASS
	Slide on	LeftHandSide Cheek, Low Channel	32.6	0.512	-0.320	22	PASS
		LeftHandSide Cheek, Mid Channel	32.6	0.445	-0.357	22	PASS
		LeftHandSide Cheek, High Channel	32.6	0.413	-0.113	22	PASS
		LeftHandSide Tilt, Low Channel	32.6	0.175	-0.281	22	PASS
		LeftHandSide Tilt, Mid Channel	32.6	0.183	0.154	22	PASS
		LeftHandSide Tilt, High Channel	32.6	0.161	0.175	22	PASS
		RightHandSide Cheek, Low Channel	32.6	0.541	0.751	22	PASS

		RightHandSide Cheek, Mid Channel	32.6	0.529	0.676	22	PASS
		RightHandSide Cheek, High Channel	32.6	0.439	0.198	22	PASS
		RightHandSide Tilt, Low Channel	32.6	0.164	-0.455	22	PASS
		RightHandSide Tilt, Mid Channel	32.6	0.152	-0.361	22	PASS
		RightHandSide Tilt, High Channel	32.6	0.119	0.523	22	PASS
		BodyWorn, Low Channel	32.6	0.508	0.021	22	PASS
		BodyWorn, Mid Channel	32.6	0.454	-0.054	22	PASS
		BodyWorn, High Channel	32.6	0.395	0.069	22	PASS
GSM 1900		LeftHandSide Cheek, Low Channel	30.4	*0.223*	-0.091	22	PASS
		LeftHandSide Cheek, Mid Channel	30.3	0.164	0.101	22	PASS
		LeftHandSide Cheek, High Channel	29.7	0.109	-0.089	22	PASS
		LeftHandSide Tilt, Low Channel	30.4	0.242	0.064	22	PASS
		LeftHandSide Tilt, Mid Channel	30.3	0.247	-0.017	22	PASS
		LeftHandSide Tilt, High Channel	29.7	0.167	0.009	22	PASS
		RightHandSide Cheek, Low Channel	30.4	0.144	0.022	22	PASS
	Slide off	RightHandSide Cheek, Mid Channel	30.3	0.130	-0.153	22	PASS
		RightHandSide Cheek, High Channel	29.7	0.088	-0.052	22	PASS
		RightHandSide Tilt, Low Channel	30.4	0.212	-0.008	22	PASS
		RightHandSide Tilt, Mid Channel	30.3	0.219	0.026	22	PASS
		RightHandSide Tilt, High Channel	29.7	0.138	0.011	22	PASS
		BodyWorn, Low Channel	30.4	0.422	-0.084	22	PASS
		BodyWorn, Mid Channel	30.3	0.468	0.129	22	PASS
		BodyWorn, High Channel	29.7	0.345	0.188	22	PASS
	Slide on	LeftHandSide Cheek, Low Channel	30.4	0.120	-0.146	22	PASS
		LeftHandSide Cheek, Mid Channel	30.3	0.155	-0.056	22	PASS
		LeftHandSide Cheek, High Channel	29.7	0.114	0.099	22	PASS

		LeftHandSide Tilt, Low Channel	30.4	0.079	-0.140	22	PASS
		LeftHandSide Tilt, Mid Channel	30.3	0.112	-0.031	22	PASS
		LeftHandSide Tilt, High Channel	29.7	0.102	0.088	22	PASS
		RightHandSide Cheek, Low Channel	30.4	0.166	-0.131	22	PASS
		RightHandSide Cheek, Mid Channel	30.3	0.203	-0.095	22	PASS
		RightHandSide Cheek, High Channel	29.7	0.156	0.033	22	PASS
		RightHandSide Tilt, Low Channel	30.4	0.097	-0.045	22	PASS
		RightHandSide Tilt, Mid Channel	30.3	0.136	0.001	22	PASS
		RightHandSide Tilt, High Channel	29.7	0.114	0.097	22	PASS
		BodyWorn, Low Channel	30.4	0.476	-0.034	22	PASS
		BodyWorn, Mid Channel	30.3	*0.532*	-0.005	22	PASS
		BodyWorn, High Channel	29.7	0.414	0.153	22	PASS

Maximum value

Frequency Band(MHz)	EUT position	Conducted Output Power (dBm)	1g Average (W/Kg)	Power Drift (dB)	Amb. Temp (℃)	Verdict
GSM 850	LeftHandSide Cheek, Low Channel, Slide off	32.6	*0.725*	-0.296	22	PASS
GSM 850	BodyWorn, Low Channel Slide off	32.6	*0.779*	-0.147	22	PASS
GSM 1900	LeftHandSide Tilt, Mid Channel Slide off	30.3	0.247	-0.017	22	PASS
GSM 1900	BodyWorn, Mid Channel Slide off	30.3	*0.532*	-0.005	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 GSM1900 band, the low, middle and high channels are CH512/1805.2MHz, CH661/1880.0MHz and CH810/1909.8MHz separately.

3. For the Bodyworn measurements the sample was only placed with the antenna toward the phantom since this position delivers the highest SAR values.

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 4.6 build 23	N/A	GSM-SAR-001	N/A
Probe	ES3DV3	3088	GSM-SAR-031	2005.09.13
DAE	DAE3	569	GSM-SAR-123	2005.11.17
Phantom	SAM	TP-1283	GSM-SAR-005	N/A
Robot	RX90L	F03/5V32A1/A01	GSM-SAR-008	N/A
900MHz system validation dipole	D900V2	184	GSM-SAR-013	2005.8.22
1900MHz system validation dipole	D1900V2	5d028	GSM-SAR-020	2005.8.25
Dielectric probe kit	85070D	US01440168	GSM-SAR-016	2005.12.19
Agilent network analyzer	E5071B	MY42100549	GSM-SAR-007	2005.12.19
Agilent signal generator	E4438	14438CATO-19719	GSM-SAR-008	2005.12.19
Mini-Circuits preamplifier	ZHL-42	D041905	GSM-SAR-033	2005.05.20
Agilent power meter	E4416A	GB41292095	GSM-SAR-010	2005.12.19
Agilent power sensor	8481h	MY41091234	GSM-SAR-011	2005.12.19
HT CP6100 20N Coupling	6100	SCP301480120	GSM-SAR-012	2005.12.19
R&S Universal radio communication tester	CMU200	103633	GSM-AUD-102	2004.01.25

4. Measurements

4.1 FCC-OET65-LeftHandSide-Cheek-GSM850-Low-Slide-Off

Date/Time: 2005-12-21 16:01:10

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-Low-Slide-Off

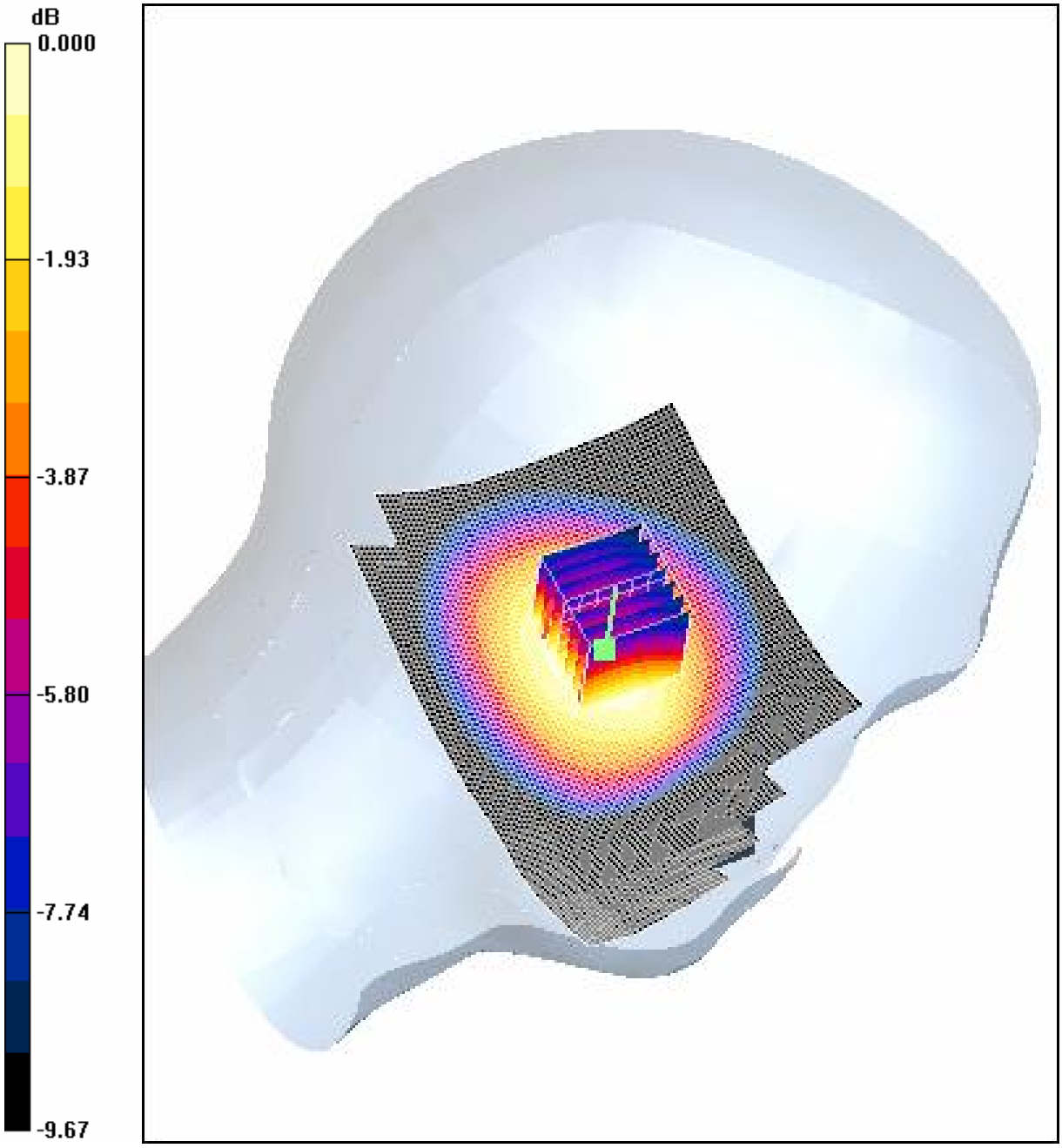
DUT: GSM50120C; Type: Head; Serial: 20051221

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.799 mW/g
Cheek position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.0 V/m; Power Drift = -0.296 dB
Peak SAR (extrapolated) = 0.946 W/kg
SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.533 mW/g
Maximum value of SAR (measured) = 0.766 mW/g



0 dB = 0.766mW/g

4.2 FCC-OET65-LeftHandSide-Cheek-GSM850-Mid-Slide-Off

Date/Time: 2005-12-27 9:24:02

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

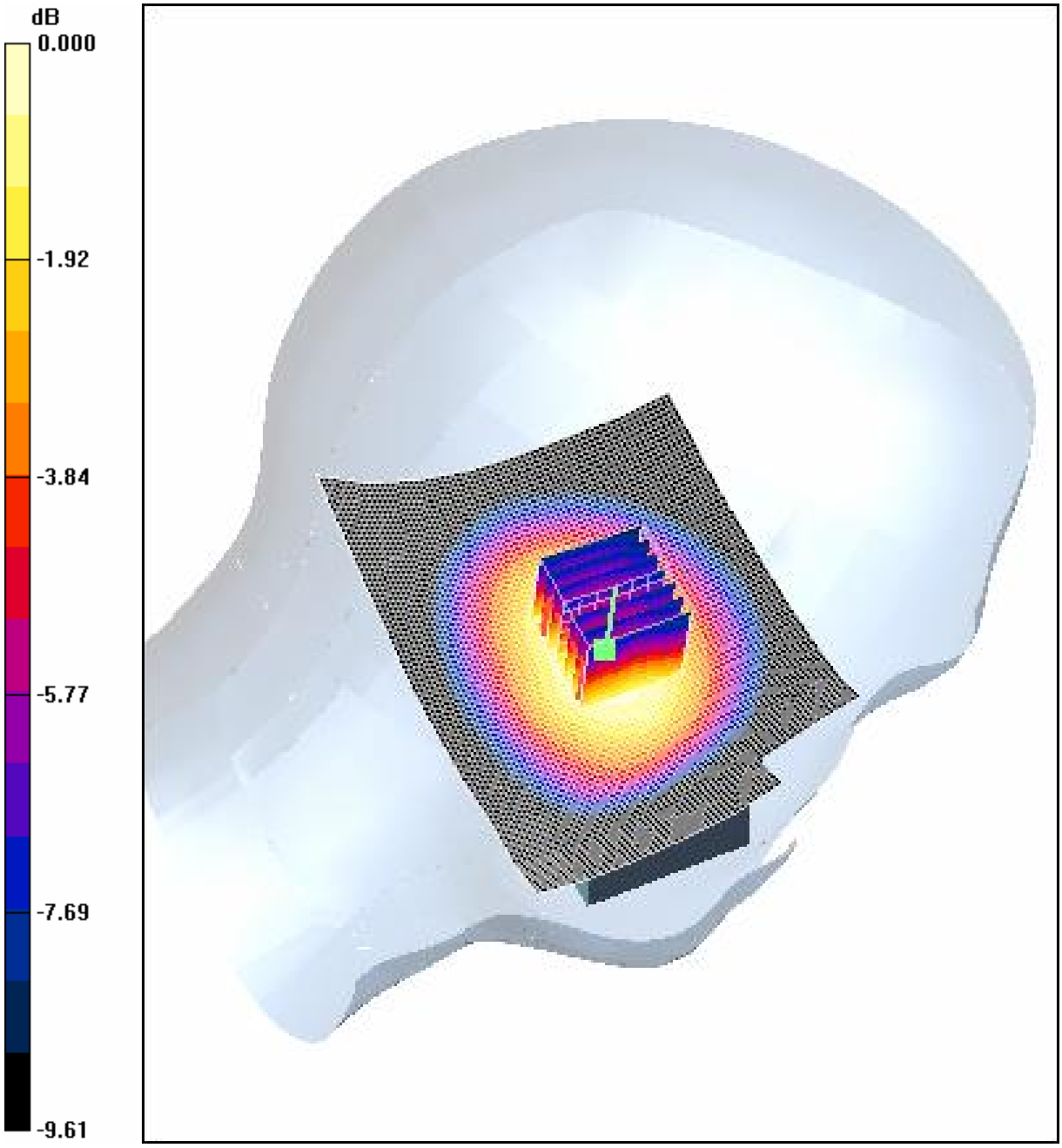
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Mid/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.613 mW/g

Cheek position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.2 V/m; Power Drift = 0.561 dB
Peak SAR (extrapolated) = 0.753 W/kg
SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.416 mW/g
Maximum value of SAR (measured) = 0.620 mW/g



0 dB = 0.620mW/g

4.3 FCC-OET65-LeftHandSide-Cheek-GSM850-High-Slide-Off

Date/Time: 2005-12-27 9:47:45

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

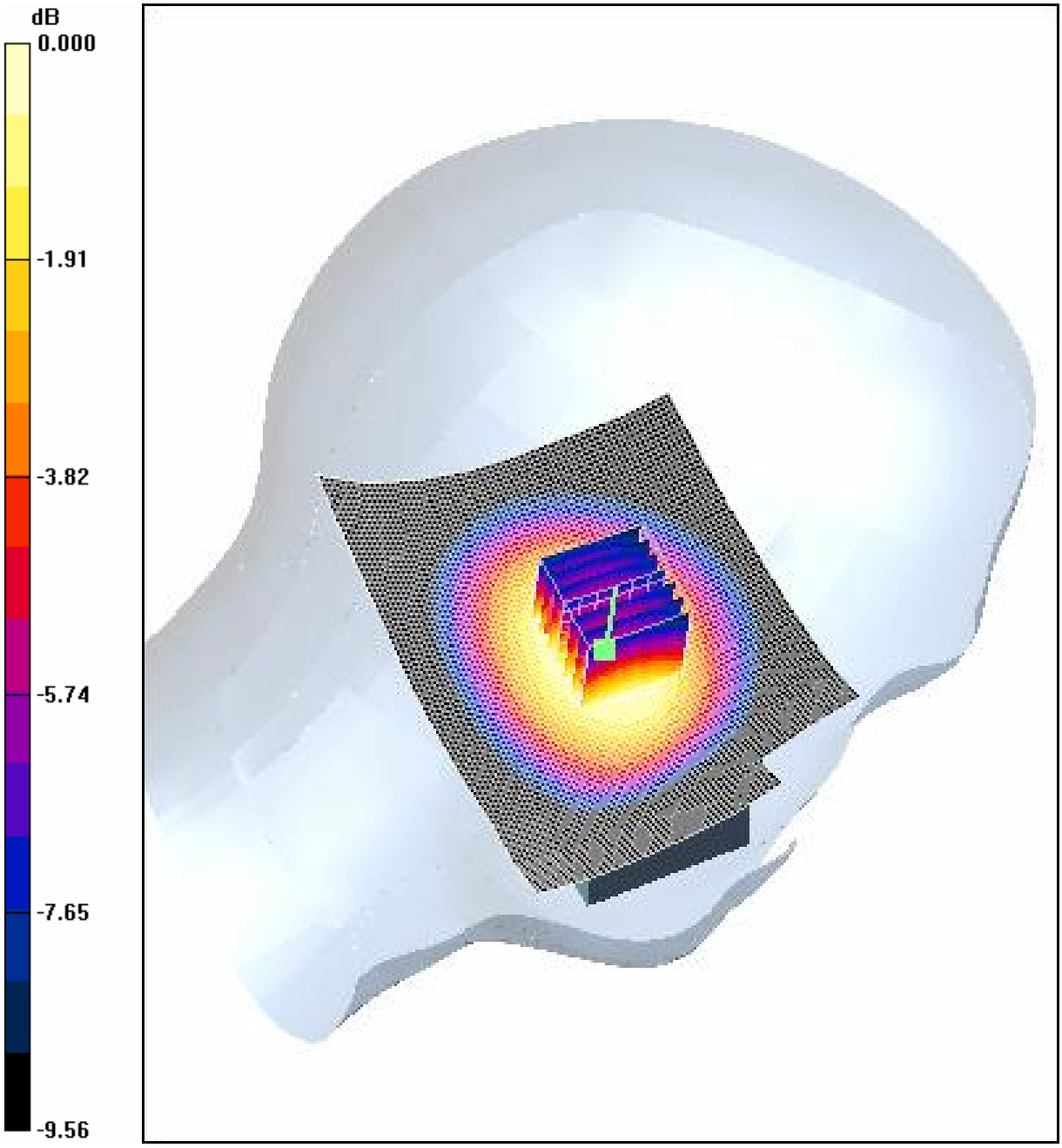
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.554 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.4 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.661 W/kg
SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.376 mW/g
Maximum value of SAR (measured) = 0.547 mW/g



0 dB = 0.547mW/g

4.4 FCC-OET65-LeftHandSide-Tilt-GSM850-Low-Slide-Off

Date/Time: 2005-12-27 15:38:36

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

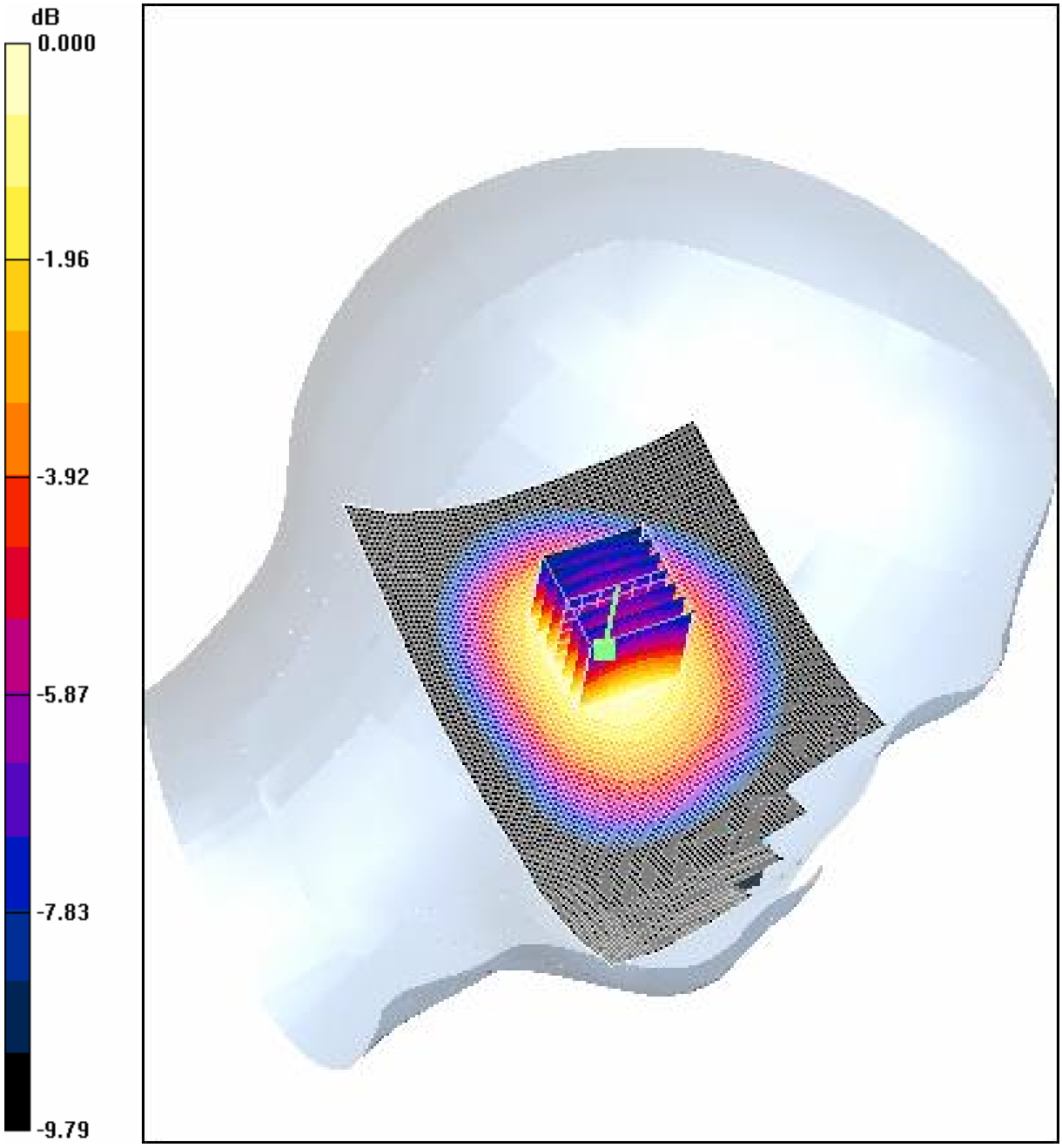
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.472 mW/g

Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.3 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.576 W/kg
SAR(1 g) = 0.451 mW/g; SAR(10 g) = 0.326 mW/g
Maximum value of SAR (measured) = 0.480 mW/g



0 dB = 0.480mW/g

4.5 FCC-OET65-LeftHandSide-Tilt-GSM850-Mid-Slide-Off

Date/Time: 2005-12-27 14:14:58

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

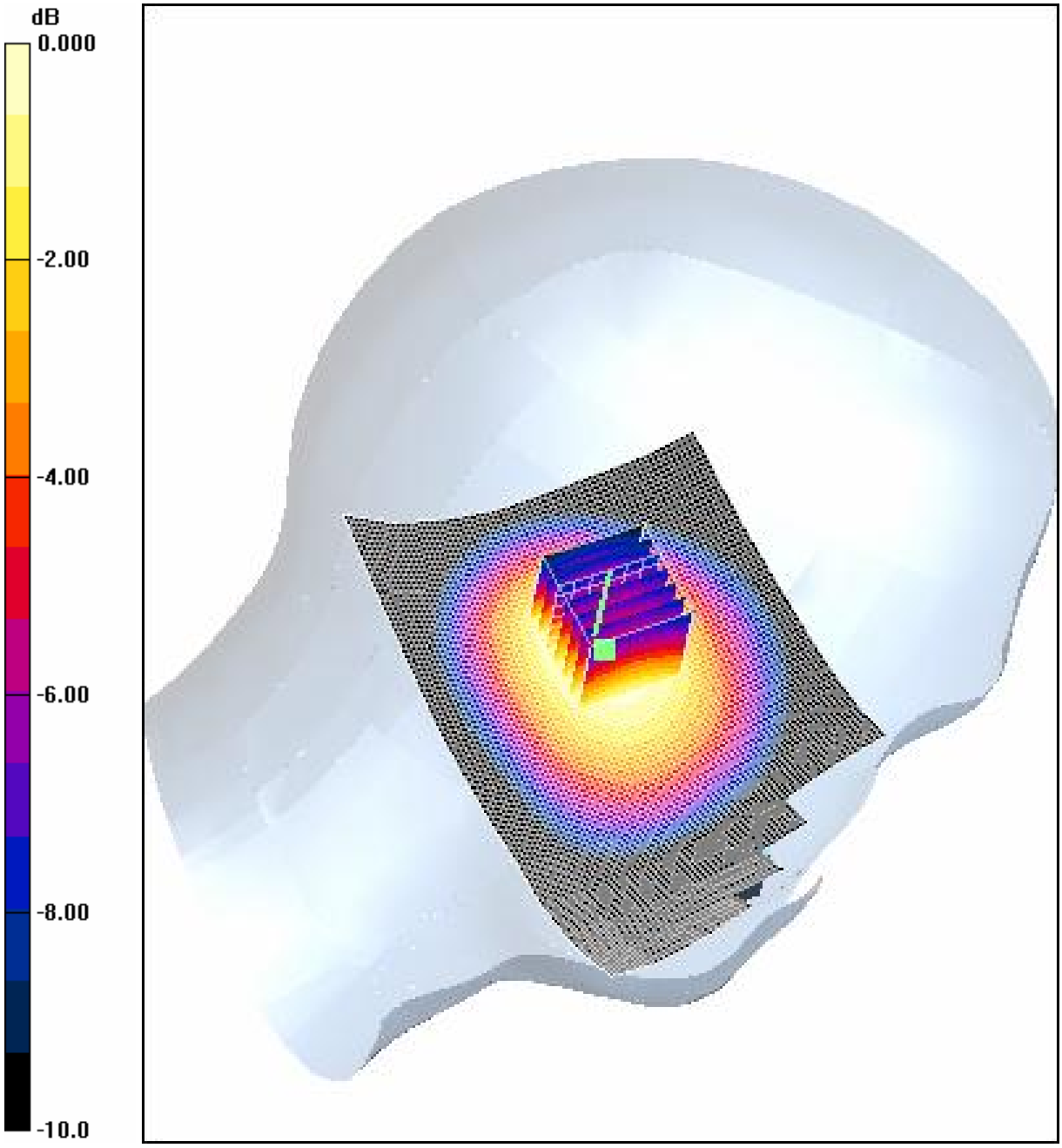
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Mid/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.521 mW/g

Tilt position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.4 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.352 mW/g
Maximum value of SAR (measured) = 0.514 mW/g



0 dB = 0.514mW/g

4.6 FCC-OET65-LeftHandSide-Tilt-GSM850-High-Slide-Off

Date/Time: 2005-12-27 13:48:49

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

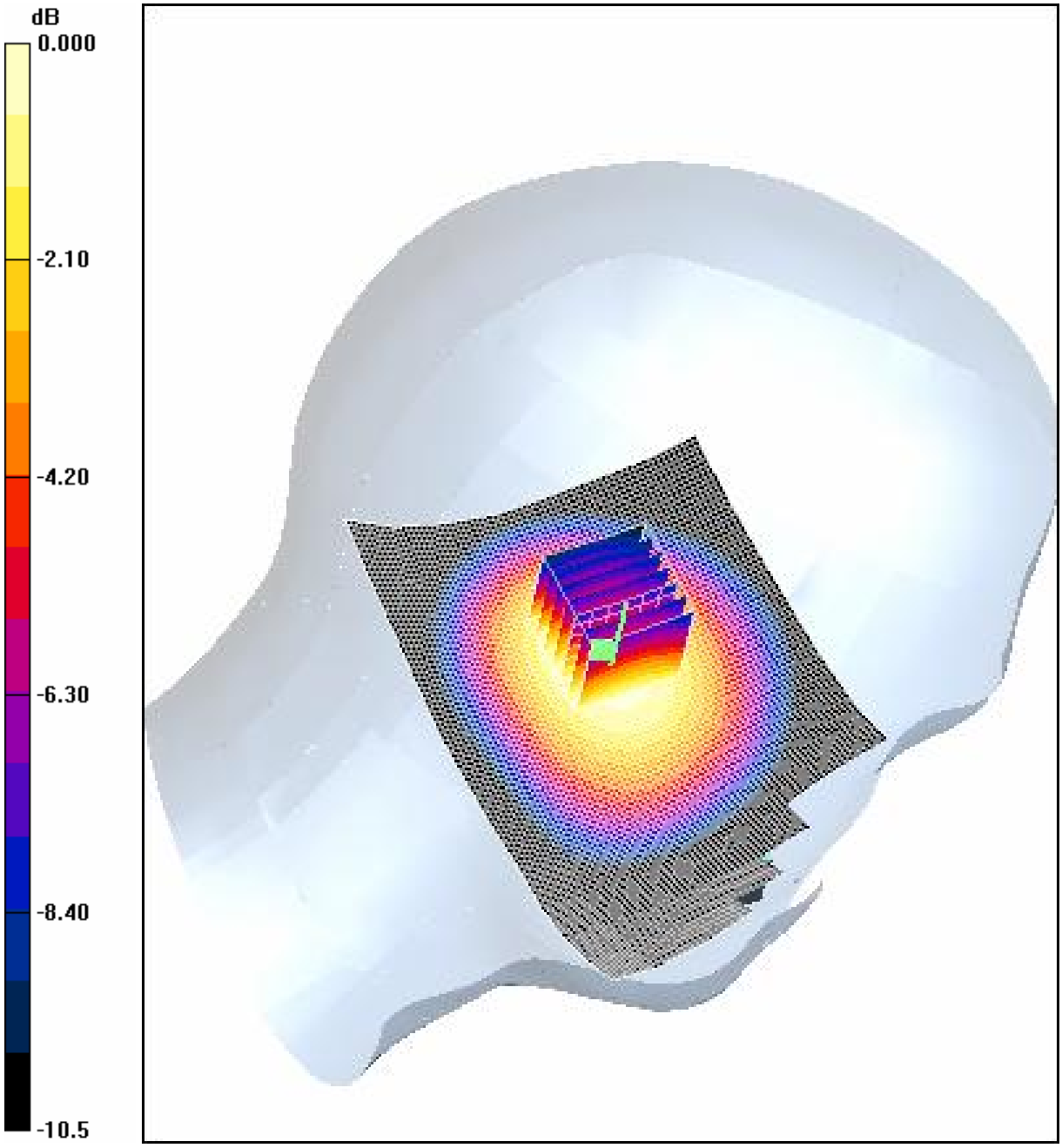
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.401 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.480 W/kg
SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.267 mW/g
Maximum value of SAR (measured) = 0.393 mW/g



0 dB = 0.393mW/g

4.7 FCC-OET65-RightHandSide-Cheek-GSM850-Low-Slide-Off

Date/Time: 2005-12-28 11:05:00

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

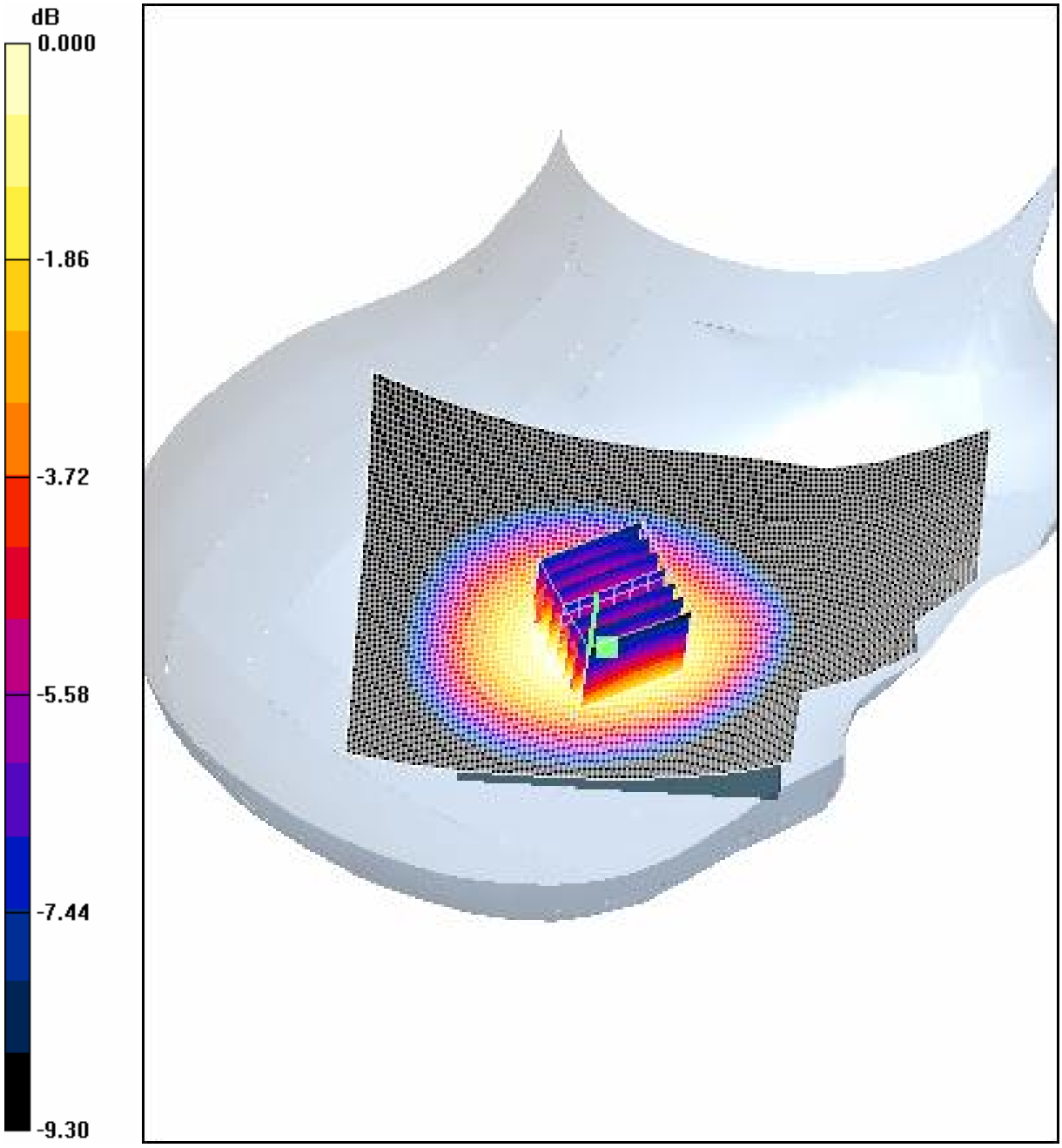
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.672 mW/g

Cheek position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.7 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 0.794 W/kg
SAR(1 g) = 0.623 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 0.658 mW/g



0 dB = 0.658mW/g

4.8 FCC-OET65-RightHandSide-Cheek-GSM850-Mid-Slide-Off

Date/Time: 2005-12-21 16:38:20

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

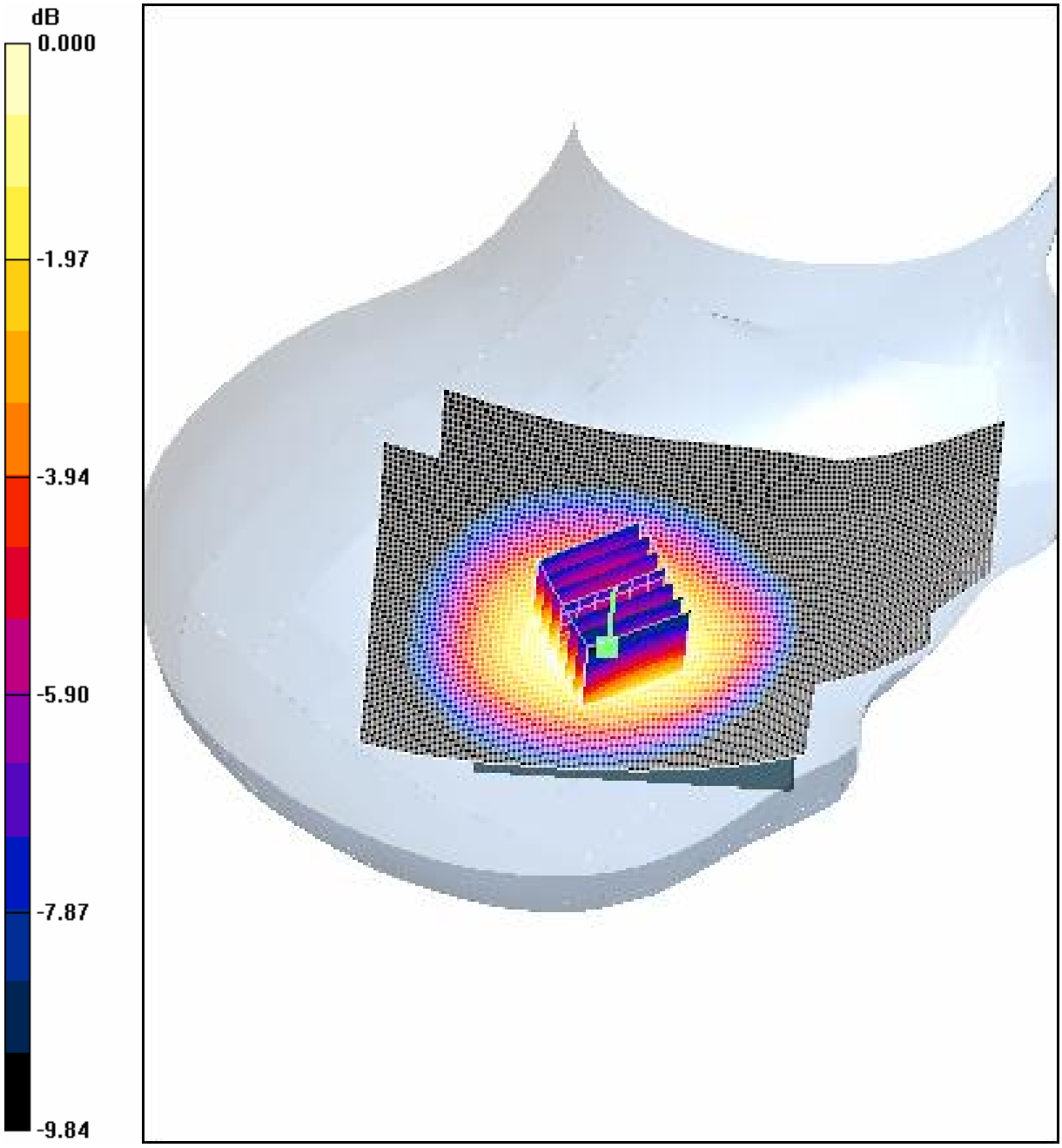
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Mid/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.702 mW/g

Cheek position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.6 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.870 W/kg
SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.494 mW/g
Maximum value of SAR (measured) = 0.715 mW/g



0 dB = 0.715mW/g

4.9 FCC-OET65-RightHandSide-Cheek-GSM850-High-Slide-Off

Date/Time: 2005-12-28 11:49:14

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

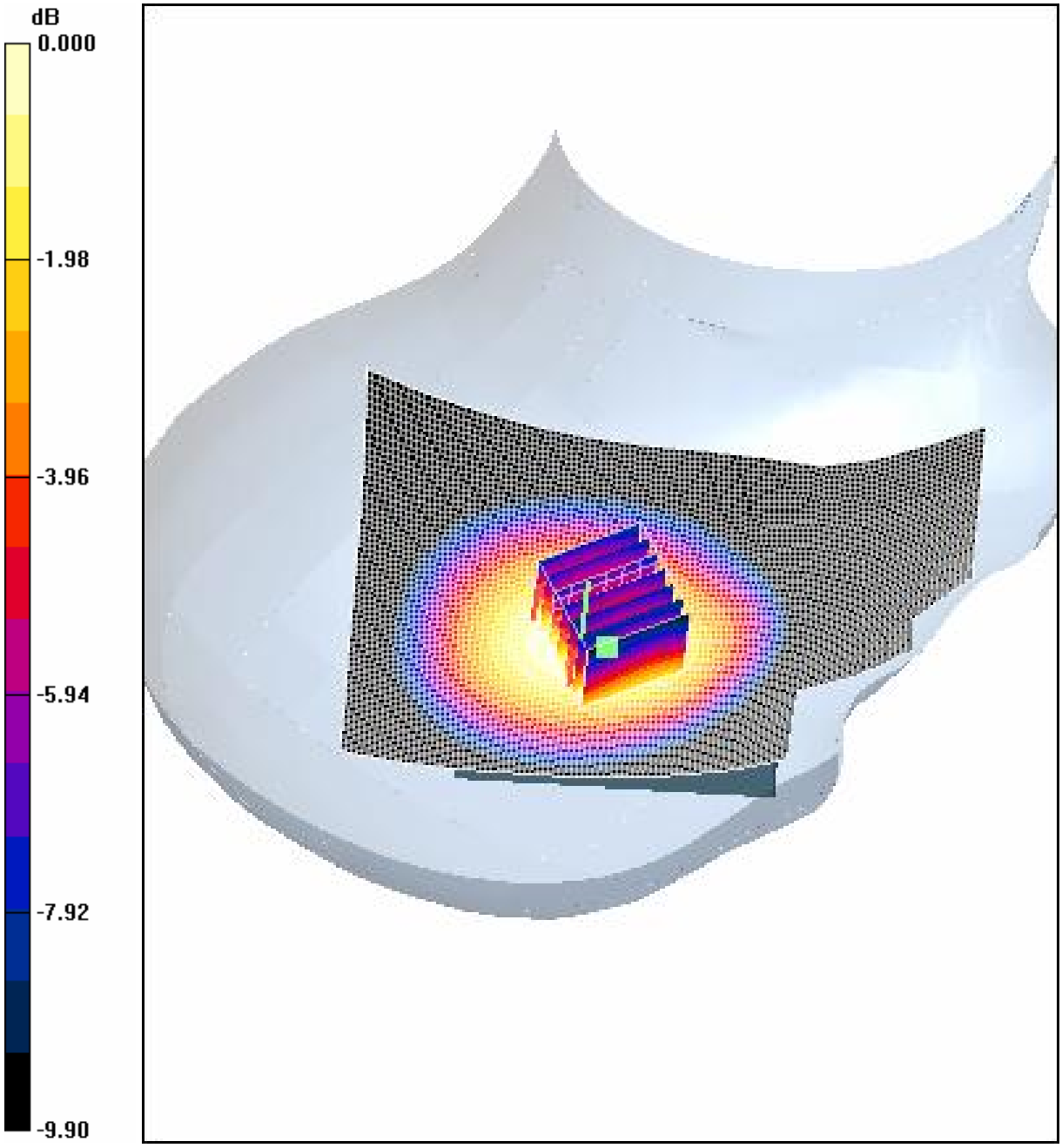
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.561 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.4 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.530 mW/g; SAR(10 g) = 0.387 mW/g
Maximum value of SAR (measured) = 0.558 mW/g



0 dB = 0.558mW/g

4.10 FCC-OET65-RightHandSide-Tilt-GSM850-Low-Slide-Off

Date/Time: 2005-12-27 16:21:48

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

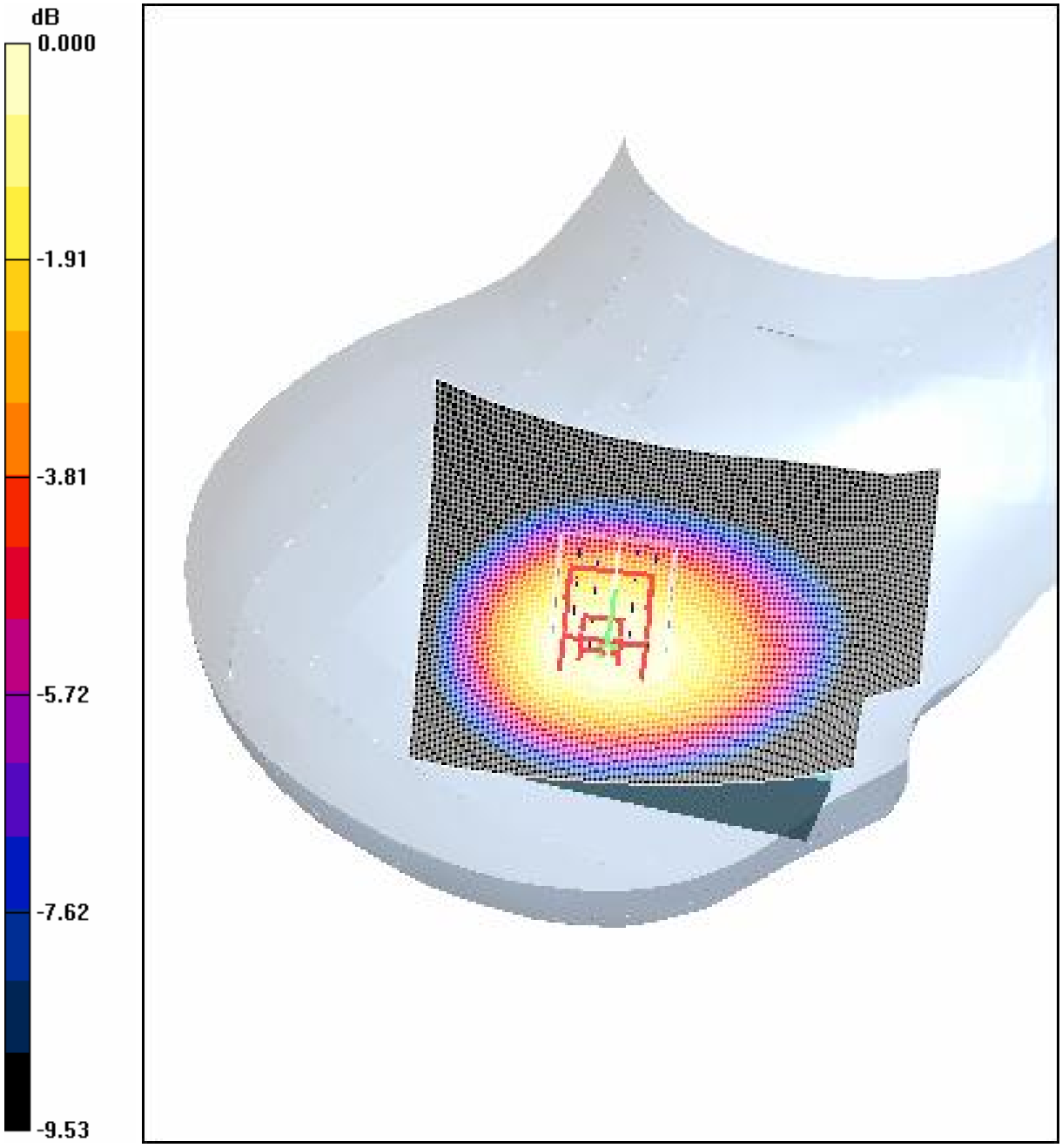
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.485 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.6 V/m; Power Drift = 0.127 dB
Peak SAR (extrapolated) = 0.570 W/kg
SAR(1 g) = 0.437 mW/g; SAR(10 g) = 0.320 mW/g
Maximum value of SAR (measured) = 0.467 mW/g



0 dB = 0.467mW/g

4.11 FCC-OET65-RightHandSide-Tilt-GSM850-Mid-Slide-Off

Date/Time: 2005-12-27 16:45:18

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

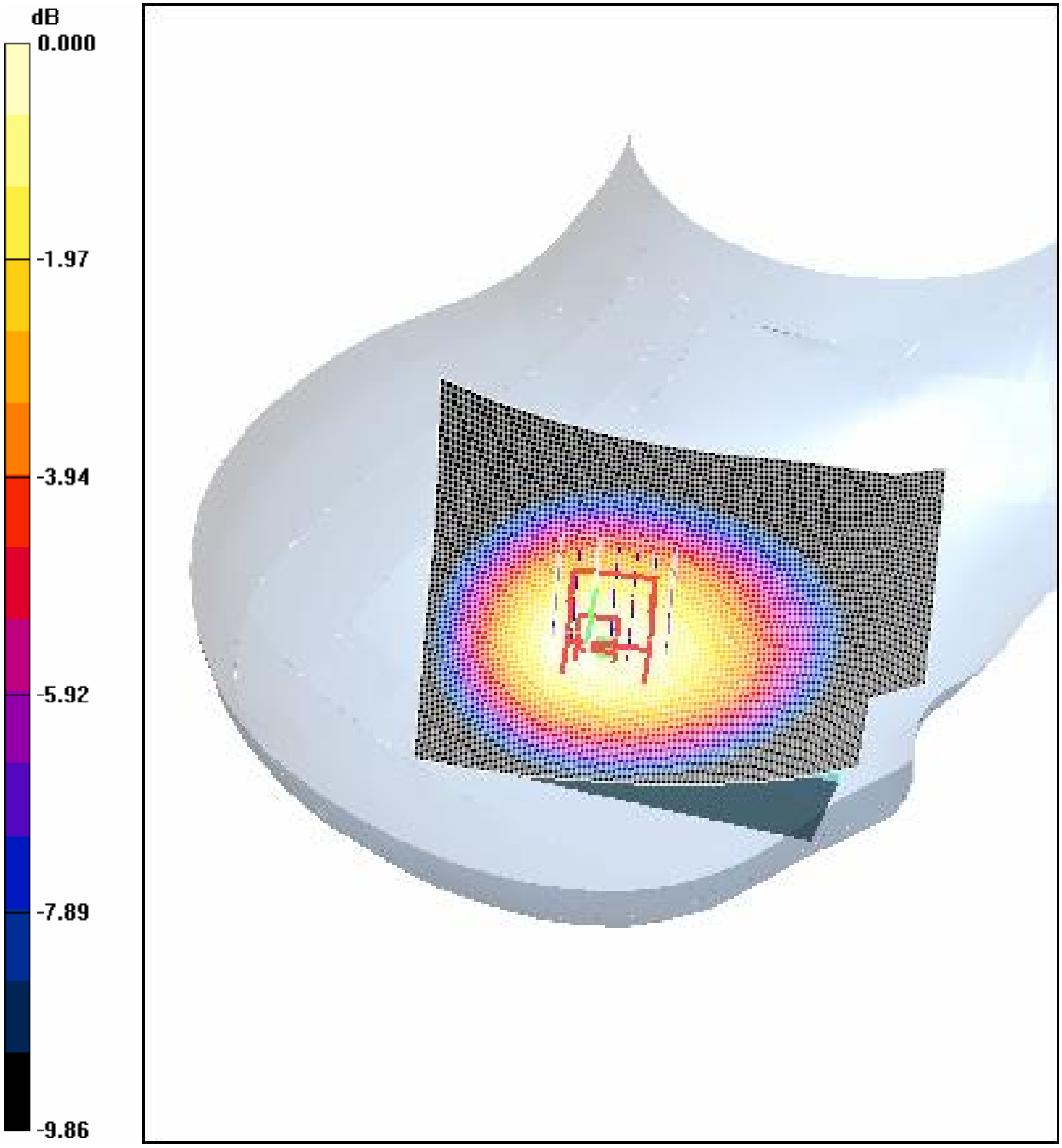
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.536 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.8 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.665 W/kg
SAR(1 g) = 0.504 mW/g; SAR(10 g) = 0.362 mW/g
Maximum value of SAR (measured) = 0.533 mW/g



0 dB = 0.533mW/g

4.12 FCC-OET65-RightHandSide-Tilt-GSM850-High-Slide-Off

Date/Time: 2005-12-27 17:08:45

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

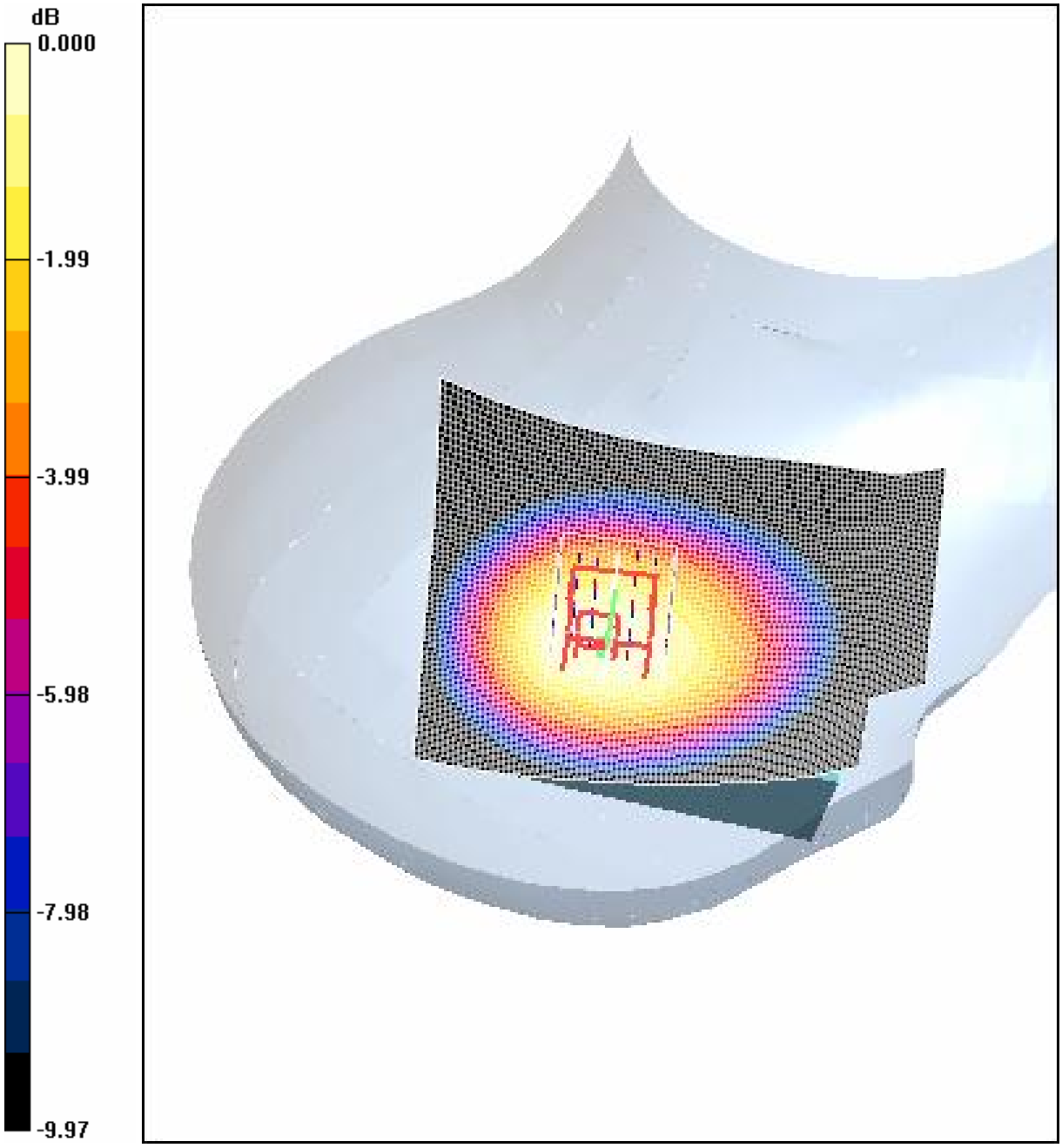
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.406 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.500 W/kg
SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.274 mW/g
Maximum value of SAR (measured) = 0.401 mW/g



0 dB = 0.401mW/g

4.13 FCC-OET65-Body-Worn-GSM850-Low-Slide-Off

Date/Time: 2005-12-21 19:32:03

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-Low-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

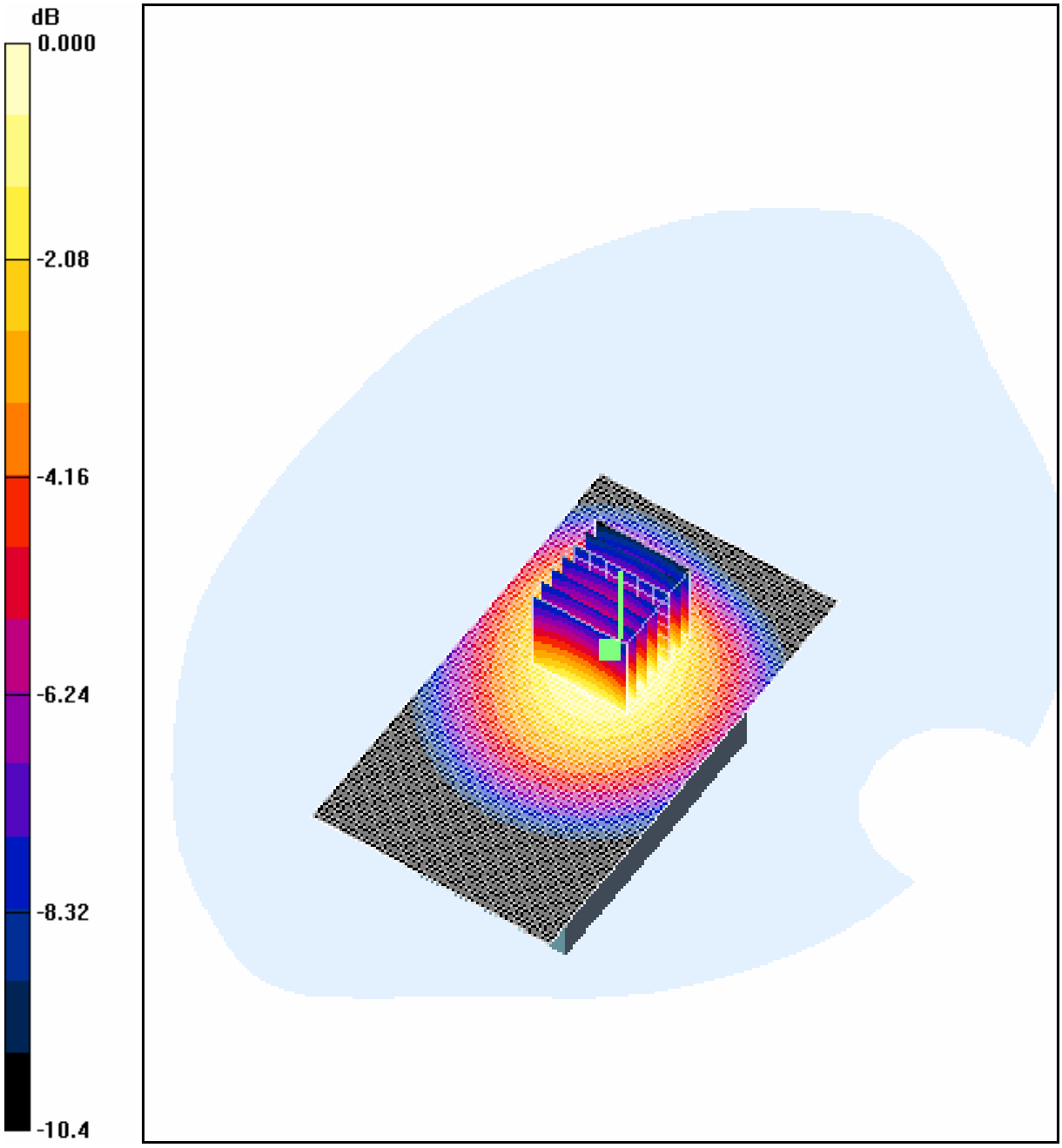
Communication System: GSM850-GSM Mode; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 824.2 MHz; σ = 0.984 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.856 mW/g

Body Worn - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.3 V/m; Power Drift = -0.147 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.779 mW/g; SAR(10 g) = 0.550 mW/g
Maximum value of SAR (measured) = 0.828 mW/g



0 dB = 0.828mW/g

4.14 FCC-OET65-Body-Worn-GSM850-Mid-Slide-Off

Date/Time: 2005-12-22 10:41:18

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-Mid-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

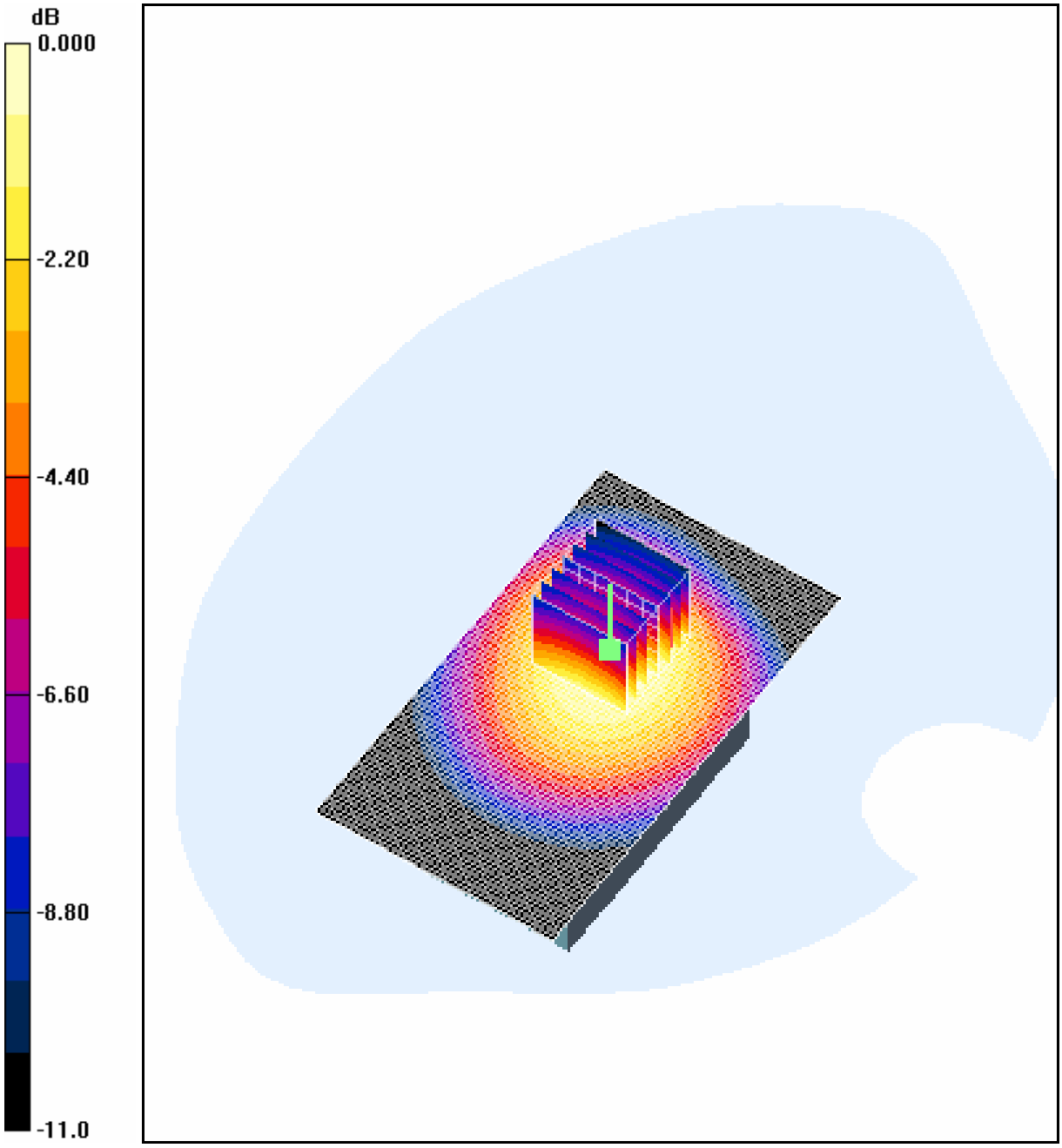
Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 836.4 MHz; σ = 0.998 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.783 mW/g

Body Worn - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.7 V/m; Power Drift = -0.151 dB
Peak SAR (extrapolated) = 0.957 W/kg
SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.491 mW/g
Maximum value of SAR (measured) = 0.753 mW/g



0 dB = 0.753mW/g

4.15 FCC-OET65-Body-Worn-GSM850-High-Slide-Off

Date/Time: 2005-12-22 11:03:03

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-High-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

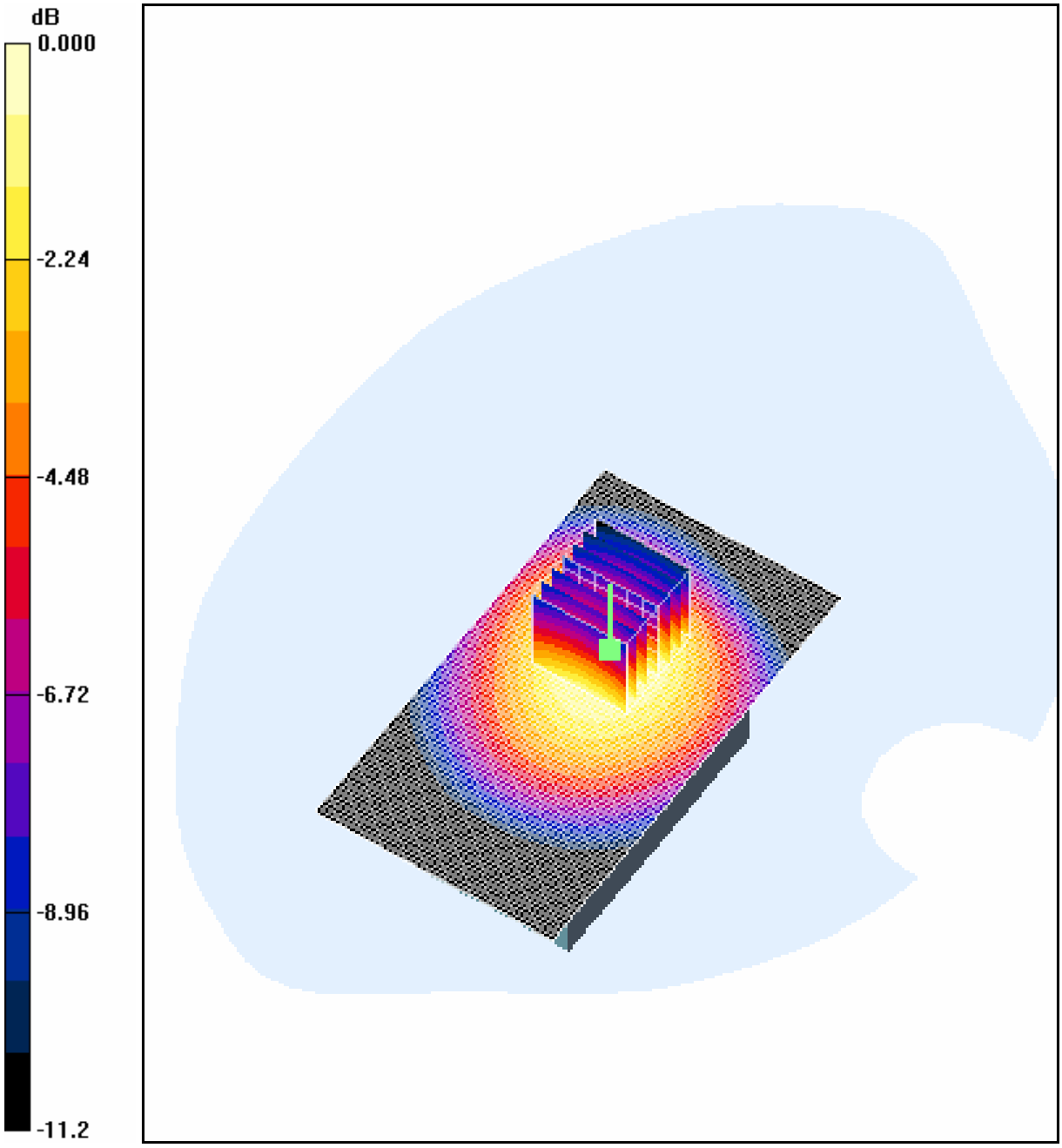
Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 848.8 MHz; σ = 1.01 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.565 mW/g

Body Worn - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 0.715 W/kg
SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.358 mW/g
Maximum value of SAR (measured) = 0.551 mW/g



0 dB = 0.551mW/g

4.16 FCC-OET65-LeftHandSide-Cheek-GSM850-Low-Slide-On

Date/Time: 2005-12-27 11:26:09

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

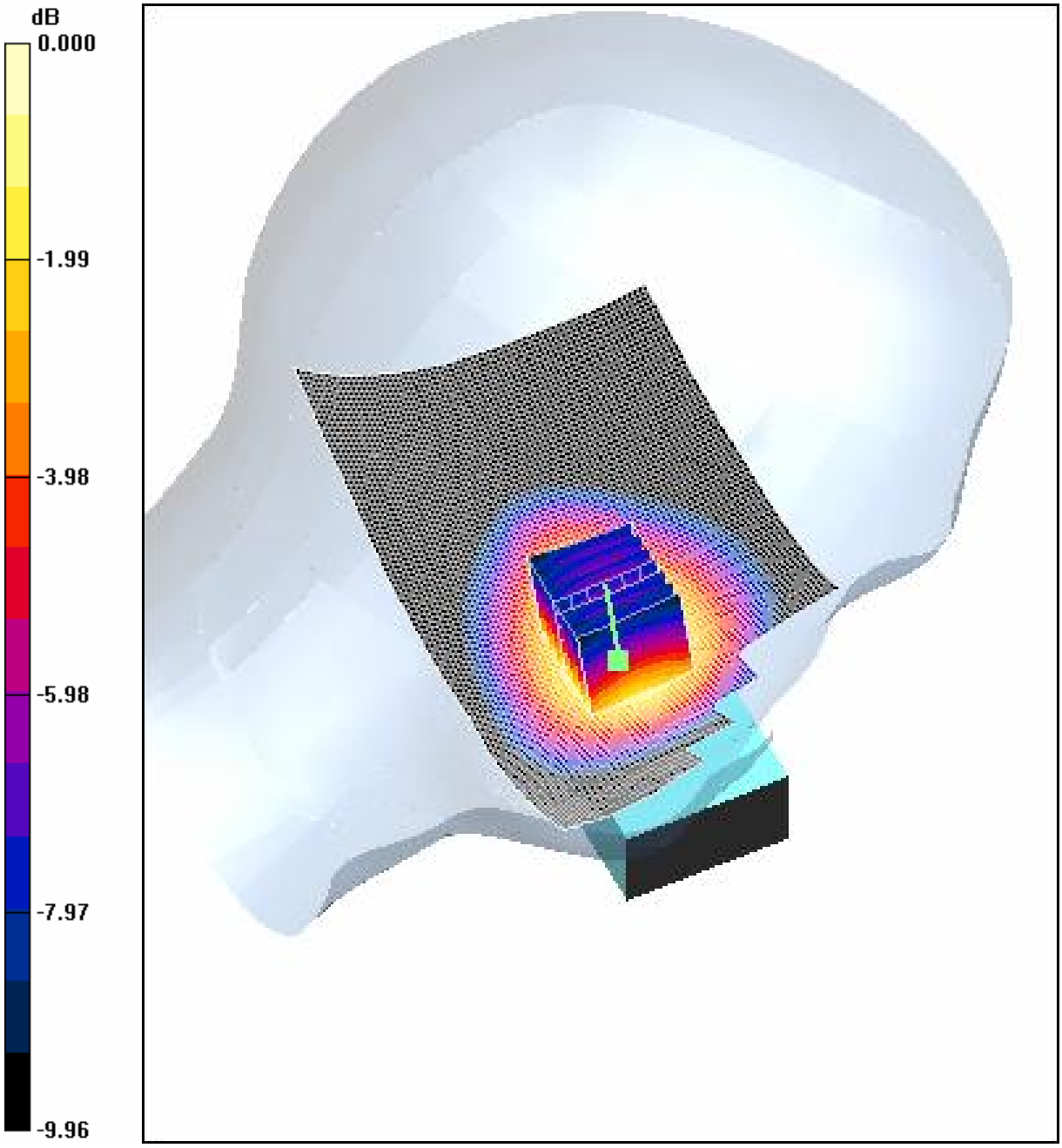
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.566 mW/g

Cheek position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.68 V/m; Power Drift = -0.320 dB
Peak SAR (extrapolated) = 0.706 W/kg
SAR(1 g) = 0.512 mW/g; SAR(10 g) = 0.357 mW/g
Maximum value of SAR (measured) = 0.545 mW/g



0 dB = 0.545mW/g

4.17 FCC-OET65-LeftHandSide-Cheek-GSM850-Mid-Slide-On

Date/Time: 2005-12-27 10:39:56

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

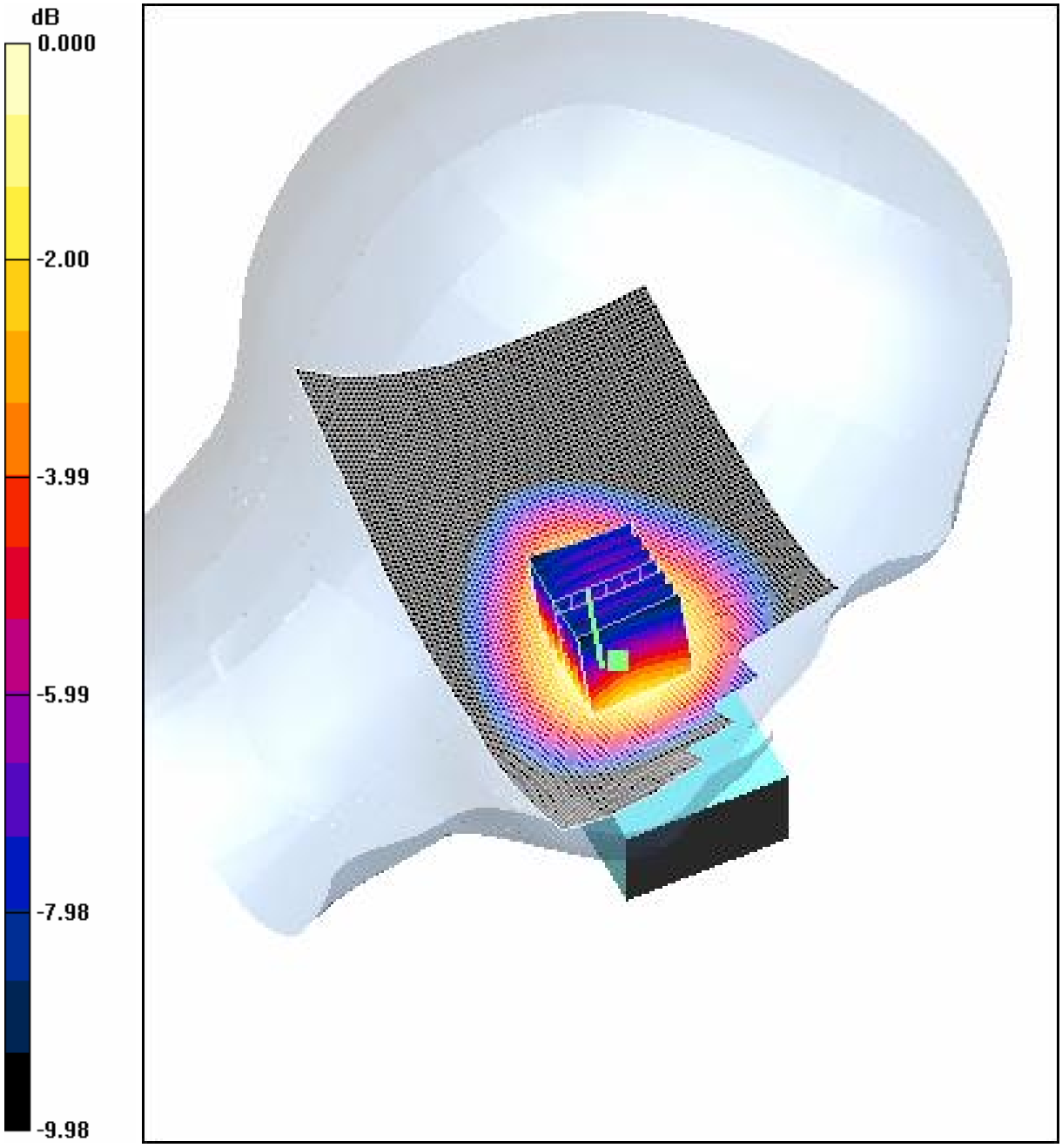
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Mid/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.530 mW/g

Cheek position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.40 V/m; Power Drift = -0.357 dB
Peak SAR (extrapolated) = 0.622 W/kg
SAR(1 g) = 0.445 mW/g; SAR(10 g) = 0.311 mW/g
Maximum value of SAR (measured) = 0.470 mW/g



0 dB = 0.470mW/g

4.18 FCC-OET65-LeftHandSide-Cheek-GSM850-High-Slide-On

Date/Time: 2005-12-27 10:14:43

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM850-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

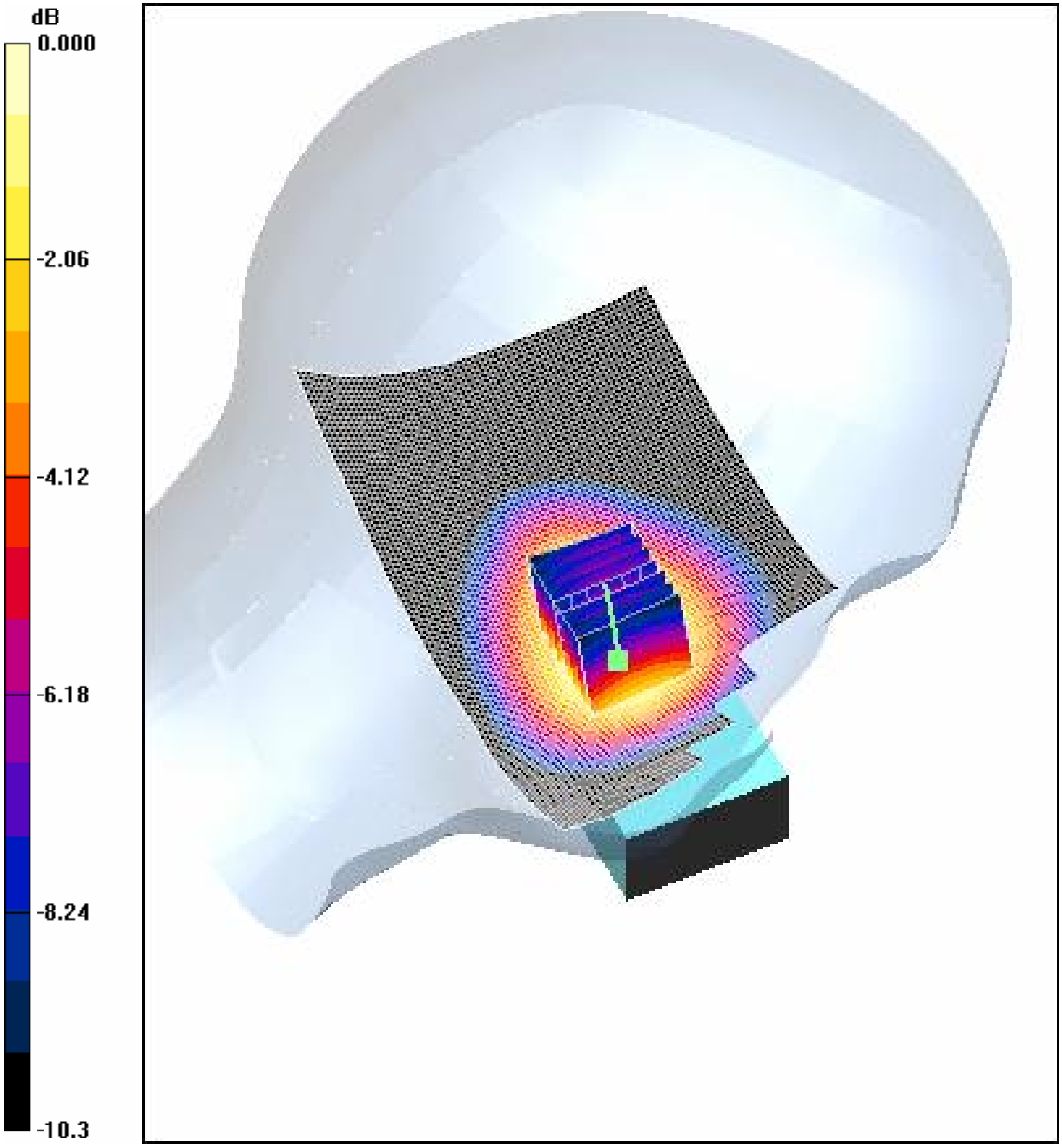
DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.475 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.75 V/m; Power Drift = -0.113 dB
Peak SAR (extrapolated) = 0.562 W/kg
SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.286 mW/g

Maximum value of SAR (measured) = 0.441 mW/g



0 dB = 0.441mW/g

4.19 FCC-OET65-LeftHandSide-Tilt-GSM850-Low-Slide-On

Date/Time: 2005-12-27 11:56:06

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

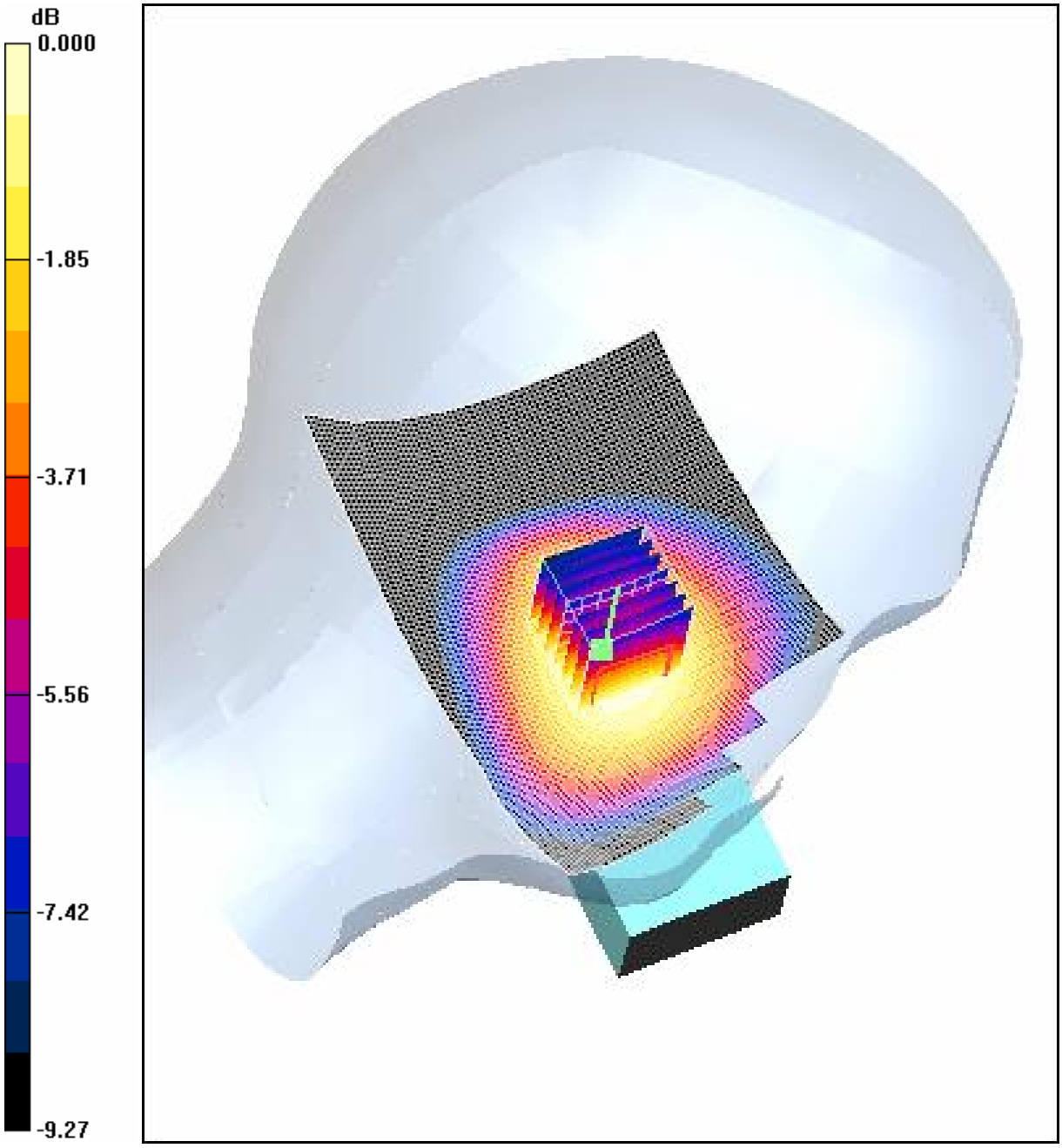
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.187 mW/g

Tilt position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.37 V/m; Power Drift = -0.281 dB
Peak SAR (extrapolated) = 0.225 W/kg
SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.129 mW/g
Maximum value of SAR (measured) = 0.186 mW/g



0 dB = 0.186mW/g

4.20 FCC-OET65-LeftHandSide-Tilt-GSM850-Mid-Slide-On

Date/Time: 2005-12-27 12:52:02

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

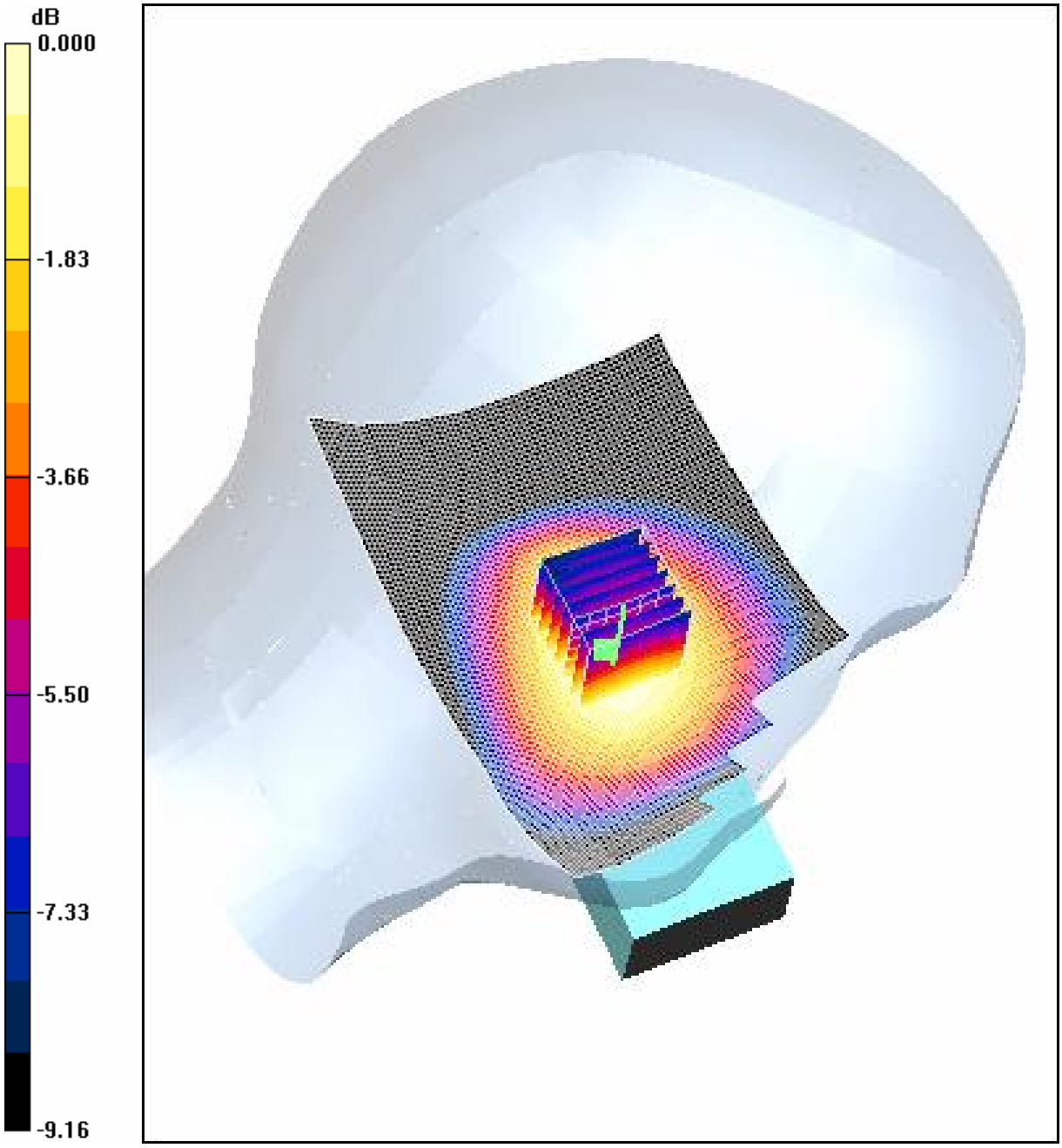
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Mid/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.201 mW/g

Tilt position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.75 V/m; Power Drift = 0.154 dB
Peak SAR (extrapolated) = 0.238 W/kg
SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.134 mW/g
Maximum value of SAR (measured) = 0.193 mW/g



0 dB = 0.193mW/g

4.21 FCC-OET65-LeftHandSide-Tilt-GSM850-High-Slide-On

Date/Time: 2005-12-27 13:17:33

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM850-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

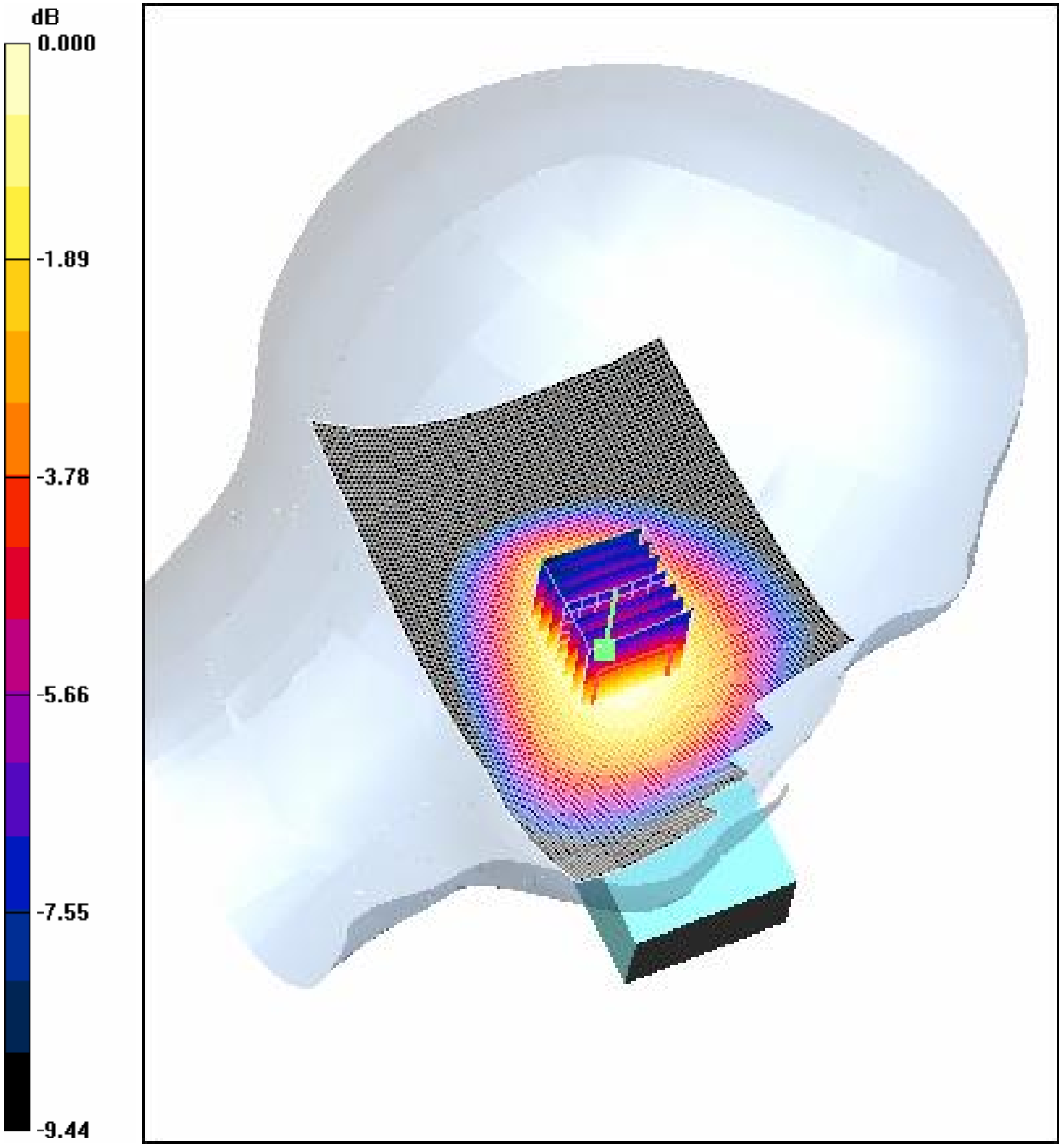
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.177 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.92 V/m; Power Drift = 0.175 dB
Peak SAR (extrapolated) = 0.212 W/kg
SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.117 mW/g
Maximum value of SAR (measured) = 0.172 mW/g



0 dB = 0.172mW/g

4.22 FCC-OET65-RightHandSide-Cheek-GSM850-Low-Slide-On

Date/Time: 2005-12-28 13:20:40

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

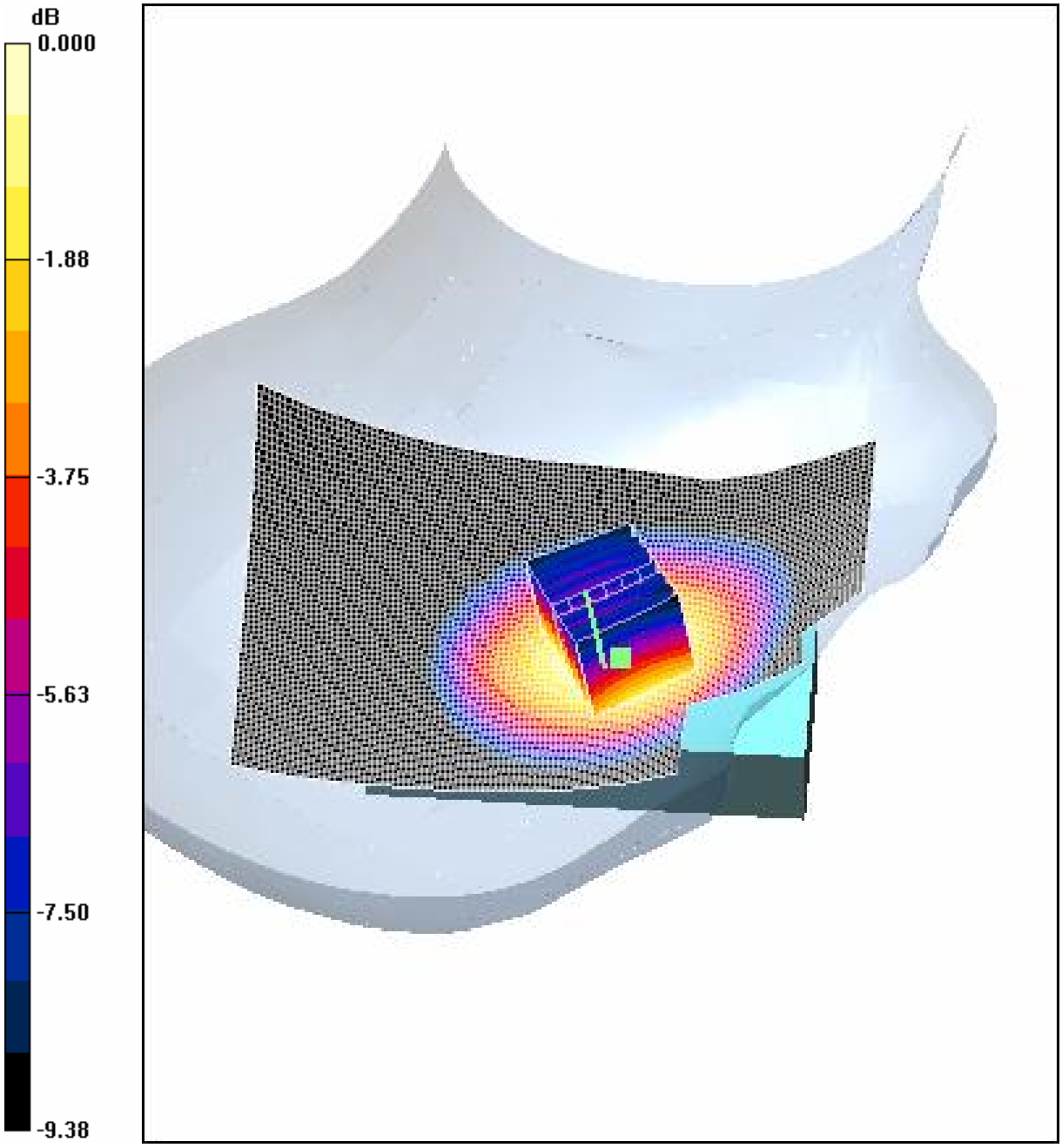
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.541 mW/g

Cheek position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.87 V/m; Power Drift = 0.751 dB
Peak SAR (extrapolated) = 0.710 W/kg
SAR(1 g) = 0.541 mW/g; SAR(10 g) = 0.387 mW/g
Maximum value of SAR (measured) = 0.571 mW/g



0 dB = 0.571mW/g

4.23 FCC-OET65-RightHandSide-Cheek-GSM850-Mid-Slide-On

Date/Time: 2005-12-28 13:46:36

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

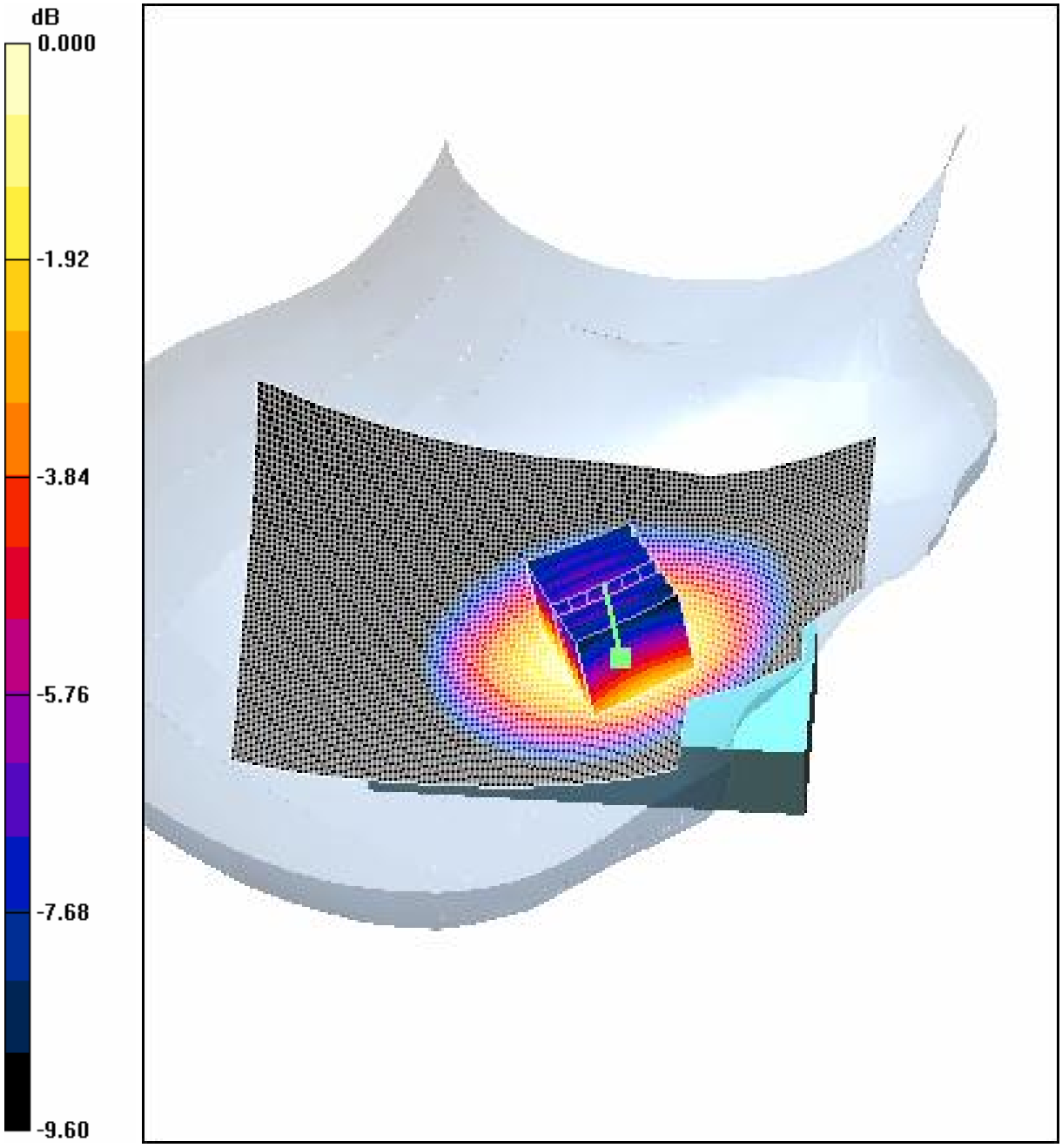
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Mid/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.540 mW/g

Cheek position - Mid/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.25 V/m; Power Drift = 0.676 dB
Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.377 mW/g
Maximum value of SAR (measured) = 0.561 mW/g



0 dB = 0.561mW/g

4.24 FCC-OET65-RightHandSide-Cheek-GSM850-High-Slide-On

Date/Time: 2005-12-28 14:12:21

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM850-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

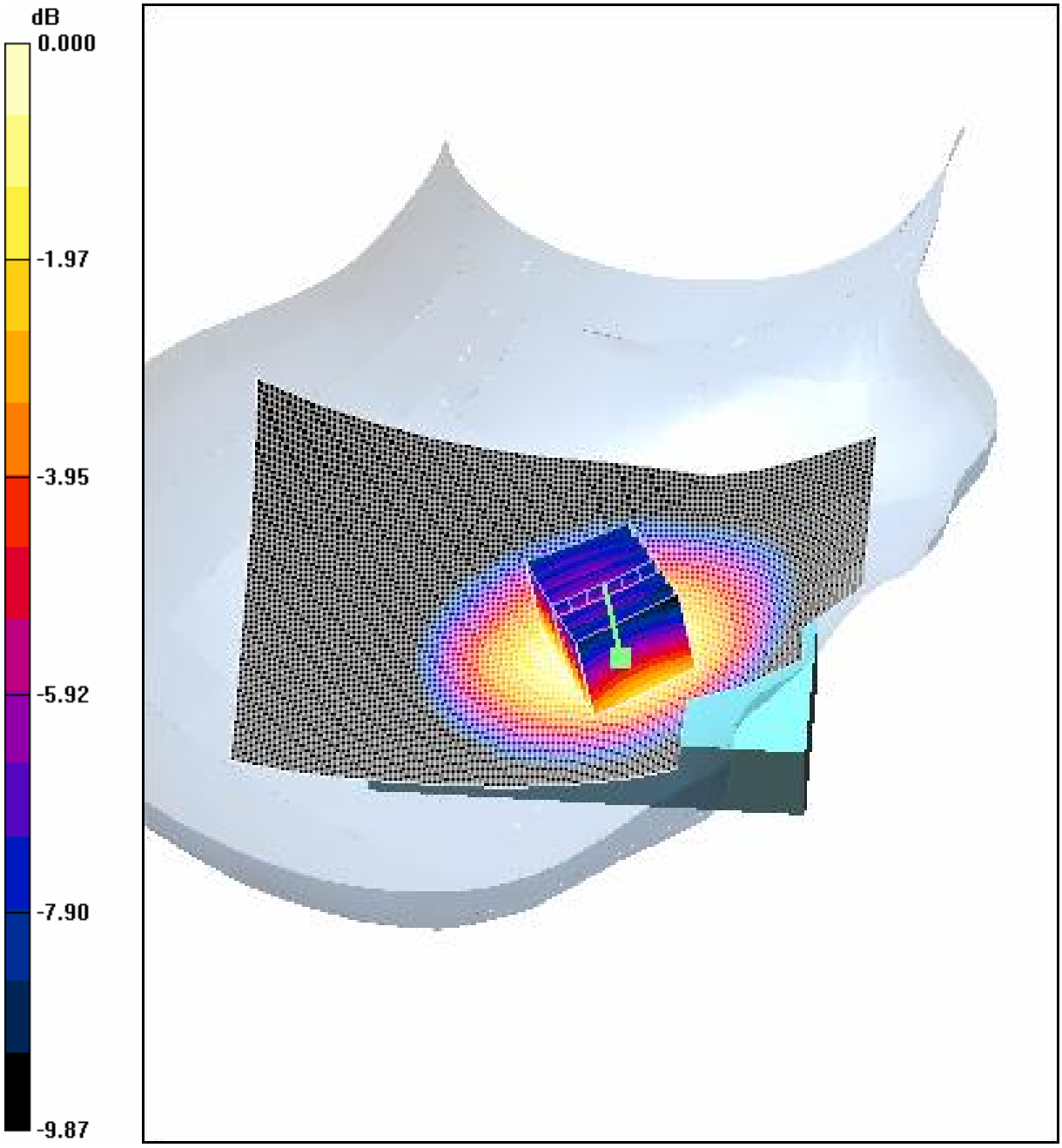
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.466 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.91 V/m; Power Drift = 0.198 dB
Peak SAR (extrapolated) = 0.576 W/kg
SAR(1 g) = 0.439 mW/g; SAR(10 g) = 0.314 mW/g
Maximum value of SAR (measured) = 0.463 mW/g



0 dB = 0.463mW/g

4.25 FCC-OET65-RightHandSide-Tilt-GSM850-Low-Slide-On

Date/Time: 2005-12-28 9:40:40

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

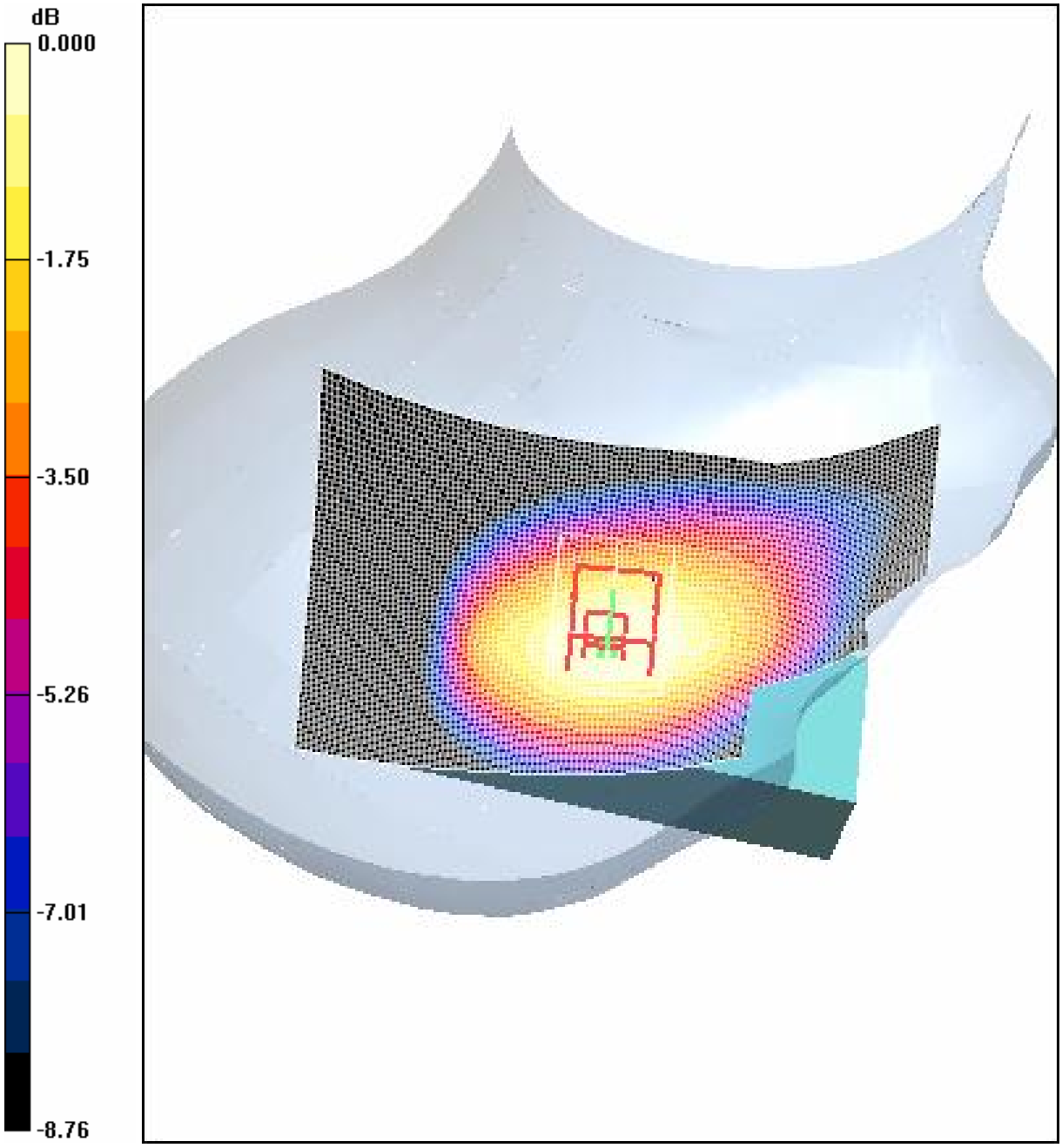
Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.866 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.185 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.455 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.164 mW/g; SAR(10 g) = 0.119 mW/g
Maximum value of SAR (measured) = 0.175 mW/g



0 dB = 0.175mW/g

4.26 FCC-OET65-RightHandSide-Tilt-GSM850-Mid-Slide-On

Date/Time: 2005-12-28 9:15:28

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

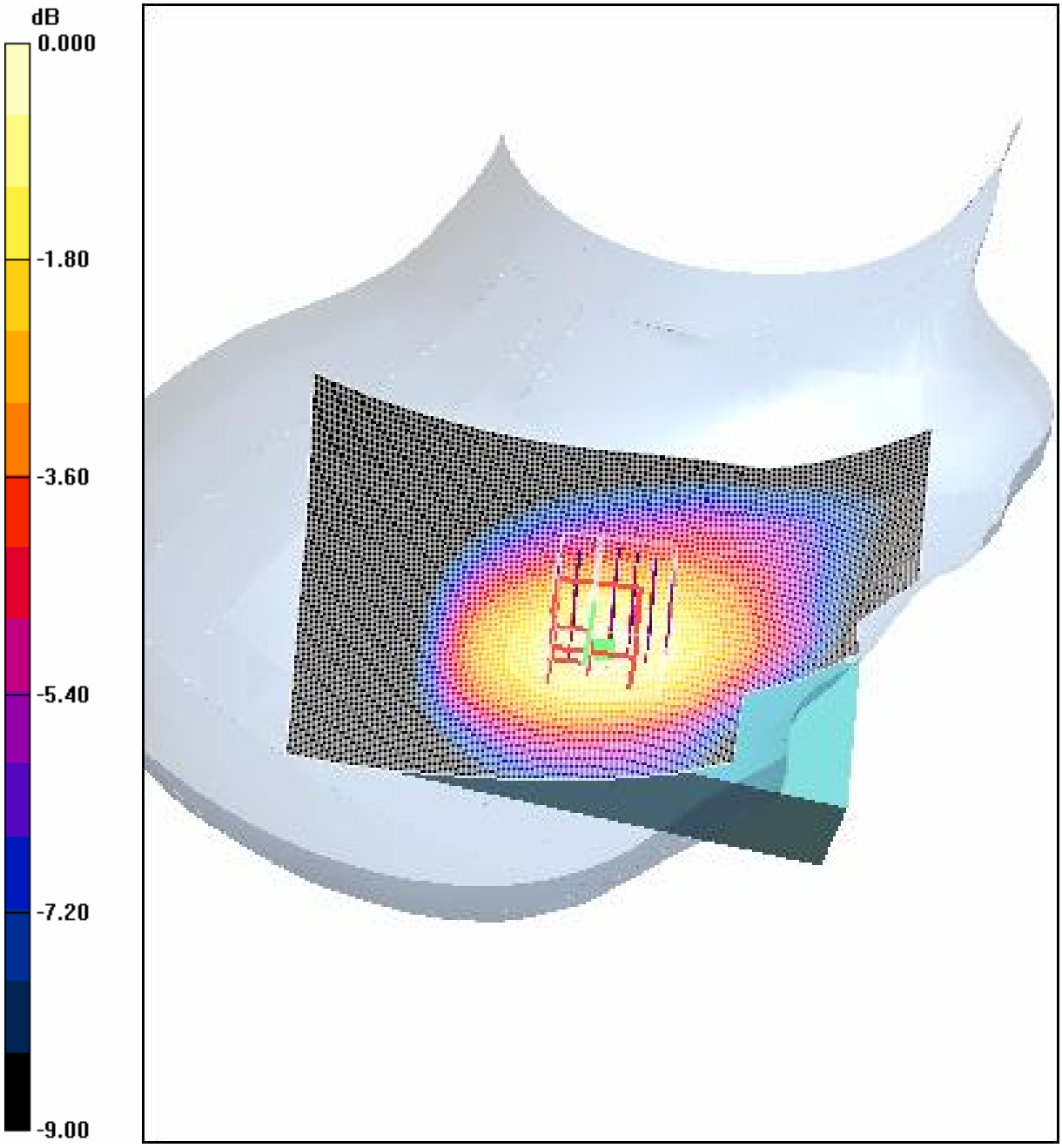
Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.878 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.155 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.361 dB
Peak SAR (extrapolated) = 0.203 W/kg
SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.111 mW/g
Maximum value of SAR (measured) = 0.167 mW/g



0 dB = 0.167mW/g

4.27 FCC-OET65-RightHandSide-Tilt-GSM850-High-Slide-On

Date/Time: 2005-12-28 10:10:00

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM850-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

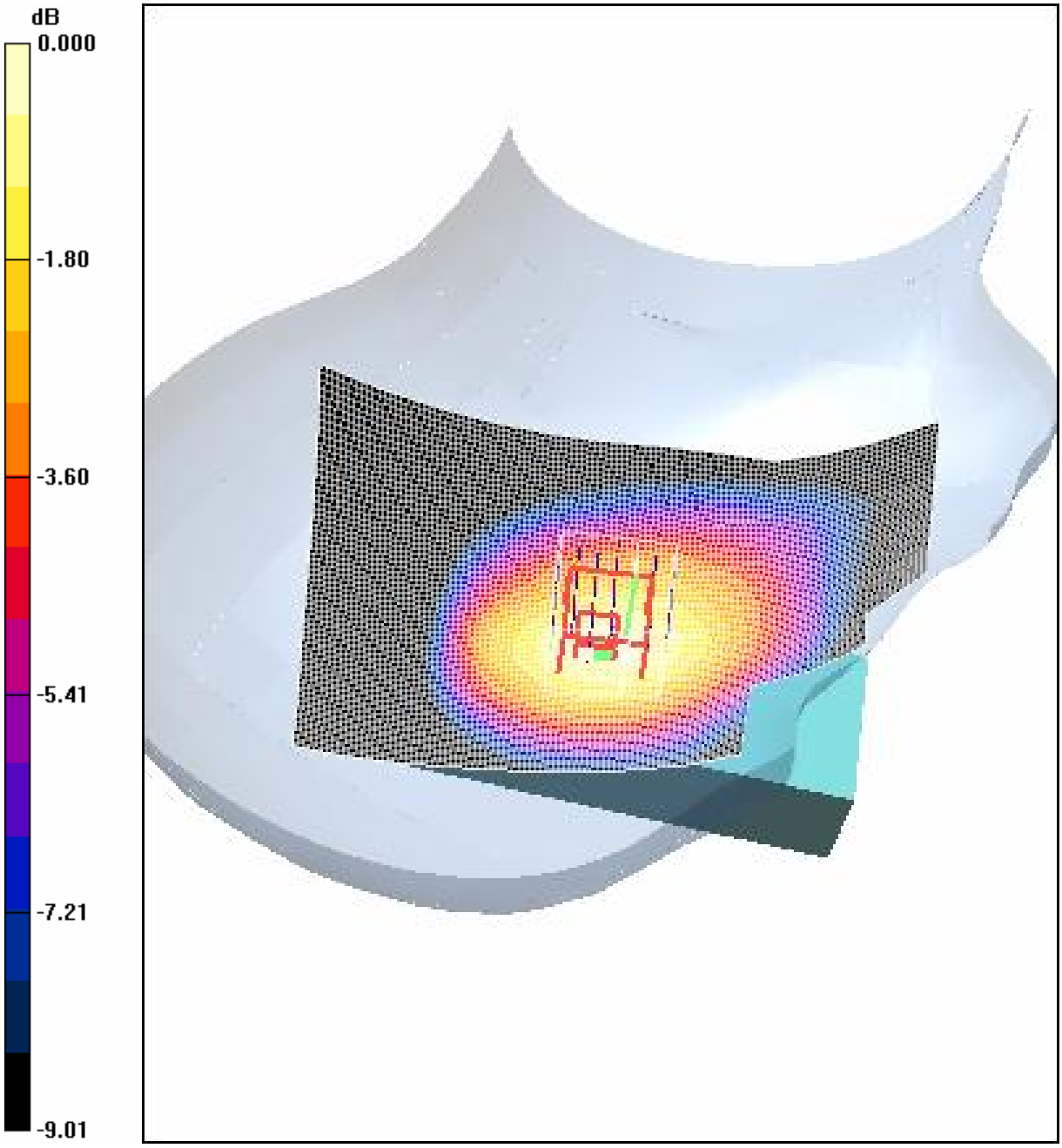
Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850 Medium parameters used: f = 849 MHz; σ = 0.89 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.91, 5.91, 5.91); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.119 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.89 V/m; Power Drift = 0.523 dB
Peak SAR (extrapolated) = 0.157 W/kg
SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.127 mW/g



0 dB = 0.127mW/g

4.28 FCC-OET65-Body-Worn-GSM850-Low-Slide-On

Date/Time: 2005-12-21 20:02:33

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-Low-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

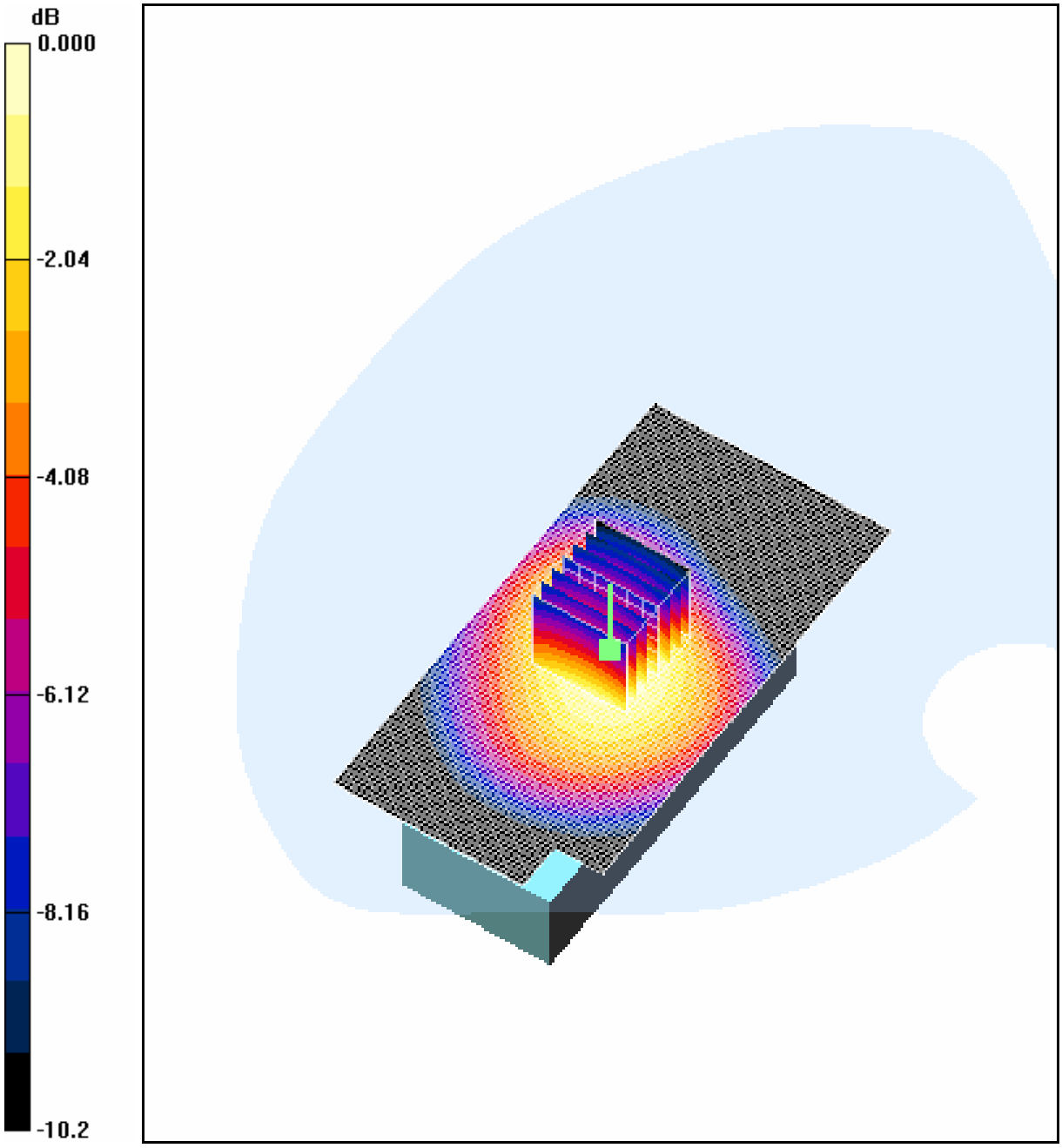
Communication System: GSM850-GSM Mode; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 824.2 MHz; σ = 0.984 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Low/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.543 mW/g

Body Worn - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.47 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.681 W/kg
SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.361 mW/g
Maximum value of SAR (measured) = 0.538 mW/g



0 dB = 0.538mW/g

4.29FCC-OET65-Body-Worn-GSM850-Mid-Slide-On

Date/Time: 2005-12-22 11:59:54

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-Mid-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

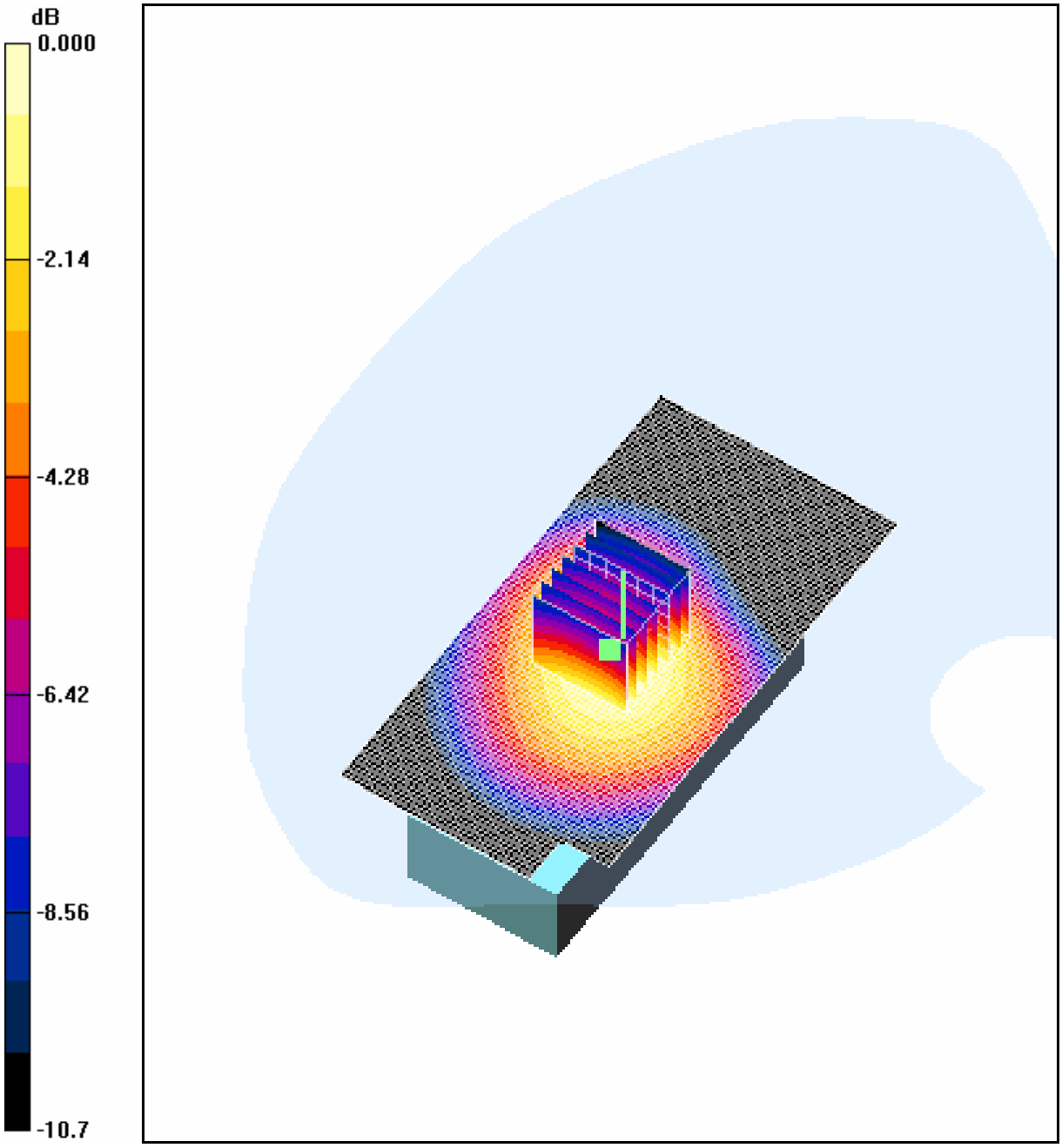
Communication System: GSM850-GSM Mode; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 836.4 MHz; σ = 0.998 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Middle/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.491 mW/g

Body Worn - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.50 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 0.616 W/kg
SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.316 mW/g
Maximum value of SAR (measured) = 0.484 mW/g



0 dB = 0.484mW/g

4.30 FCC-OET65-Body-Worn-GSM850-High-Slide-On

Date/Time: 2005-12-22 11:26:55

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM850-High-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

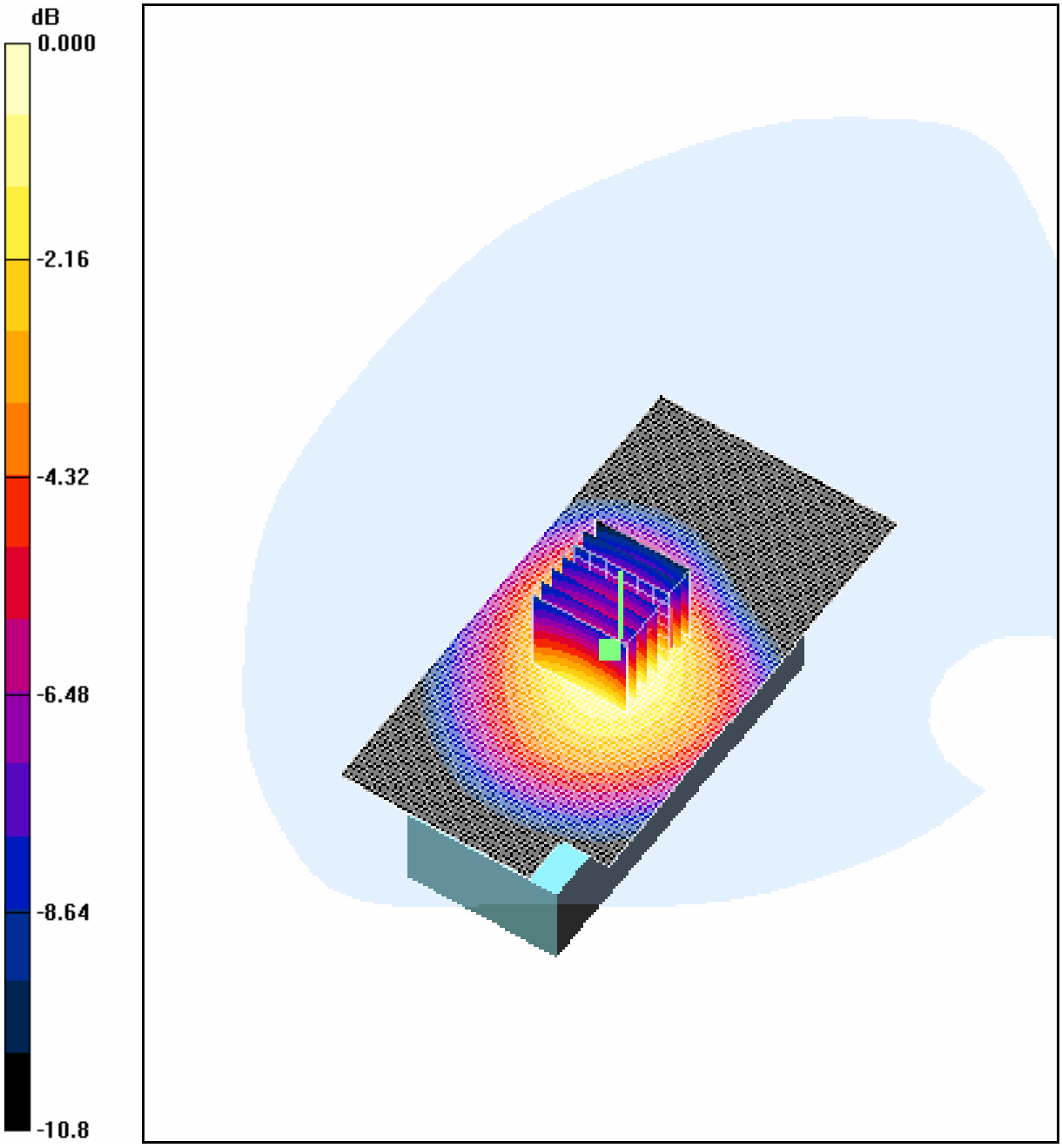
Communication System: GSM850-GSM Mode; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL850-Body Medium parameters used: f = 848.8 MHz; σ = 1.01 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(5.83, 5.83, 5.83); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - High/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.420 mW/g

Body Worn - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.90 V/m; Power Drift = 0.069 dB
Peak SAR (extrapolated) = 0.536 W/kg
SAR(1 g) = 0.395 mW/g; SAR(10 g) = 0.275 mW/g
Maximum value of SAR (measured) = 0.421 mW/g



0 dB = 0.421mW/g

4.31 FCC-OET65-LeftHandSide-Cheek-GSM1900-Low-Slide-Off

Date/Time: 2005-12-21 14:50:25

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

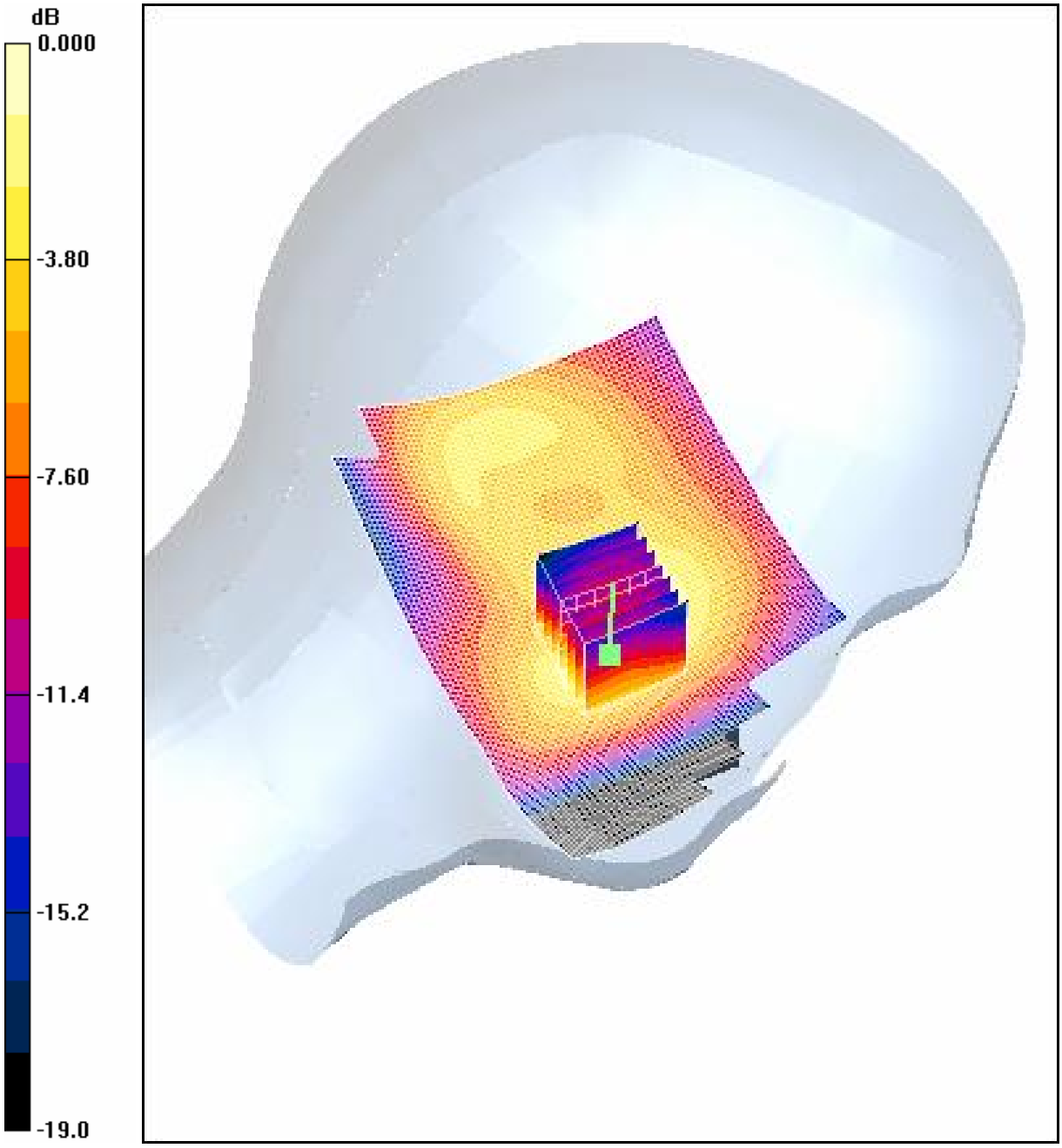
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.254 mW/g

Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.72 V/m; Power Drift = -0.091 dB
Peak SAR (extrapolated) = 0.342 W/kg
SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.255 mW/g



0 dB = 0.255mW/g

4.32 FCC-OET65-LeftHandSide-Cheek-GSM1900-Mid-Slide-Off

Date/Time: 2005-12-30 8:50:41

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

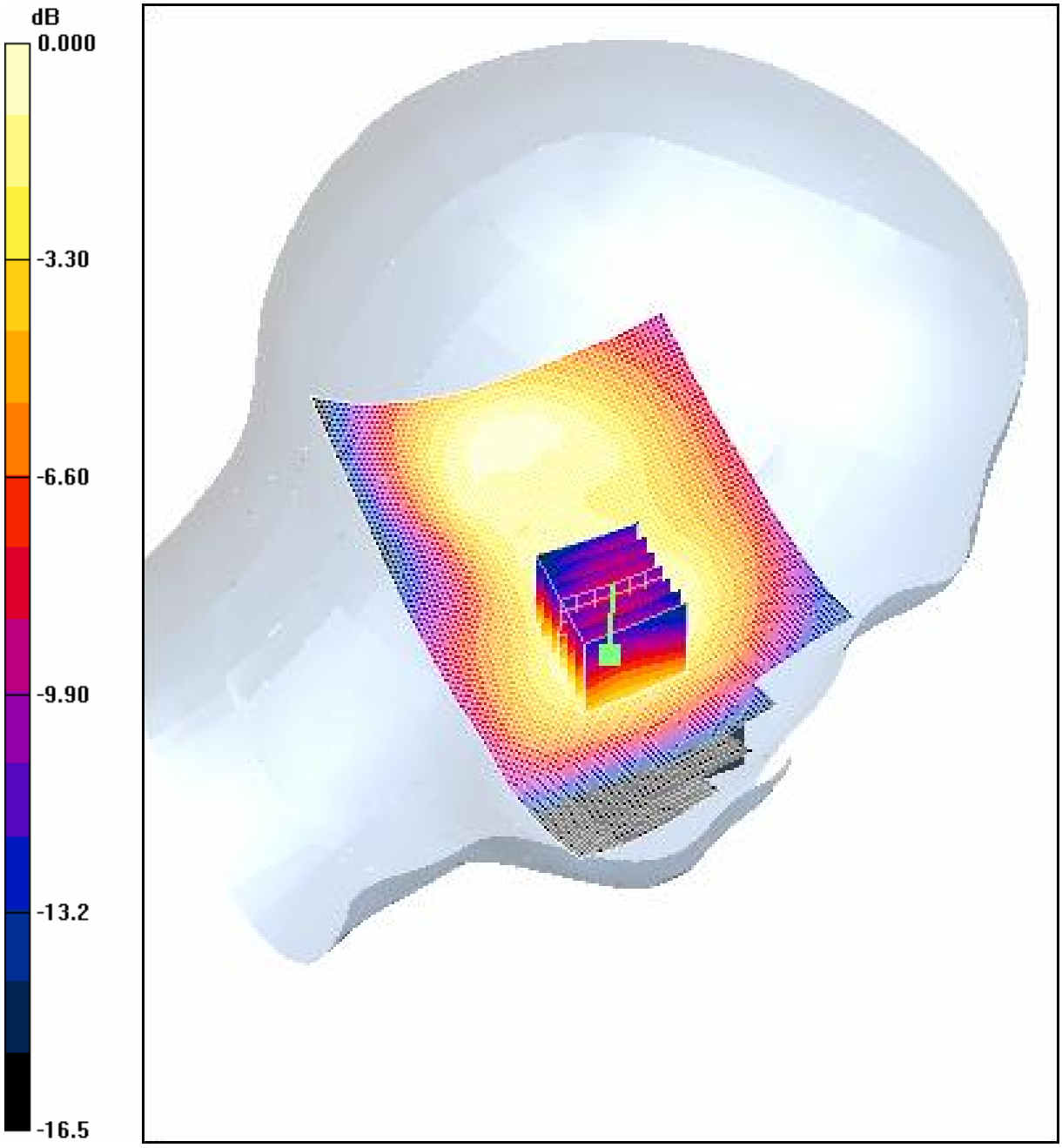
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.189 mW/g

Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.75 V/m; Power Drift = 0.101 dB
Peak SAR (extrapolated) = 0.237 W/kg
SAR(1 g) = 0.164 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.182 mW/g



0 dB = 0.182mW/g

4.33 FCC-OET65-LeftHandSide-Cheek-GSM1900-High-Slide-Off

Date/Time: 2005-12-30 9:20:40

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

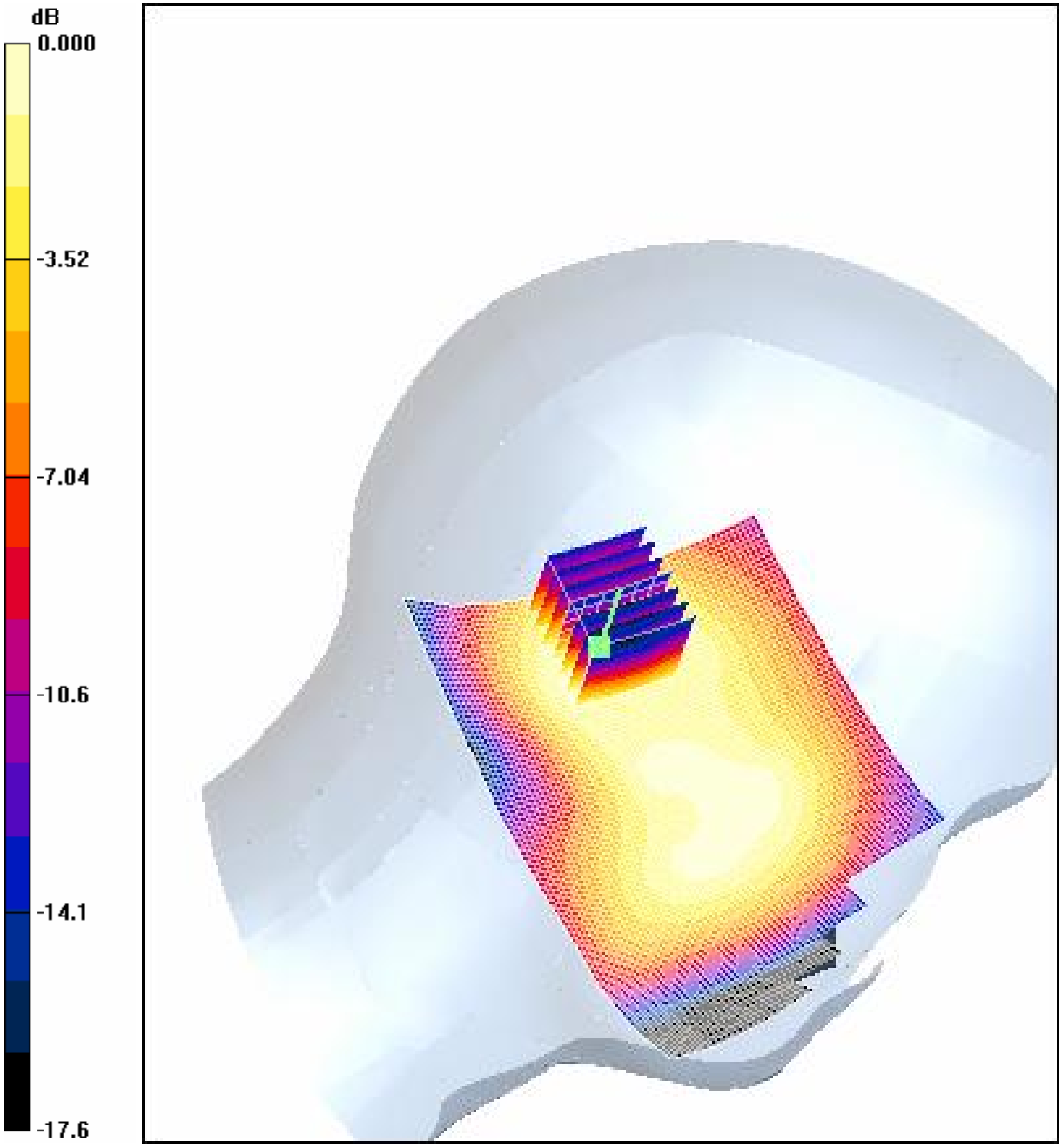
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.112 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.56 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 0.183 W/kg
SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.062 mW/g
Maximum value of SAR (measured) = 0.119 mW/g



0 dB = 0.119mW/g

4.34 FCC-OET65-LeftHandSide-Tilt-GSM1900-Low-Slide-Off

Date/Time: 2005-12-30 15:36:38

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

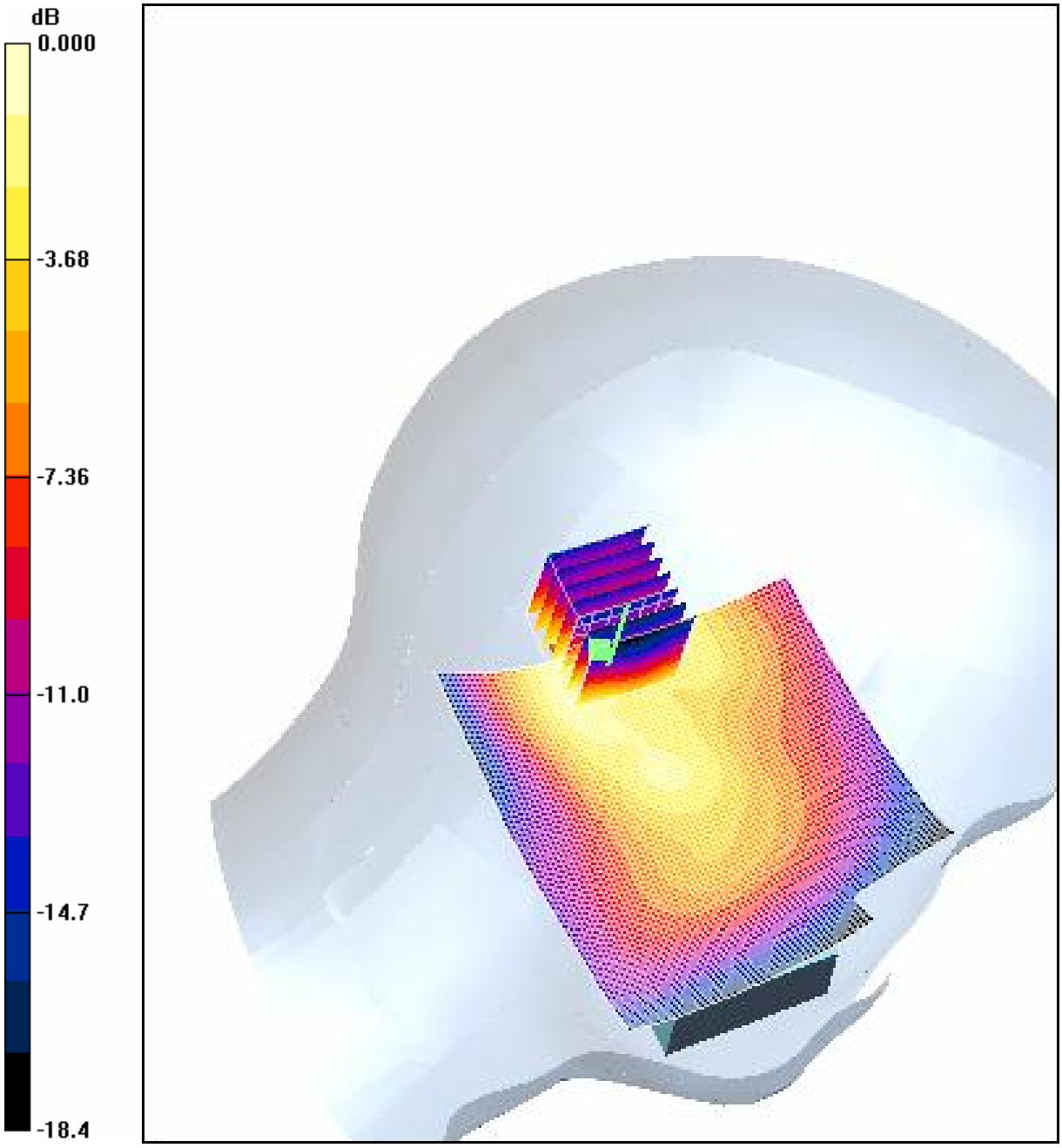
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.265 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.4 V/m; Power Drift = 0.064 dB
Peak SAR (extrapolated) = 0.412 W/kg
SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.135 mW/g
Maximum value of SAR (measured) = 0.263 mW/g



0 dB = 0.263mW/g

4.35 FCC-OET65-LeftHandSide-Tilt-GSM1900-Mid-Slide-Off

Date/Time: 2005-12-30 16:14:54

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

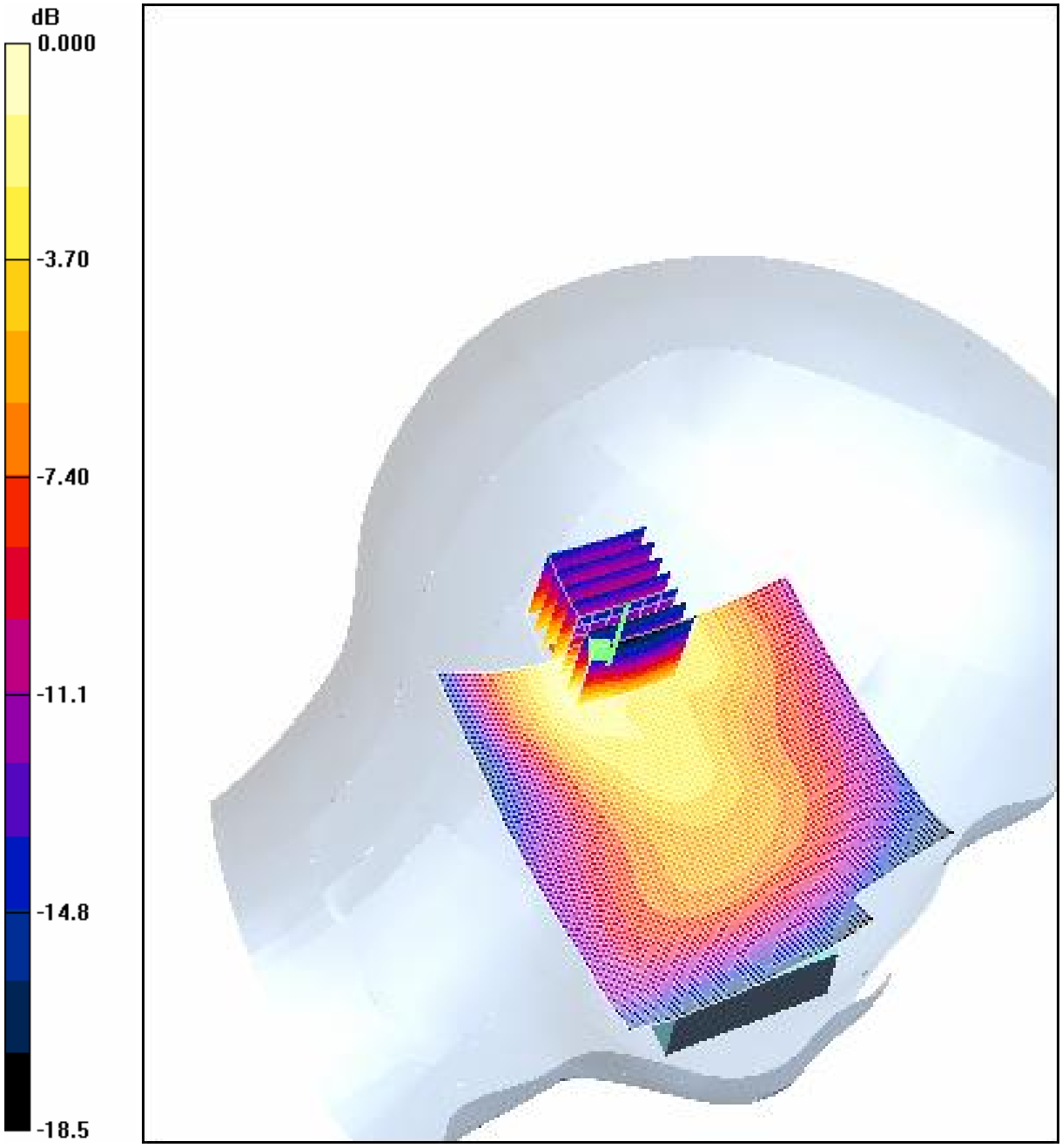
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.266 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.431 W/kg
SAR(1 g) = 0.247 mW/g; SAR(10 g) = 0.136 mW/g
Maximum value of SAR (measured) = 0.270 mW/g



0 dB = 0.270mW/g

4.36 FCC-OET65-LeftHandSide-Tilt-GSM1900-High-Slide-Off

Date/Time: 2005-12-30 16:46:47

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

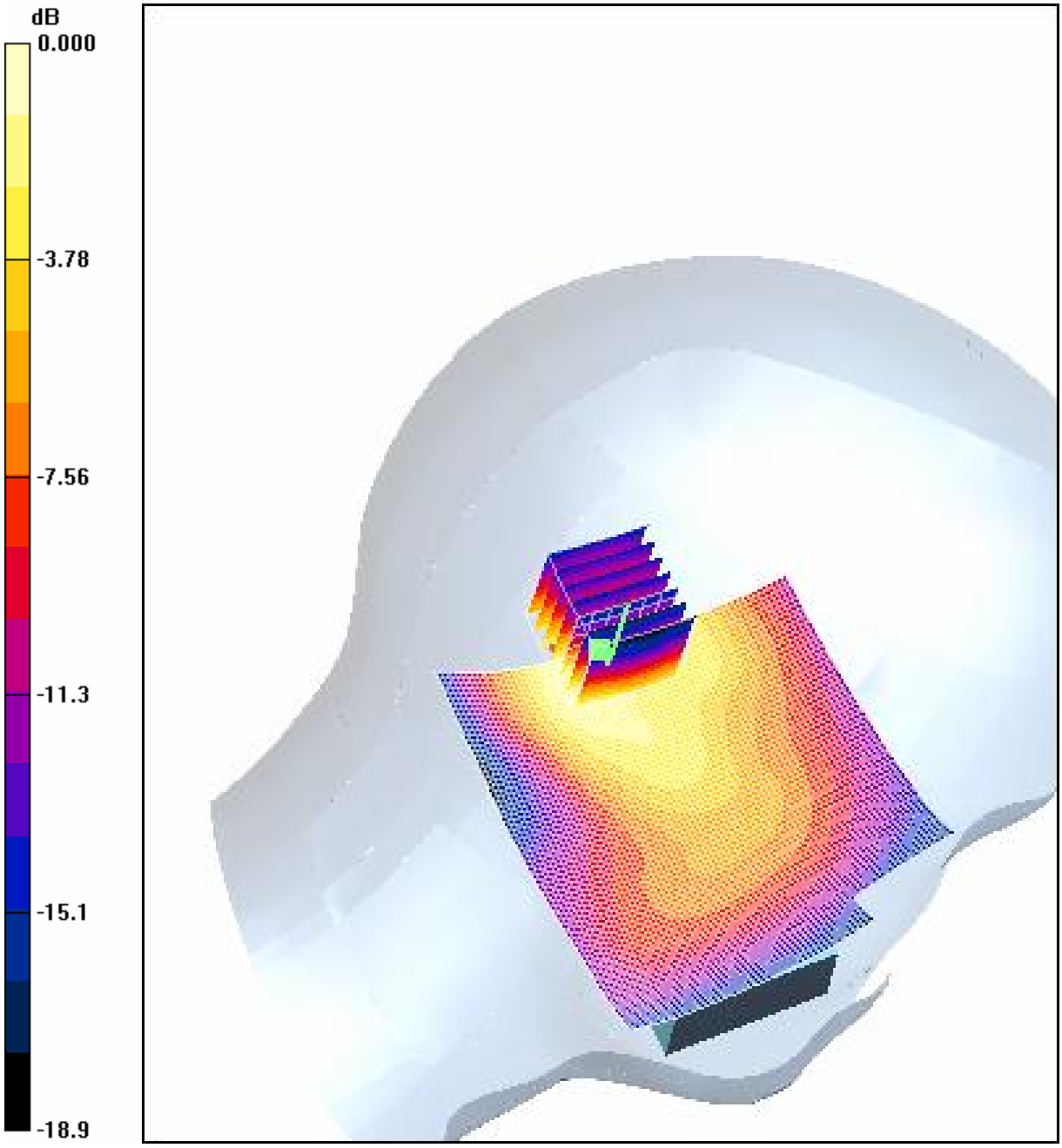
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.182 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.67 V/m; Power Drift = 0.009 dB
Peak SAR (extrapolated) = 0.288 W/kg
SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.092 mW/g
Maximum value of SAR (measured) = 0.183 mW/g



0 dB = 0.183mW/g

4.37 FCC-OET65-RightHandSide-Cheek-GSM1900-Low-Slide-Off

Date/Time: 2005-12-29 10:16:40

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

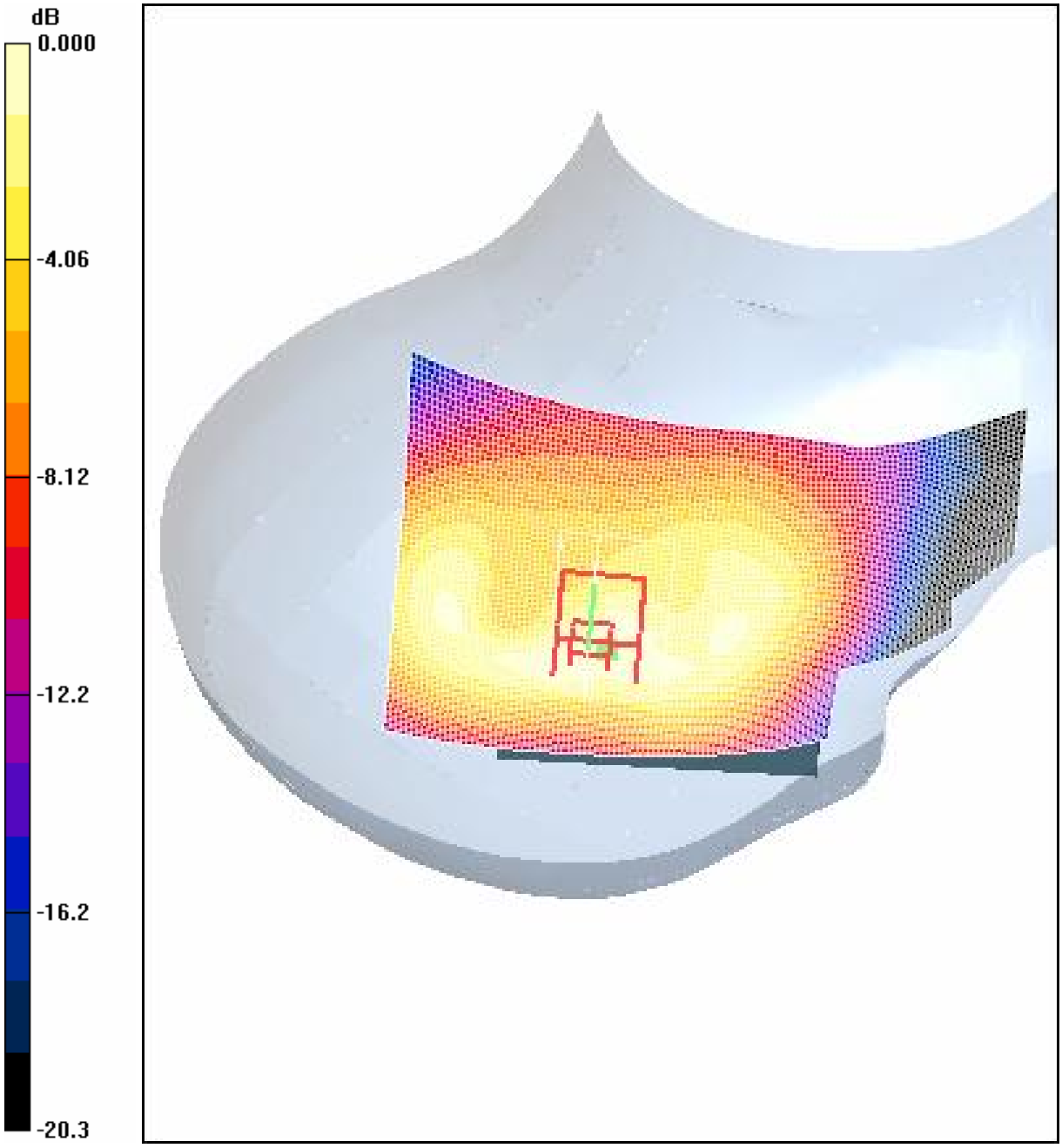
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.155 mW/g

Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.77 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.144 mW/g; SAR(10 g) = 0.082 mW/g
Maximum value of SAR (measured) = 0.159 mW/g



0 dB = 0.159mW/g

4.38 FCC-OET65-RightHandSide-Cheek-GSM1900-Mid-Slide-Off

Date/Time: 2005-12-29 9:46:09

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

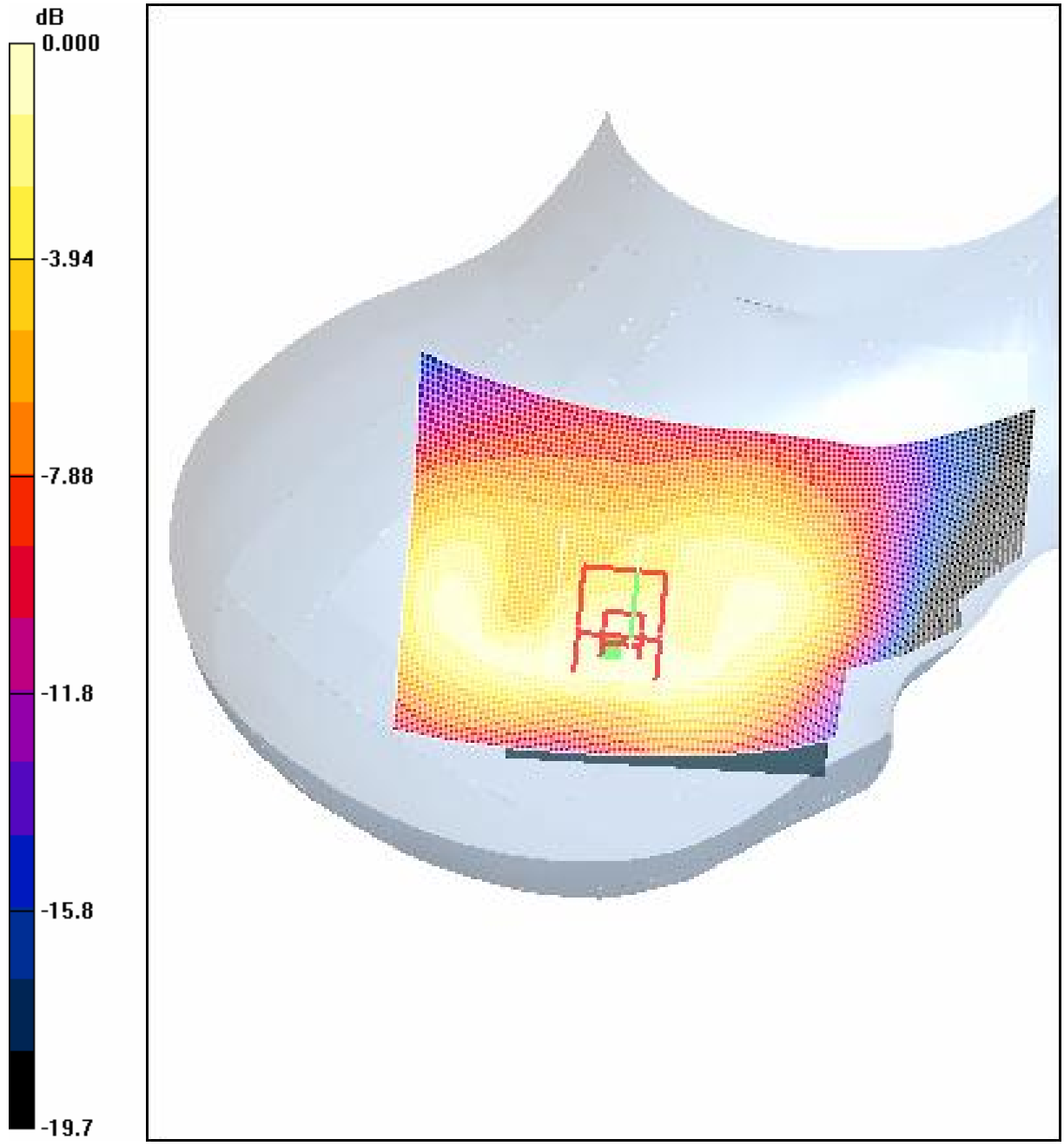
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.150 mW/g

Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.12 V/m; Power Drift = -0.153 dB
Peak SAR (extrapolated) = 0.253 W/kg
SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.076 mW/g
Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146mW/g

4.39 FCC-OET65-RightHandSide-Cheek-GSM1900-High-Slide-Off

Date/Time: 2005-12-29 11:15:35

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

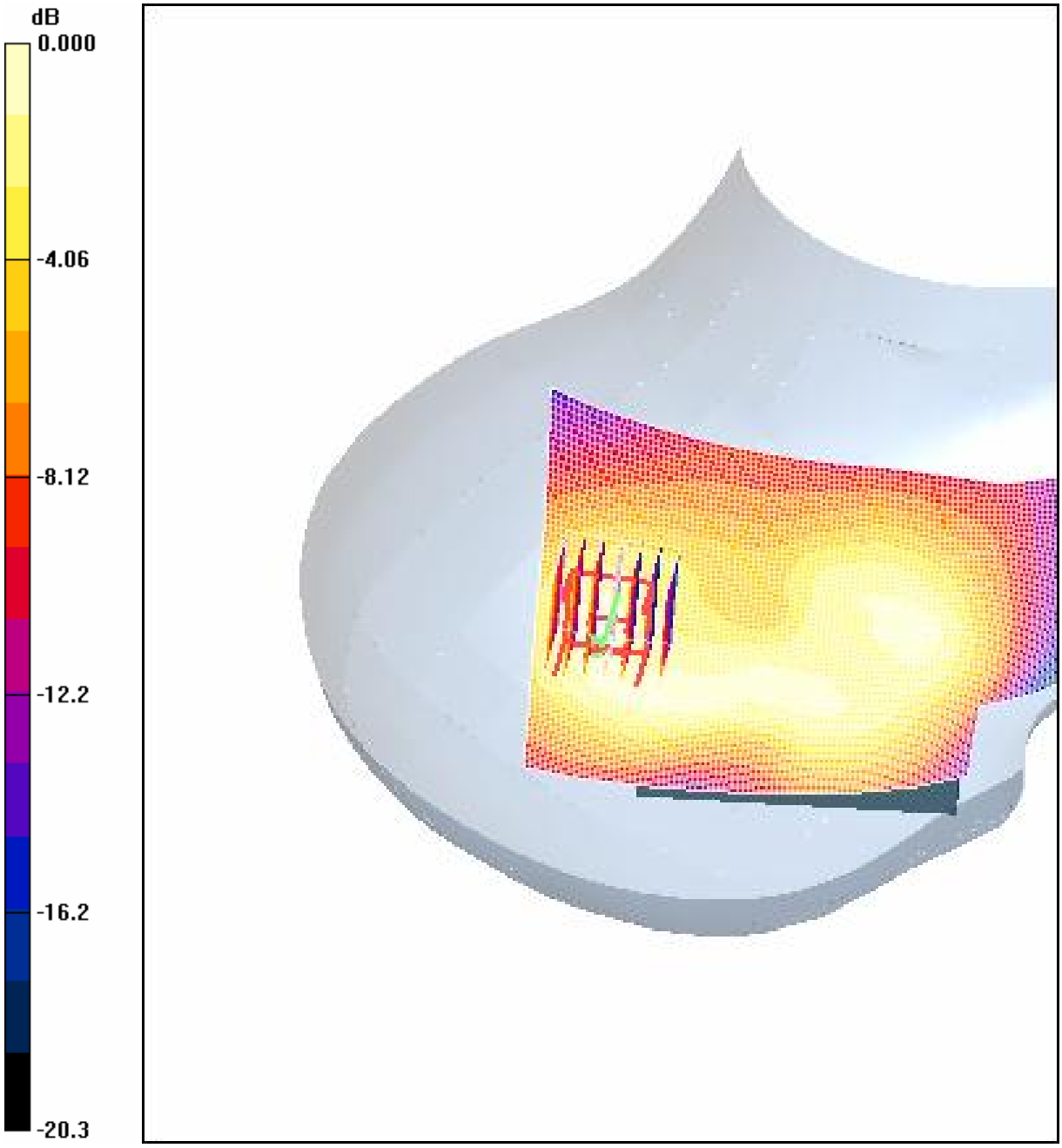
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.092 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.60 V/m; Power Drift = -0.052 dB
Peak SAR (extrapolated) = 0.147 W/kg
SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.049 mW/g
Maximum value of SAR (measured) = 0.098 mW/g



0 dB = 0.098mW/g

4.40 FCC-OET65-RightHandSide-Tilt-GSM1900-Low-Slide-Off

Date/Time: 2005-12-29 13:05:25

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-Low-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

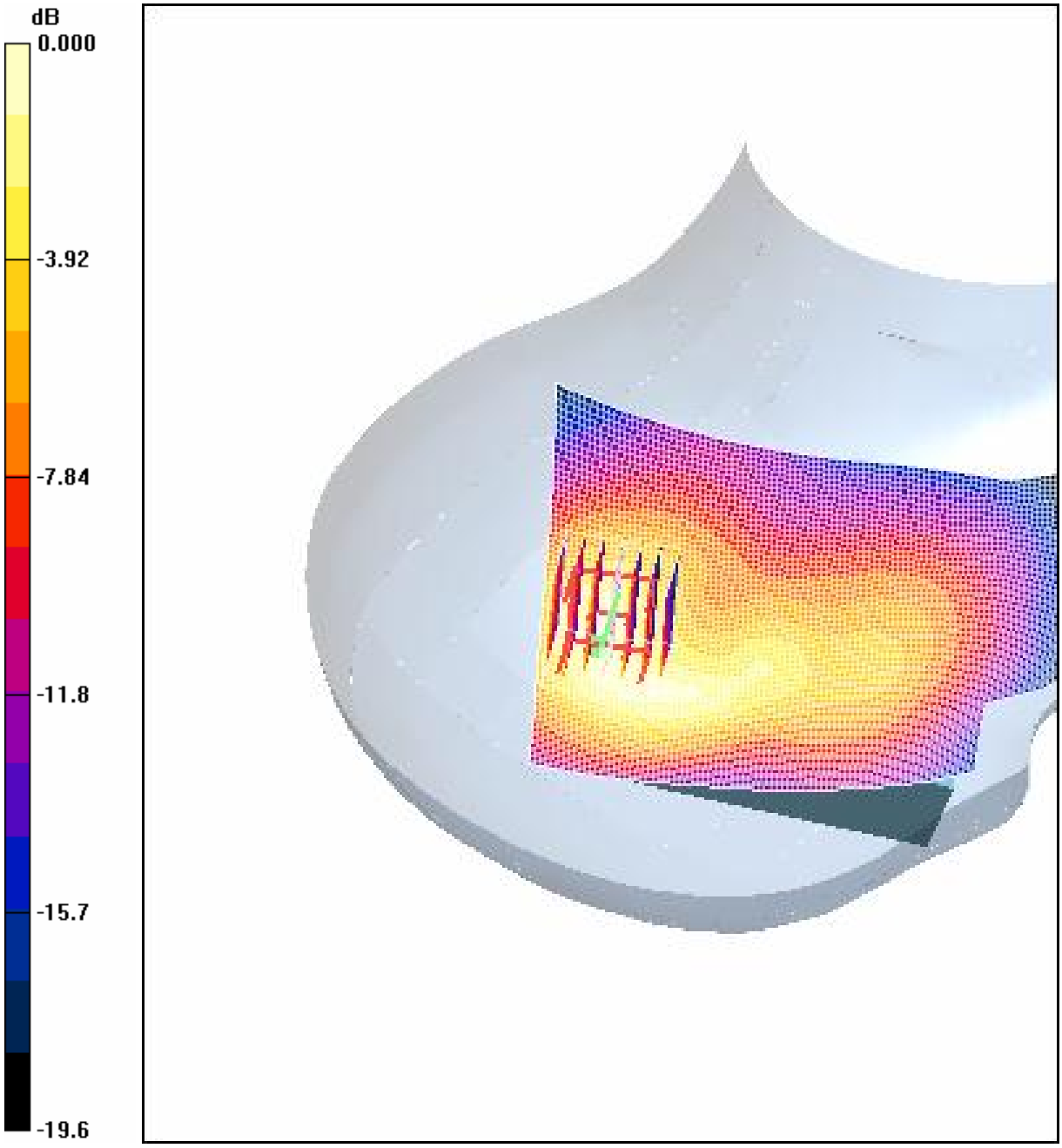
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.224 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.01 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.353 W/kg
SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.118 mW/g
Maximum value of SAR (measured) = 0.234 mW/g



0 dB = 0.234mW/g

4.41 FCC-OET65-RightHandSide-Tilt-GSM1900-Mid-Slide-Off

Date/Time: 2005-12-29 13:40:36

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-Mid-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

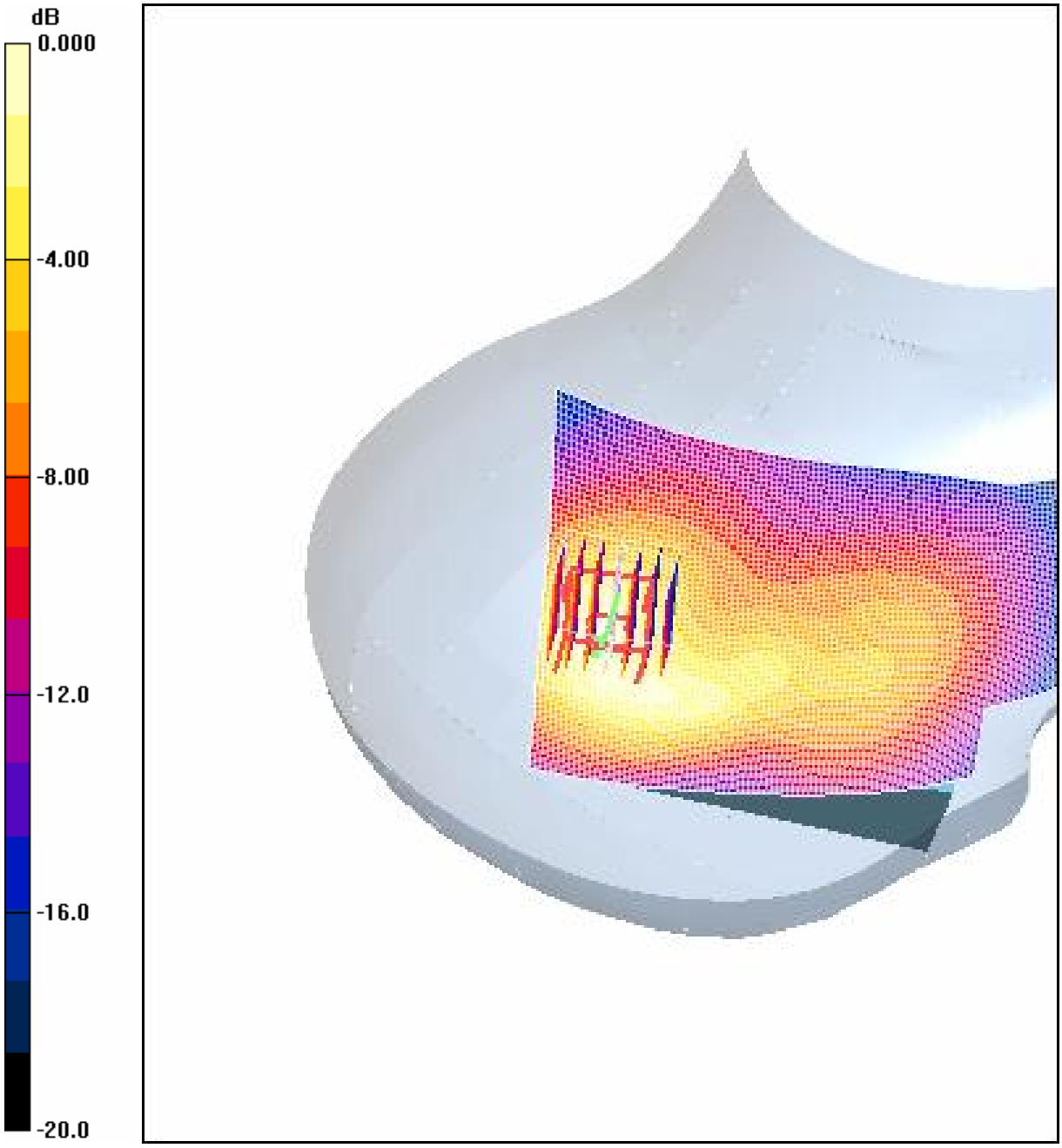
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.232 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.04 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.121 mW/g
Maximum value of SAR (measured) = 0.243 mW/g



0 dB = 0.243mW/g

4.42 FCC-OET65-RightHandSide-Tilt-GSM1900-High-Slide-Off

Date/Time: 2005-12-29 14:35:33

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-High-Slide-Off

DUT: GSM50120C; Type: Head; Serial: 20051221

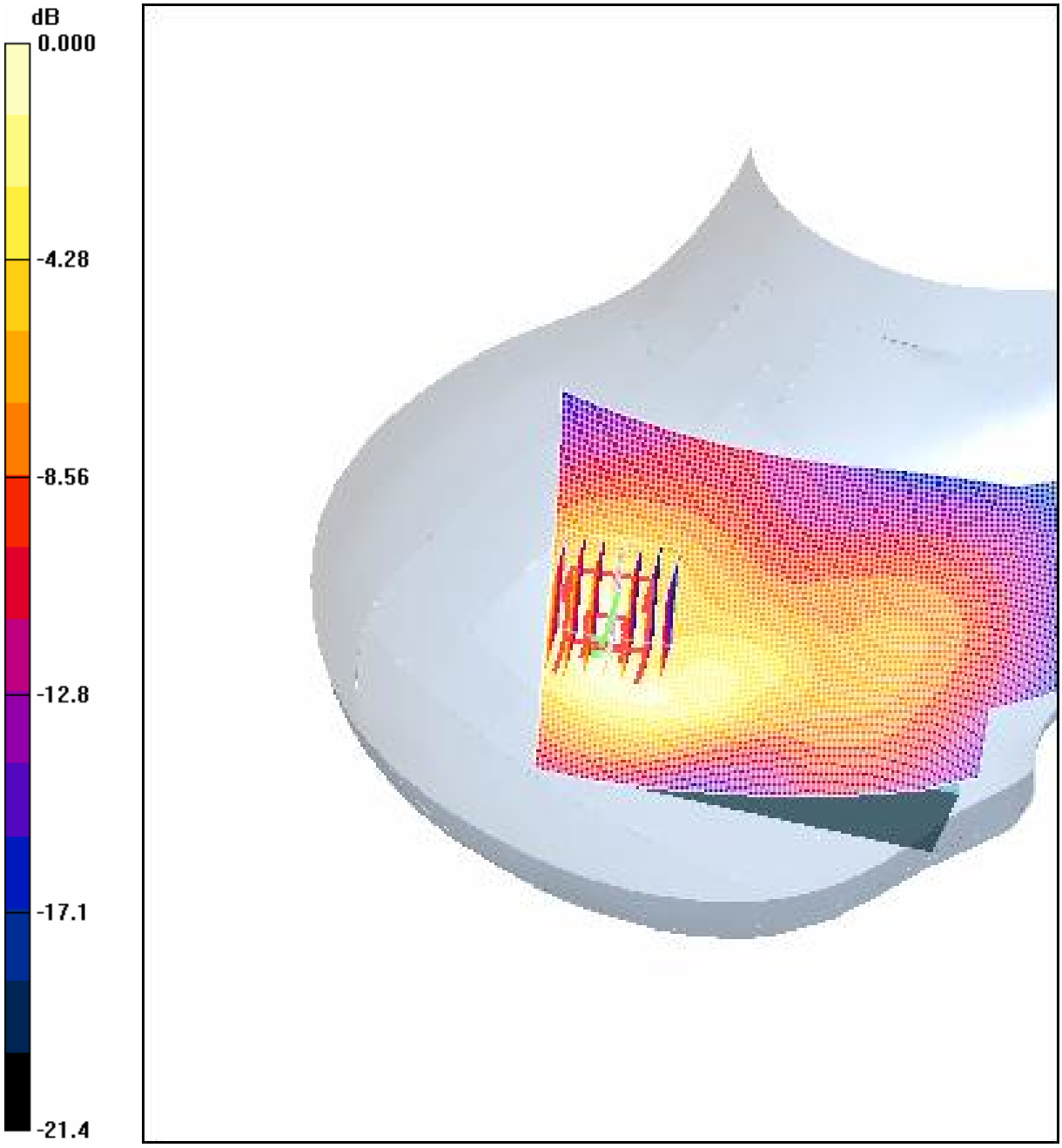
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.155 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.24 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.234 W/kg
SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.076 mW/g
Maximum value of SAR (measured) = 0.155 mW/g



0 dB = 0.155mW/g

4.43 FCC-OET65-Body-Worn-GSM1900-Low-Slide-Off

Date/Time: 2005-12-26 16:26:30

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-Low-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

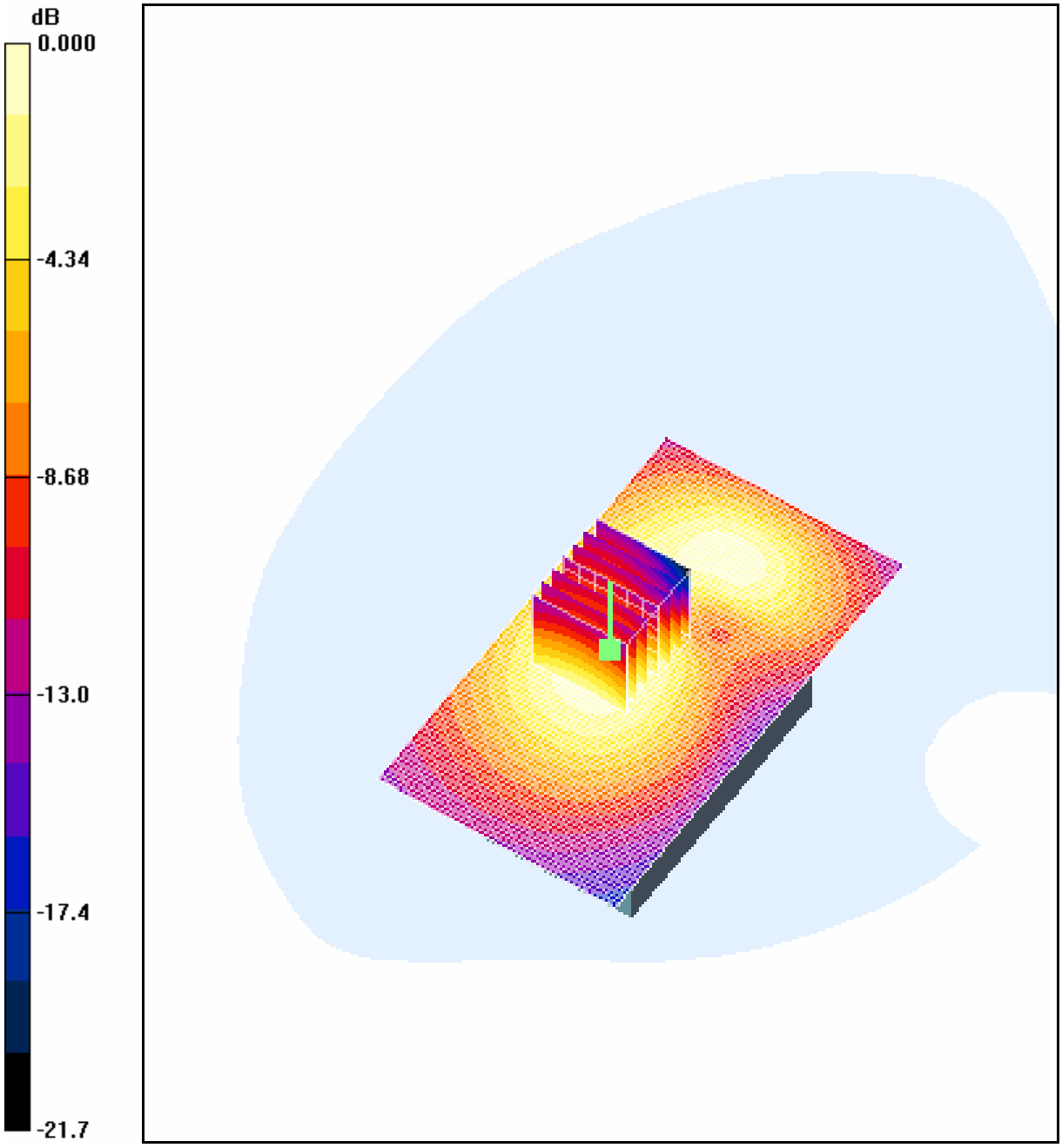
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1850.2 MHz; σ = 1.49 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.487 mW/g

Body Worn - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.4 V/m; Power Drift = -0.084 dB
Peak SAR (extrapolated) = 0.640 W/kg
SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.259 mW/g
Maximum value of SAR (measured) = 0.453 mW/g



0 dB = 0.453mW/g

4.44 FCC-OET65-Body-Worn-GSM1900-Mid-Slide-Off

Date/Time: 2005-12-26 16:55:07

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-Mid-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

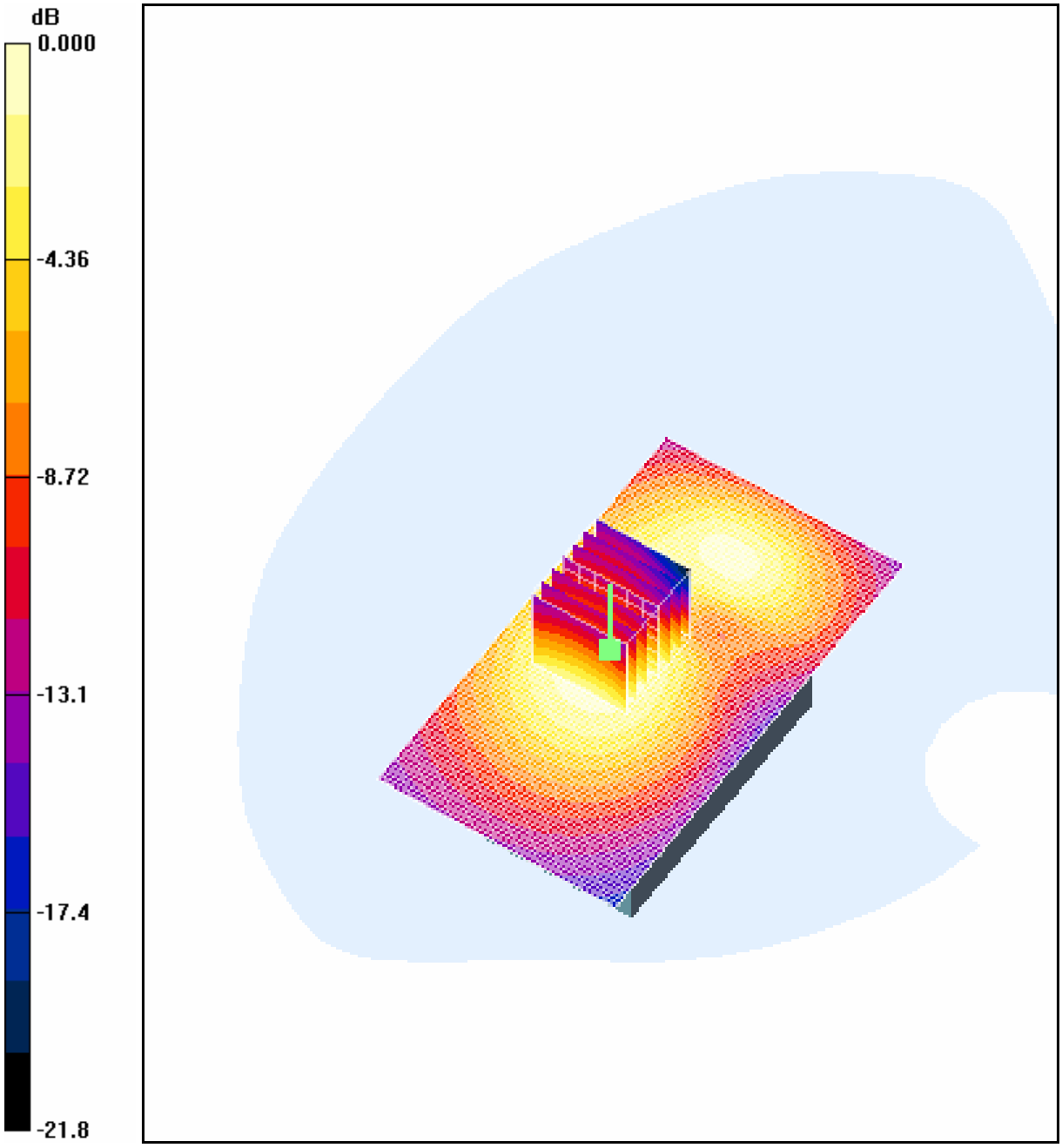
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.531 mW/g

Body Worn - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 0.727 W/kg
SAR(1 g) = 0.468 mW/g; SAR(10 g) = 0.284 mW/g
Maximum value of SAR (measured) = 0.508 mW/g



0 dB = 0.508mW/g

4.45 FCC-OET65-Body-Worn-GSM1900-High-Slide-Off

Date/Time: 2005-12-26 15:56:14

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-High-Slide-Off

DUT: GSM50120C_Body; Type: Body; Serial: 20051221

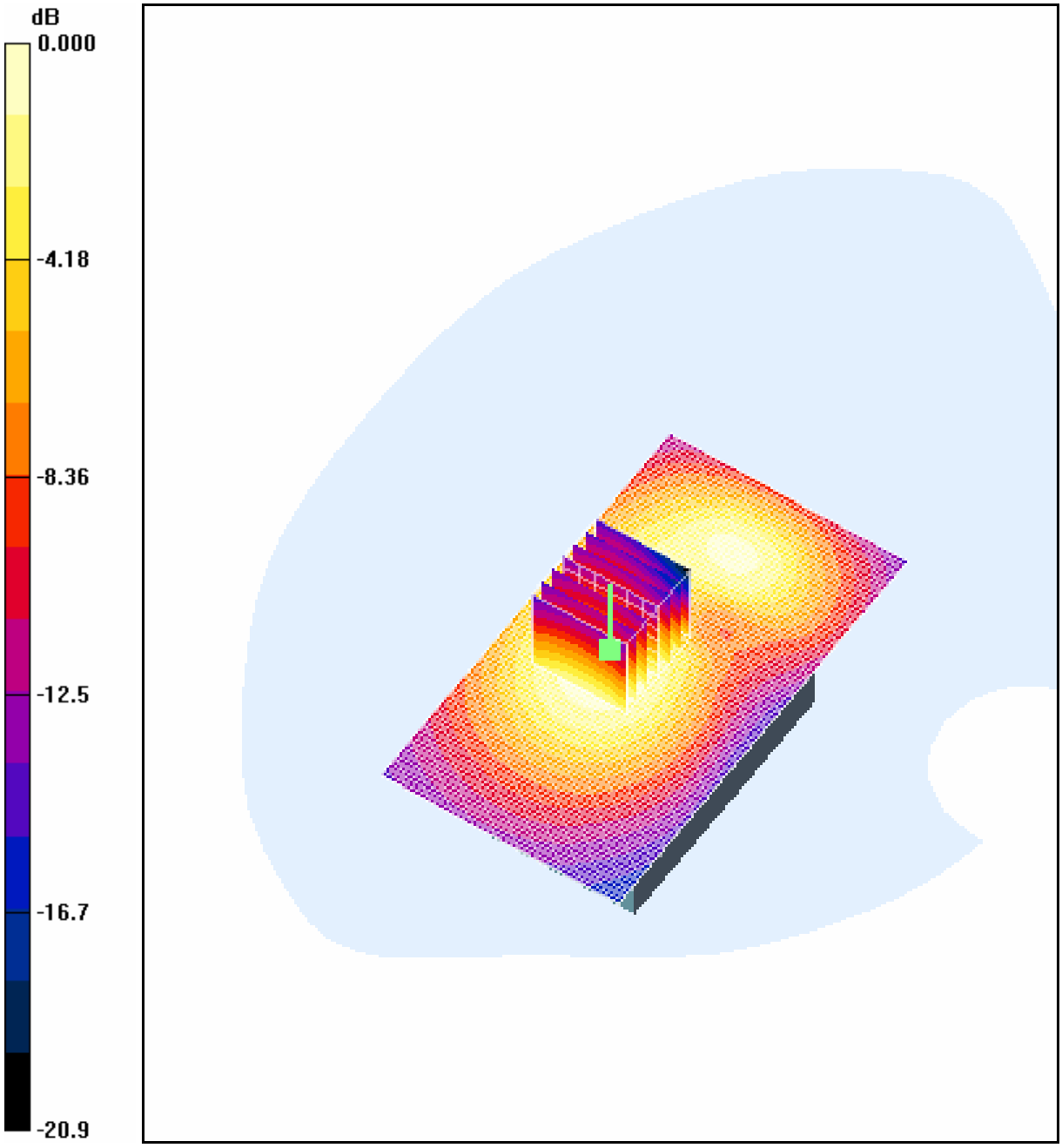
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1909.8 MHz; σ = 1.55 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.397 mW/g

Body Worn - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.188 dB
Peak SAR (extrapolated) = 0.541 W/kg
SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.209 mW/g
Maximum value of SAR (measured) = 0.374 mW/g



0 dB = 0.374mW/g

4.46 FCC-OET65-LeftHandSide-Cheek-GSM1900-Low-Slide-On

Date/Time: 2005-12-30 13:11:51

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

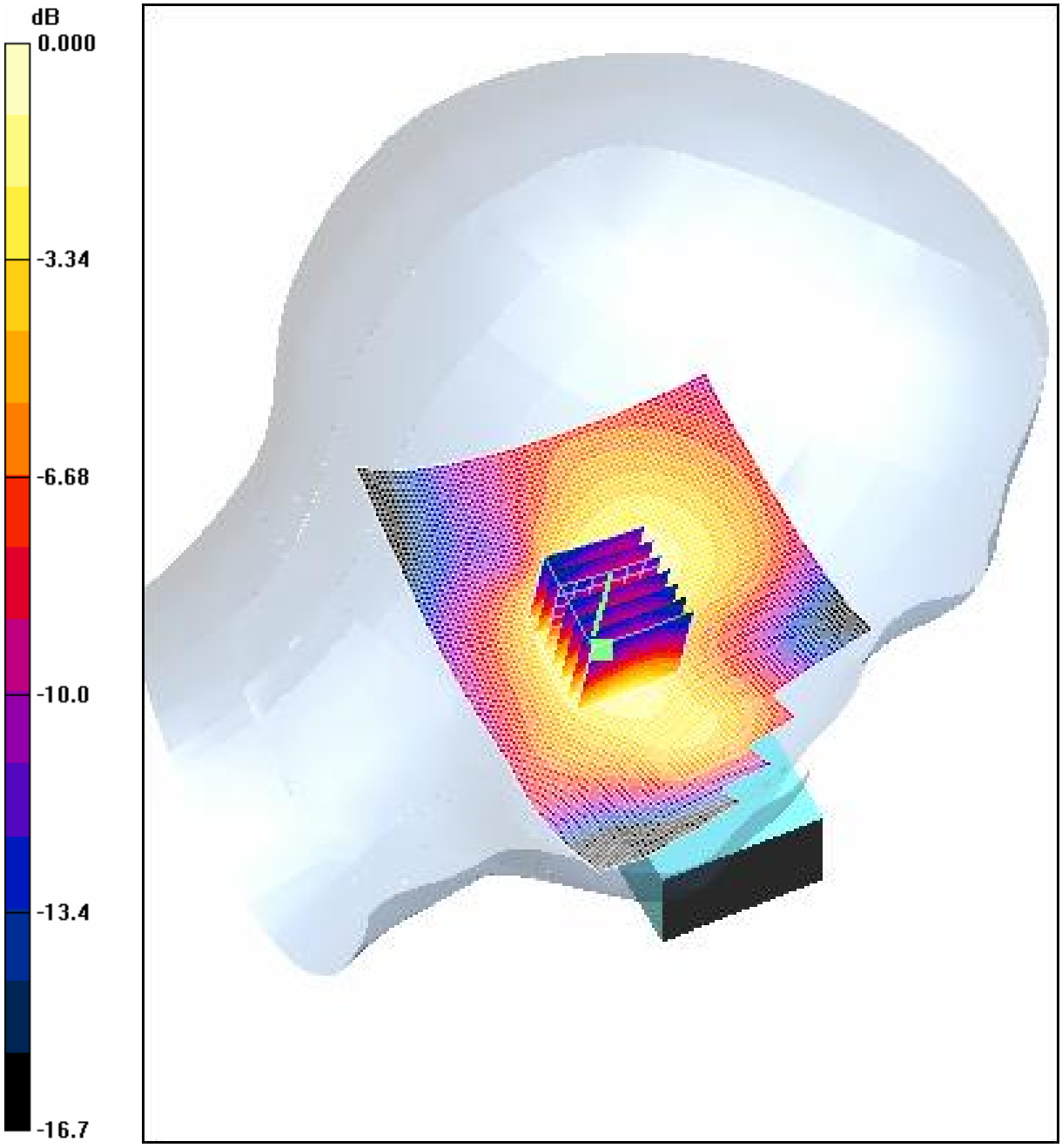
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.135 mW/g

Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.51 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.073 mW/g
Maximum value of SAR (measured) = 0.130 mW/g



0 dB = 0.130mW/g

4.47 FCC-OET65-LeftHandSide-Cheek-GSM1900-Mid-Slide-On

Date/Time: 2005-12-30 10:44:35

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

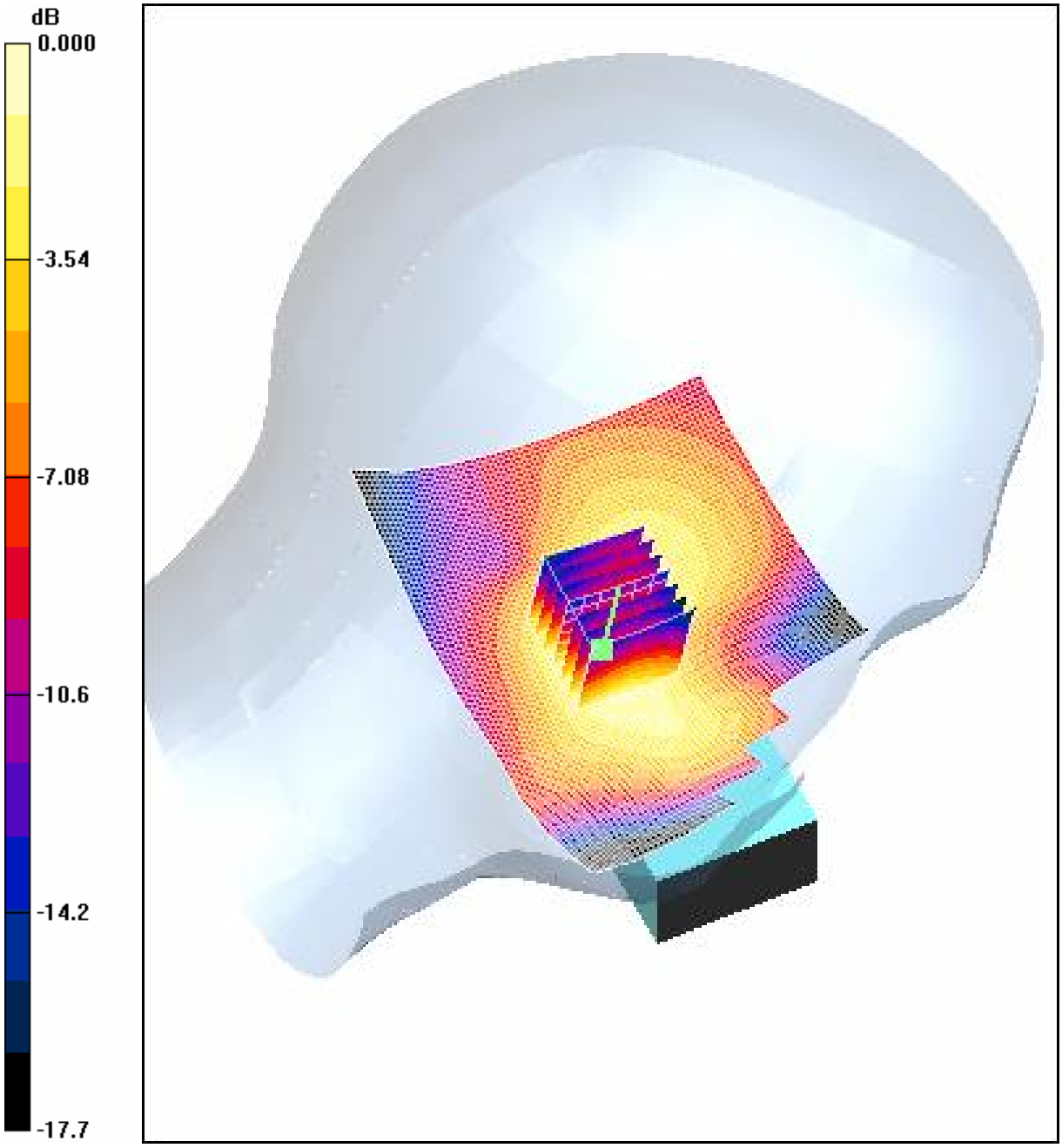
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.172 mW/g

Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.40 V/m; Power Drift = -0.056 dB
Peak SAR (extrapolated) = 0.238 W/kg
SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.169 mW/g



0 dB = 0.169mW/g

4.48 FCC-OET65-LeftHandSide-Cheek-GSM1900-High-Slide-On

Date/Time: 2005-12-30 10:00:44

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Cheek-GSM1900-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

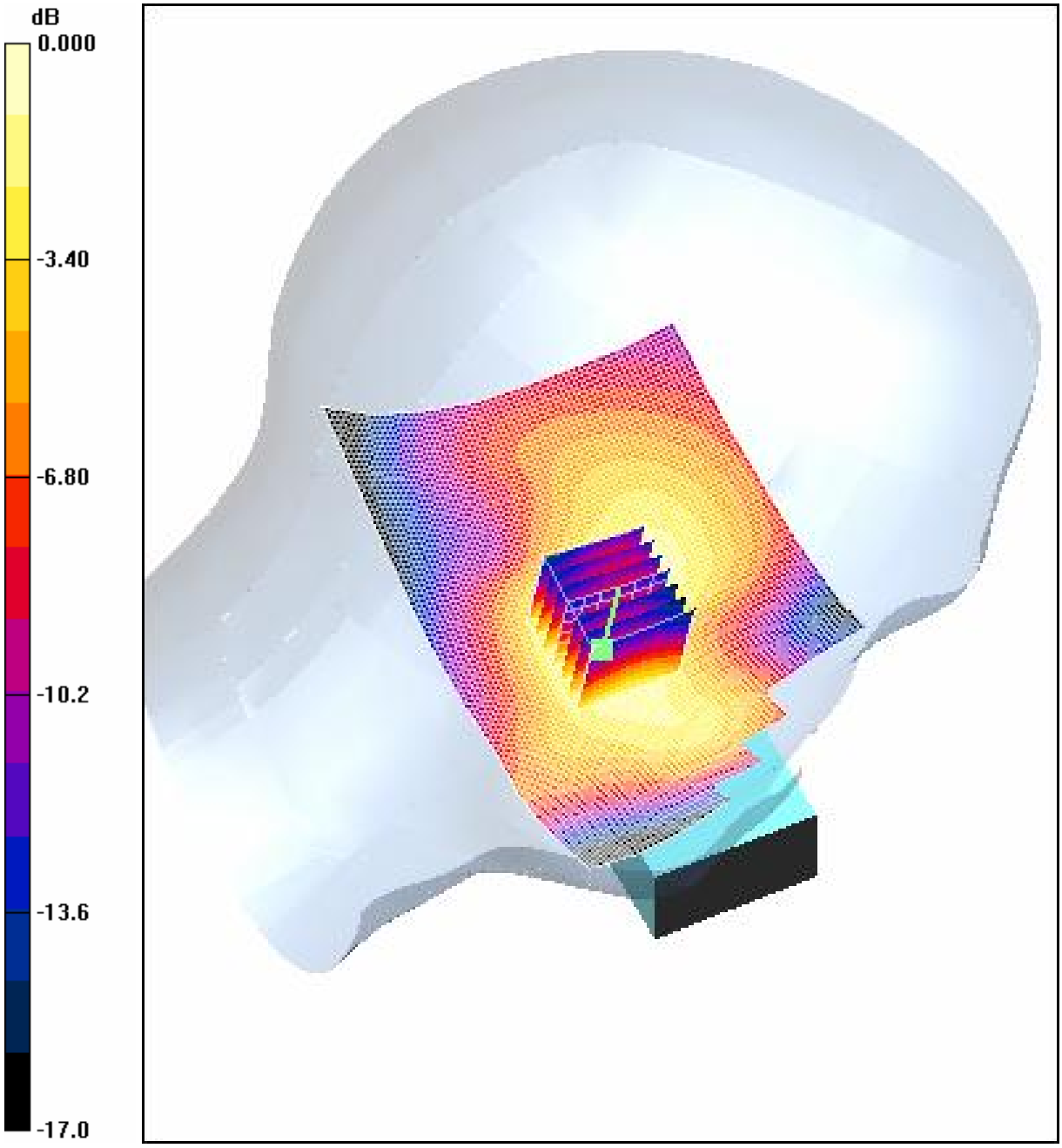
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.126 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 = 0.099 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.125 mW/g



0 dB = 0.125mW/g

4.49 FCC-OET65-LeftHandSide-Tilt-GSM1900-Low-Slide-On

Date/Time: 2005-12-30 13:44:57

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

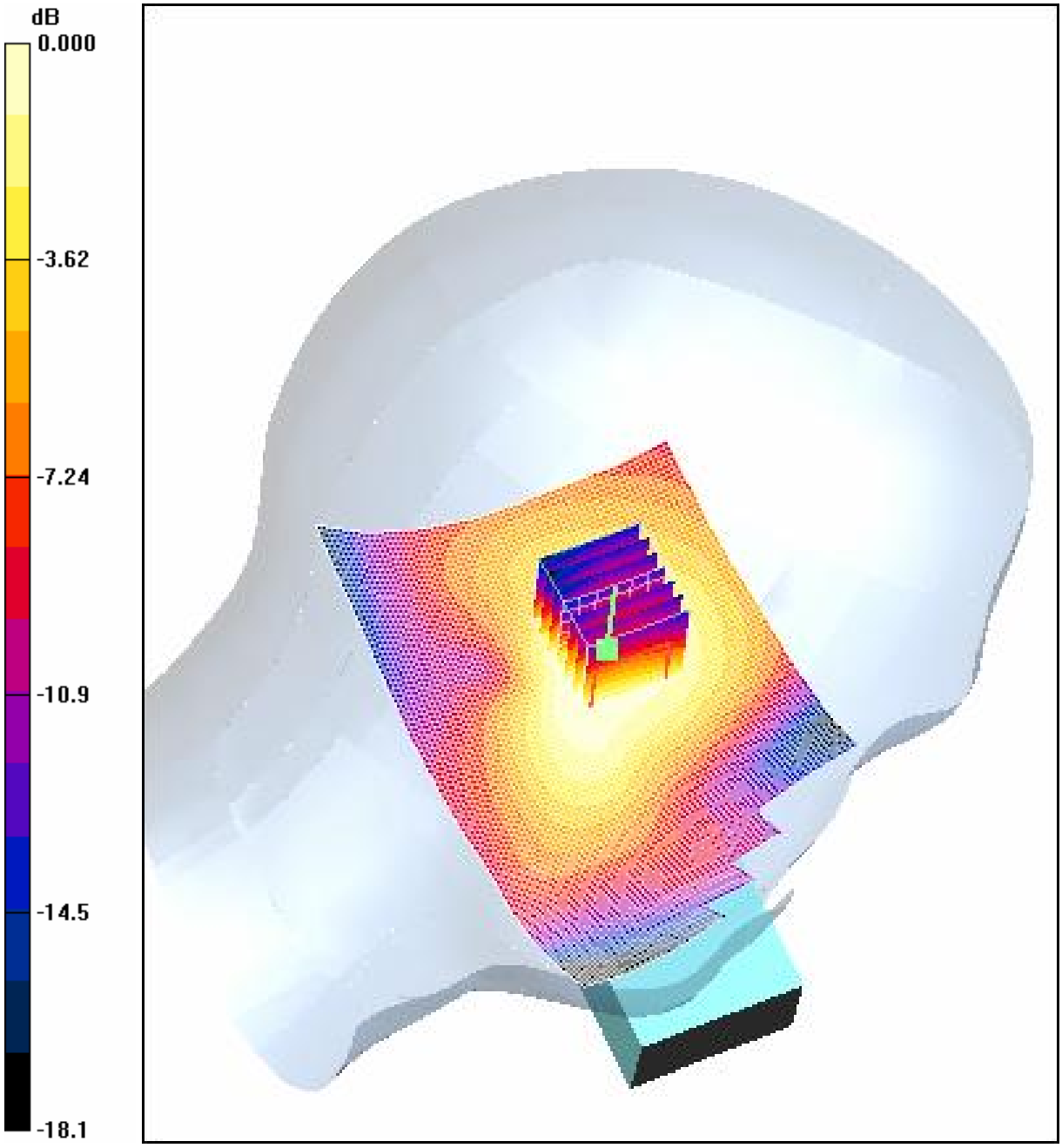
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.088 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.76 V/m; Power Drift = -0.140 dB
Peak SAR (extrapolated) = 0.120 W/kg
SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.050 mW/g
Maximum value of SAR (measured) = 0.086 mW/g



0 dB = 0.086mW/g

4.50 FCC-OET65-LeftHandSide-Tilt-GSM1900-Mid-Slide-On

Date/Time: 2005-12-30 14:19:30

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

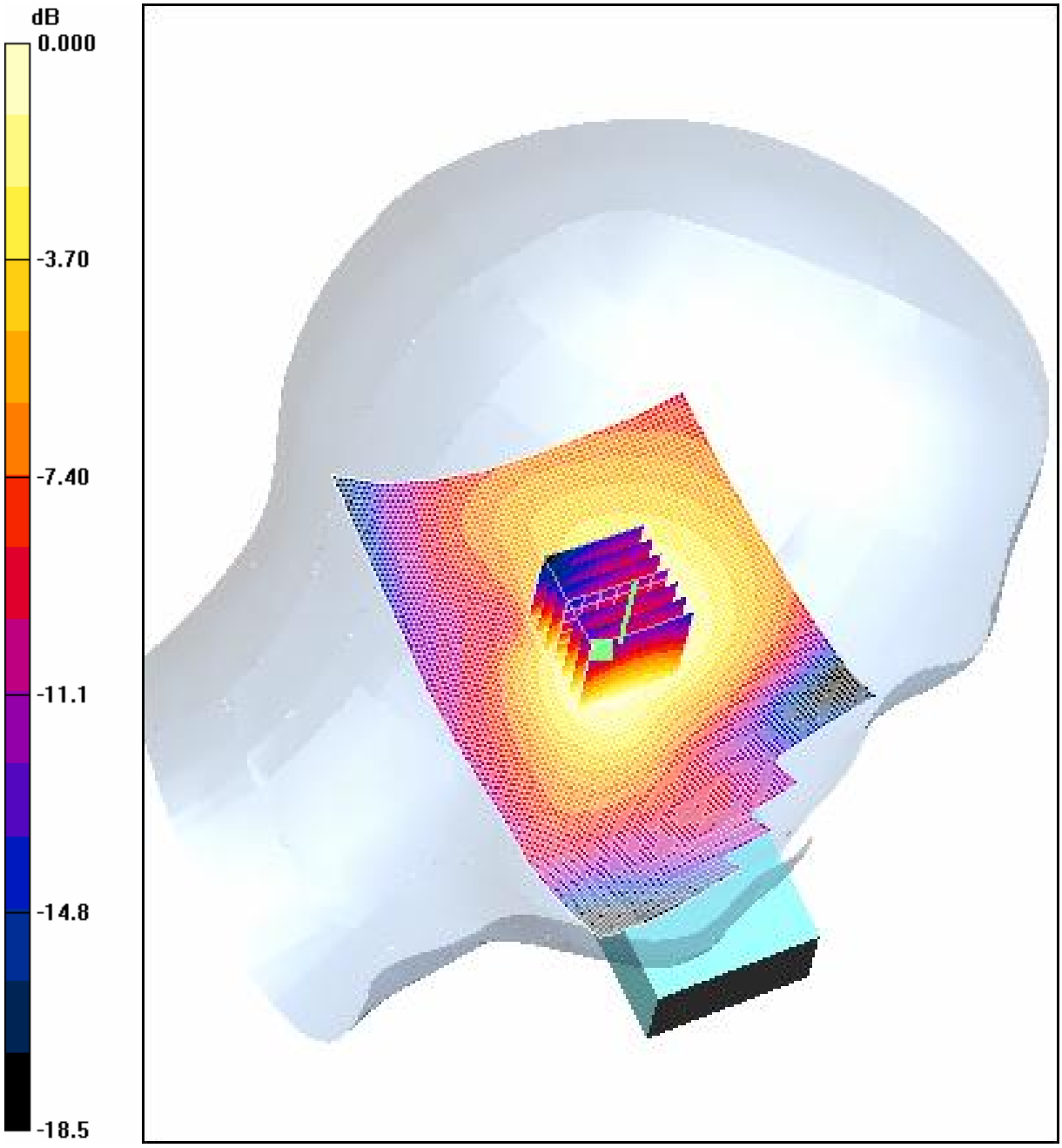
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.127 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.73 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 0.169 W/kg
SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.071 mW/g
Maximum value of SAR (measured) = 0.120 mW/g



0 dB = 0.120mW/g

4.51 FCC-OET65-LeftHandSide-Tilt-GSM1900-High-Slide-On

Date/Time: 2005-12-30 14:55:11

Test Laboratory: SGS-GSM

FCC-OET65-LeftHandSide-Tilt-GSM1900-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

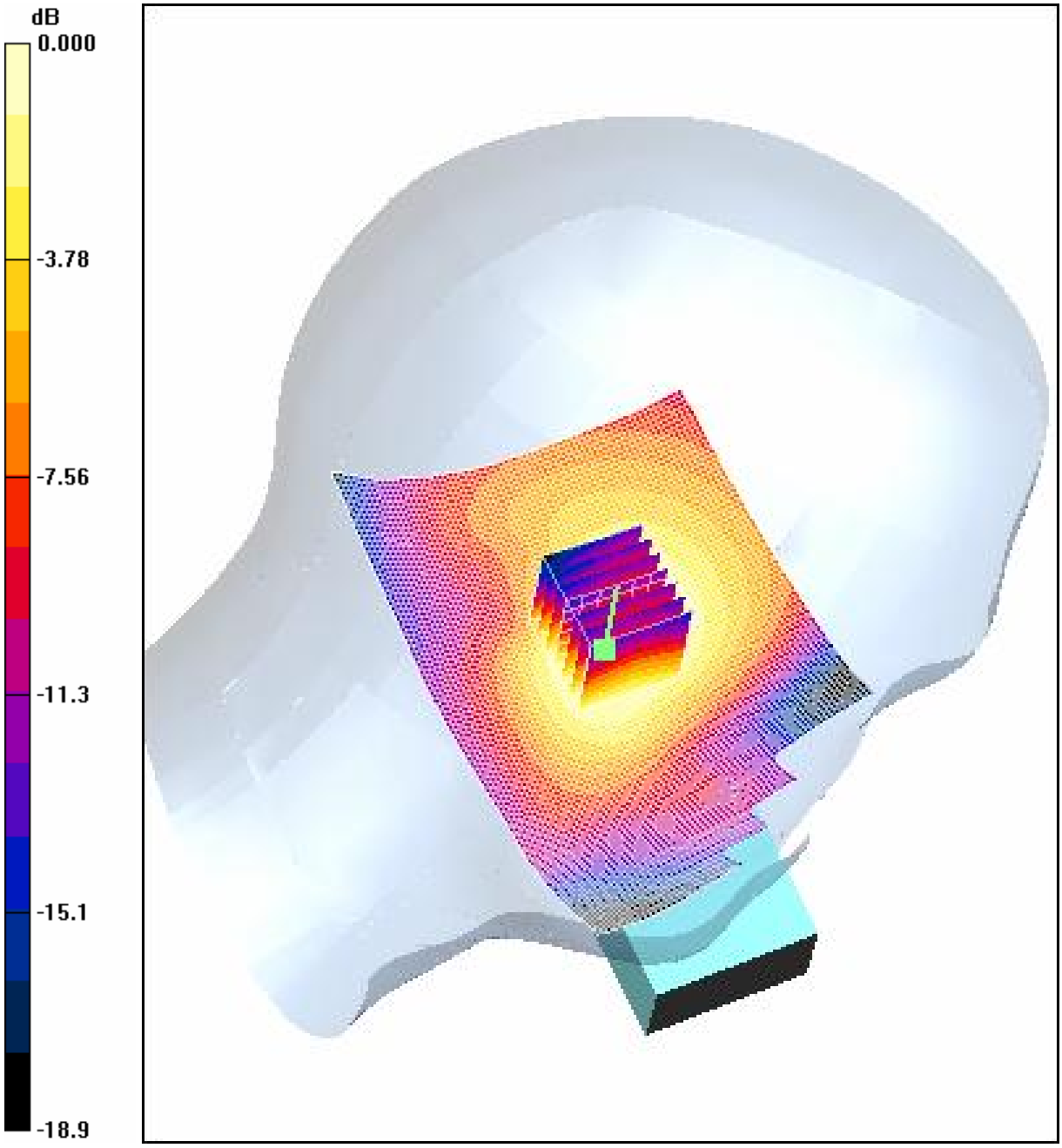
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.116 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.09 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 0.158 W/kg
SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.110 mW/g



0 dB = 0.110mW/g

4.52 FCC-OET65-RightHandSide-Cheek-GSM1900-Low-Slide-On

Date/Time: 2005-12-28 15:40:20

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

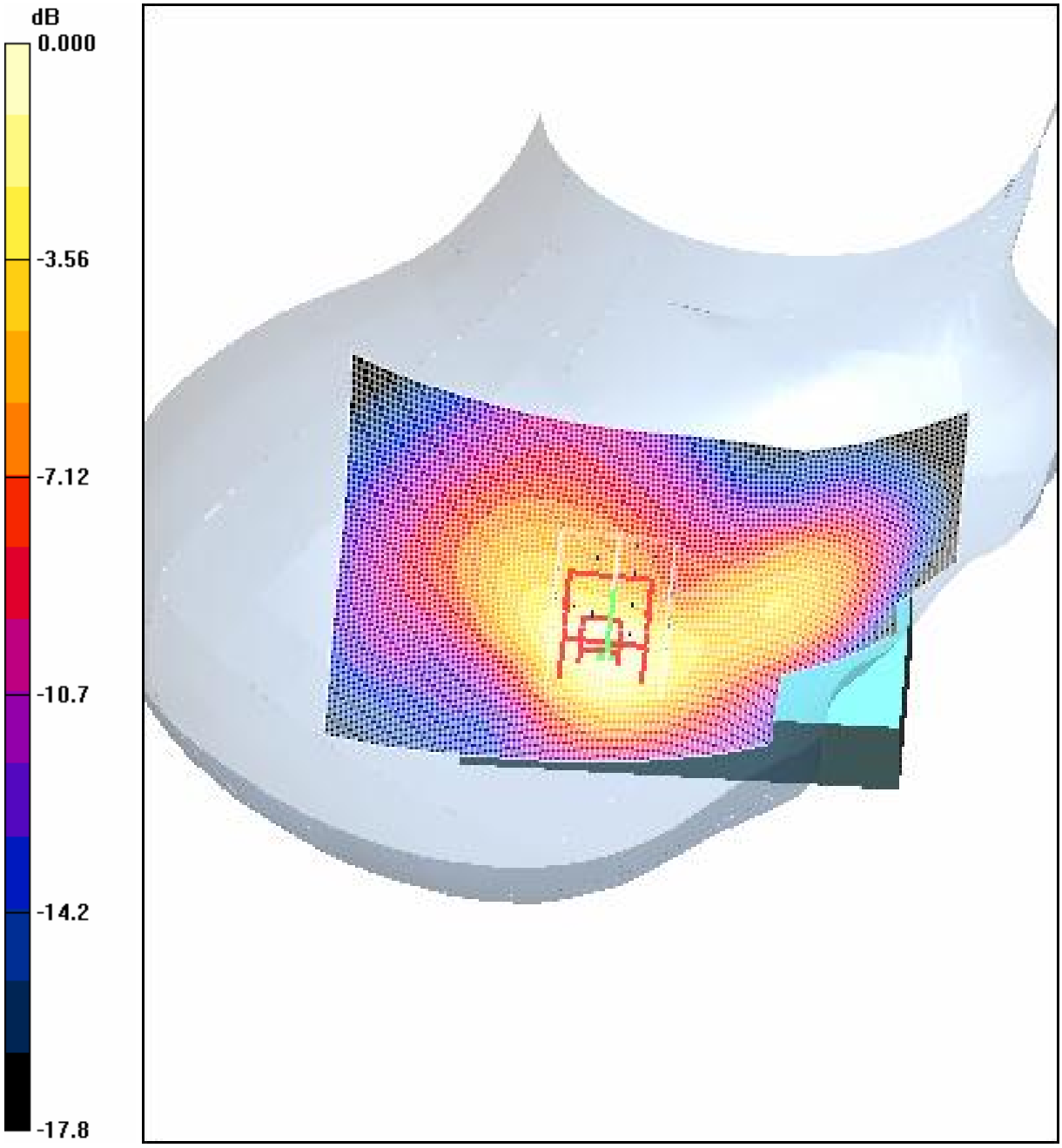
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.181 mW/g

Cheek position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.52 V/m; Power Drift = -0.131 dB
Peak SAR (extrapolated) = 0.279 W/kg
SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.093 mW/g
Maximum value of SAR (measured) = 0.186 mW/g



0 dB = 0.186mW/g

4.53 FCC-OET65-RightHandSide-Cheek-GSM1900-Mid-Slide-On

Date/Time: 2005-12-28 16:12:12

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

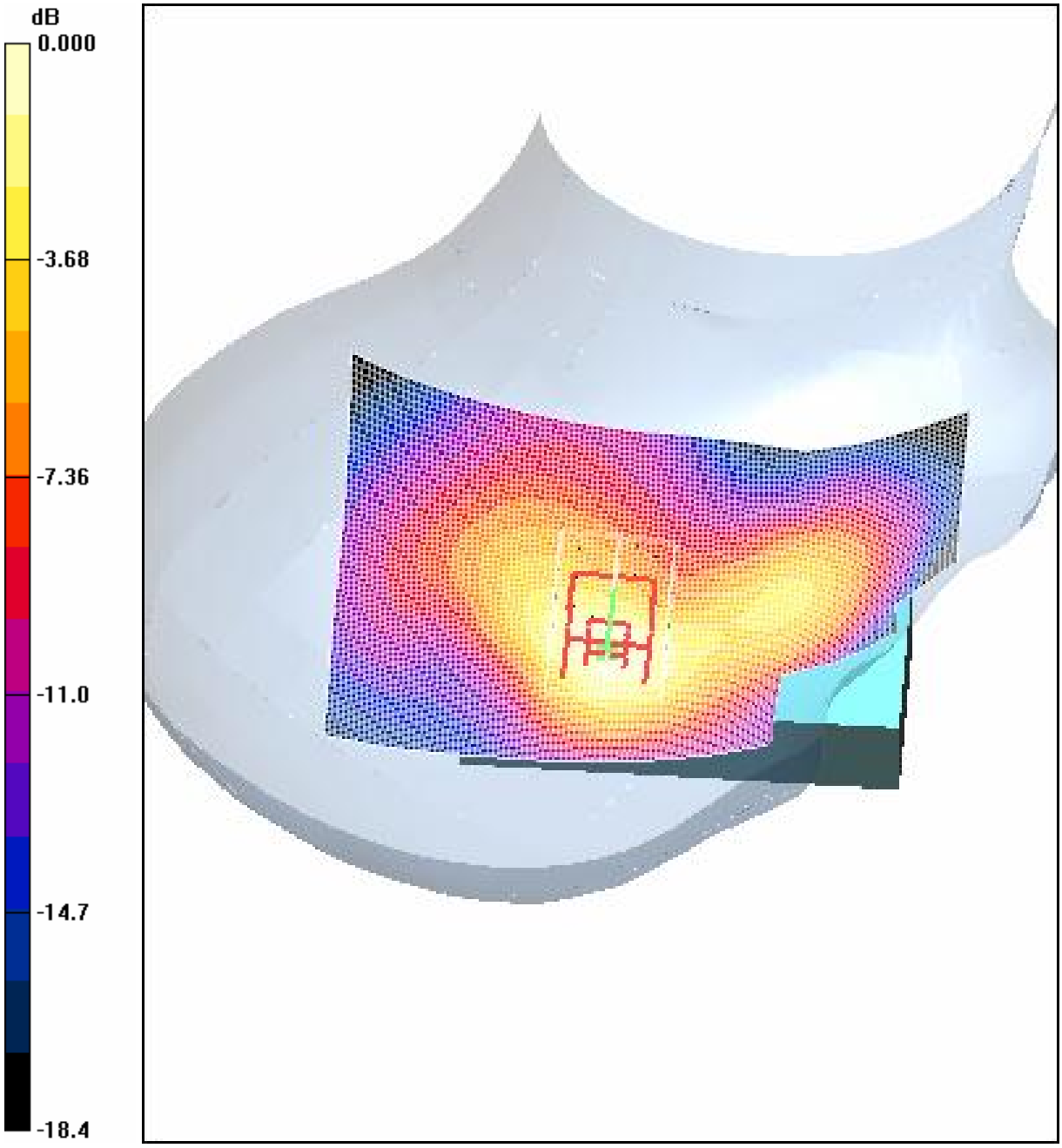
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.223 mW/g

Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.88 V/m; Power Drift = -0.095 dB
Peak SAR (extrapolated) = 0.339 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.114 mW/g
Maximum value of SAR (measured) = 0.225 mW/g



0 dB = 0.225mW/g

4.54 FCC-OET65-RightHandSide-Cheek-GSM1900-High-Slide-On

Date/Time: 2005-12-28 16:43:42

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Cheek-GSM1900-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

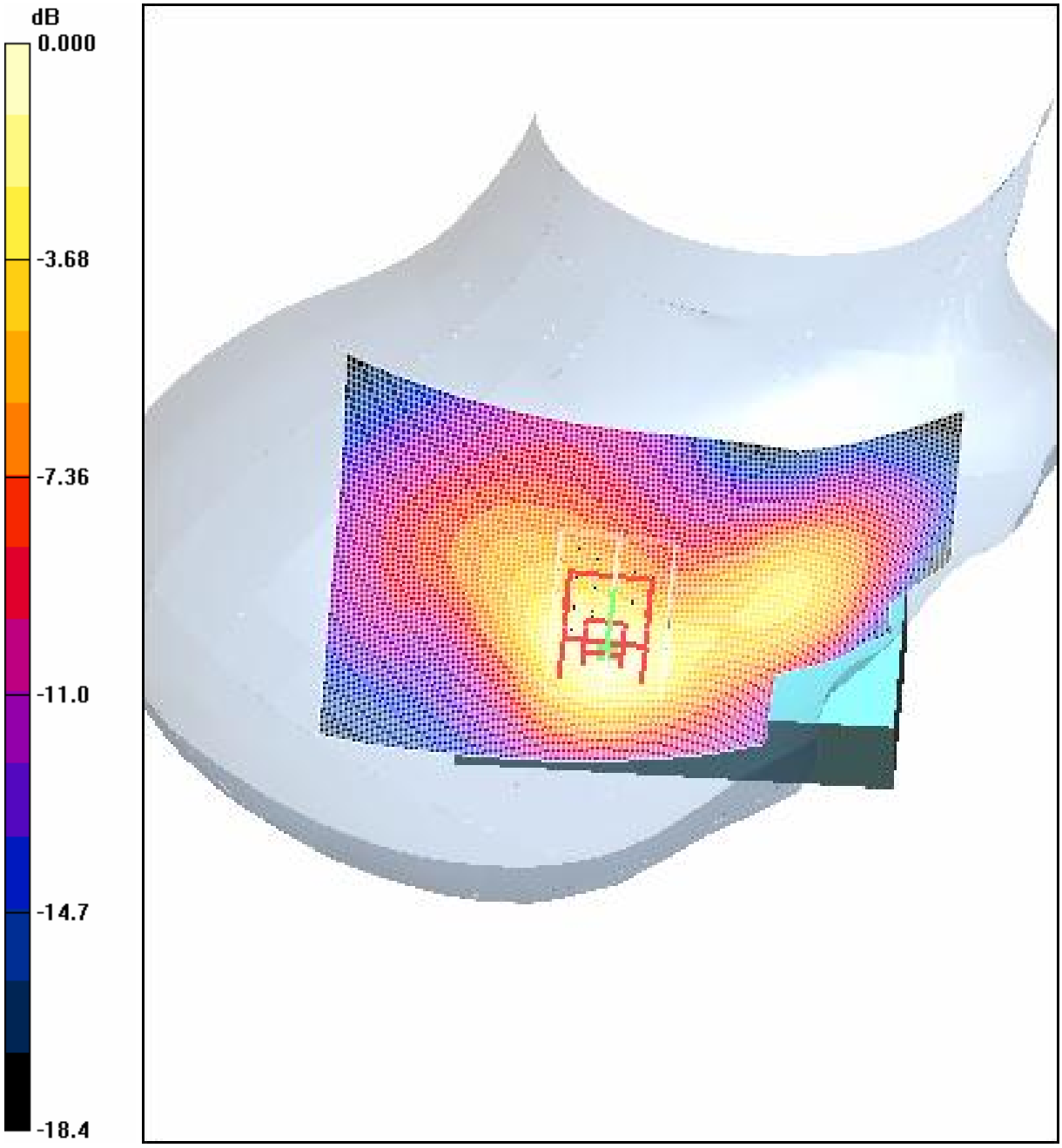
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Cheek position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.170 mW/g

Cheek position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.38 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 0.260 W/kg
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.088 mW/g
Maximum value of SAR (measured) = 0.174 mW/g



0 dB = 0.174mW/g

4.55 FCC-OET65-RightHandSide-Tilt-GSM1900-Low-Slide-On

Date/Time: 2005-12-29 15:43:23

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-Low-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

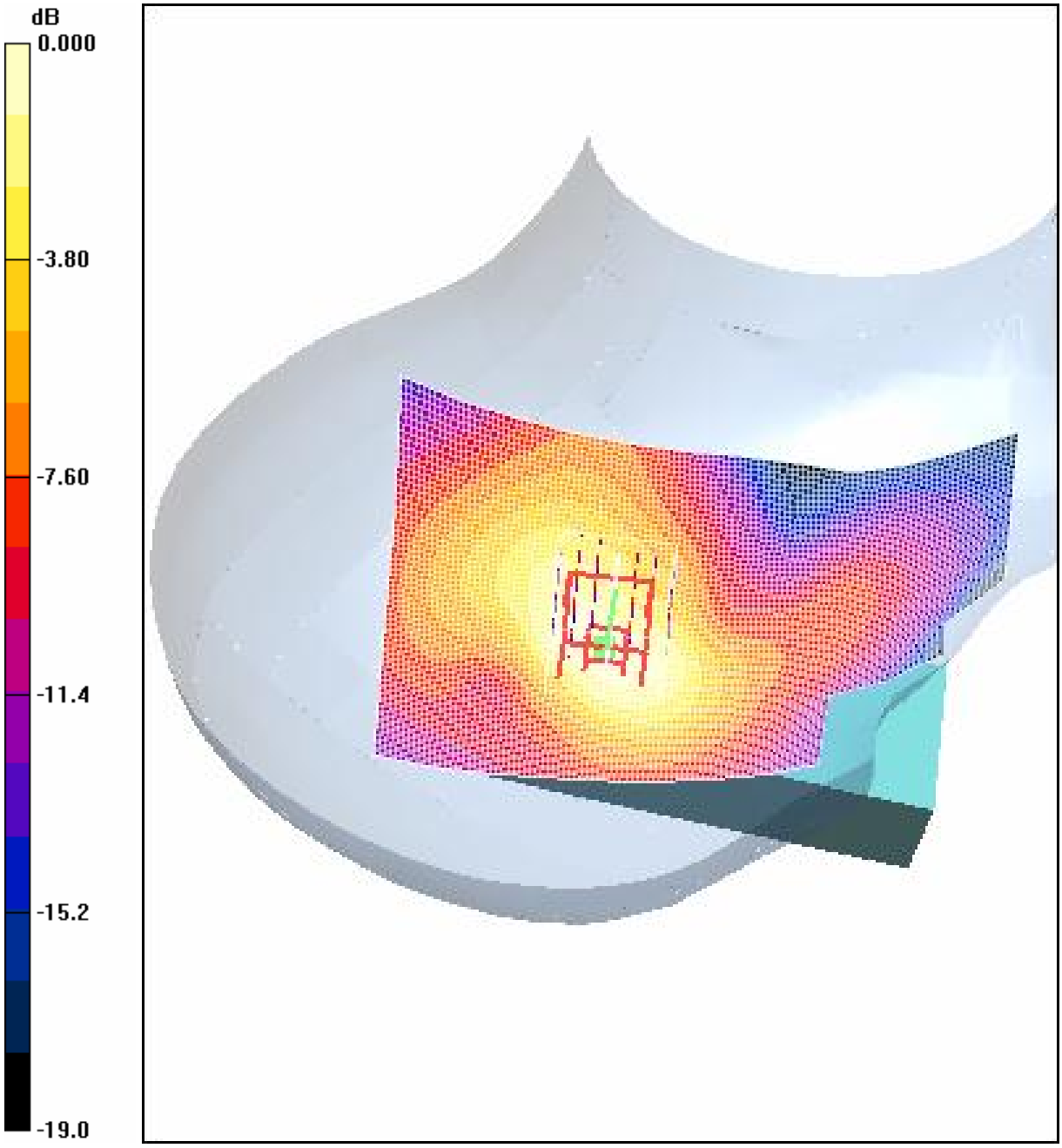
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1850.2 MHz; σ = 1.42 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Low/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.106 mW/g

Tilt position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.87 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.158 W/kg
SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.106 mW/g



0 dB = 0.106mW/g

4.56 FCC-OET65-RightHandSide-Tilt-GSM1900-Mid-Slide-On

Date/Time: 2005-12-29 16:16:21

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-Mid-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

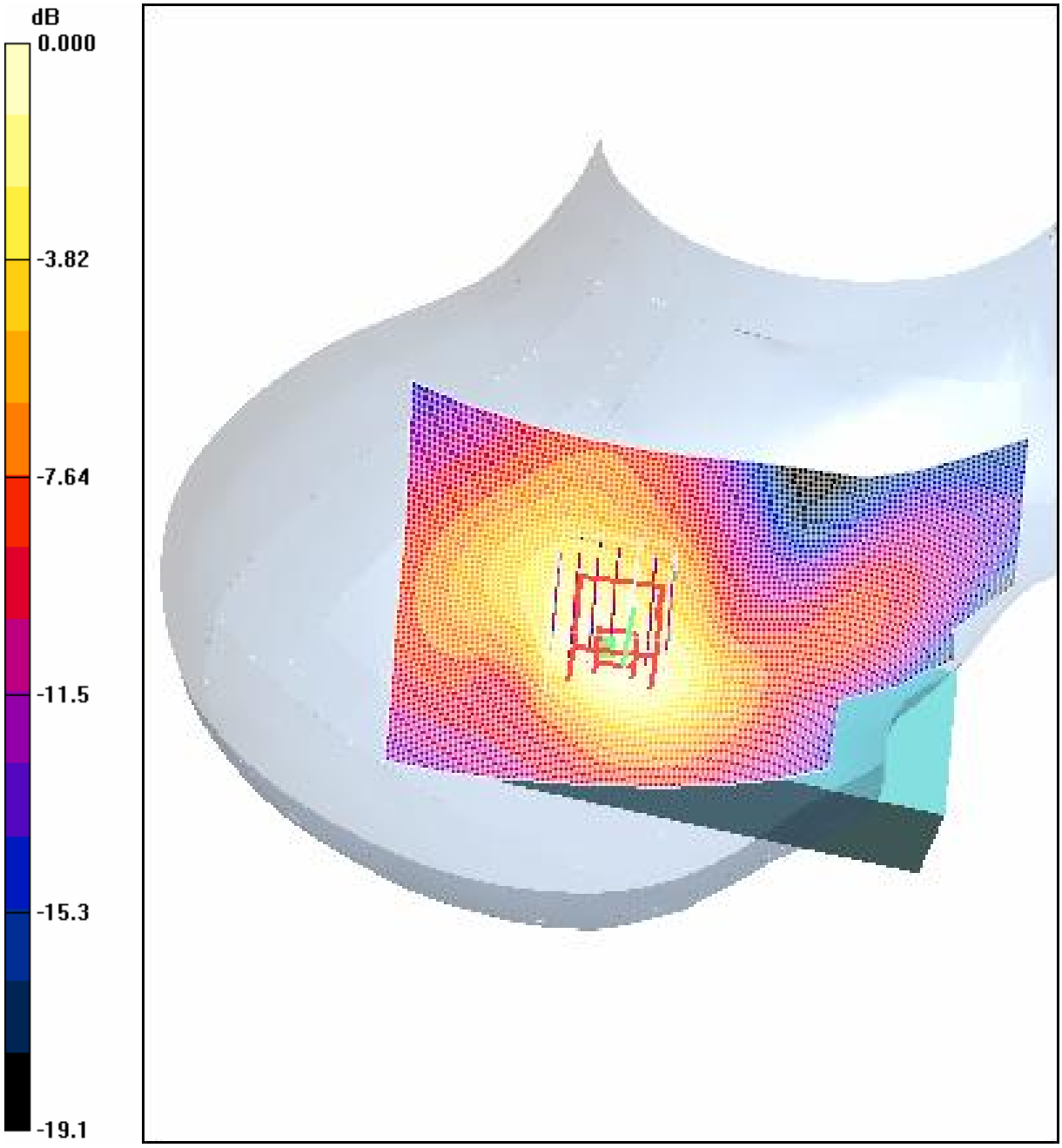
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.44 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - Middle/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.149 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.26 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.080 mW/g
Maximum value of SAR (measured) = 0.149 mW/g



0 dB = 0.149mW/g

4.57 FCC-OET65-RightHandSide-Tilt-GSM1900-High-Slide-On

Date/Time: 2005-12-29 15:09:44

Test Laboratory: SGS-GSM

FCC-OET65-RightHandSide-Tilt-GSM1900-High-Slide-On

DUT: GSM50120O_Head; Type: Head; Serial: 20051221

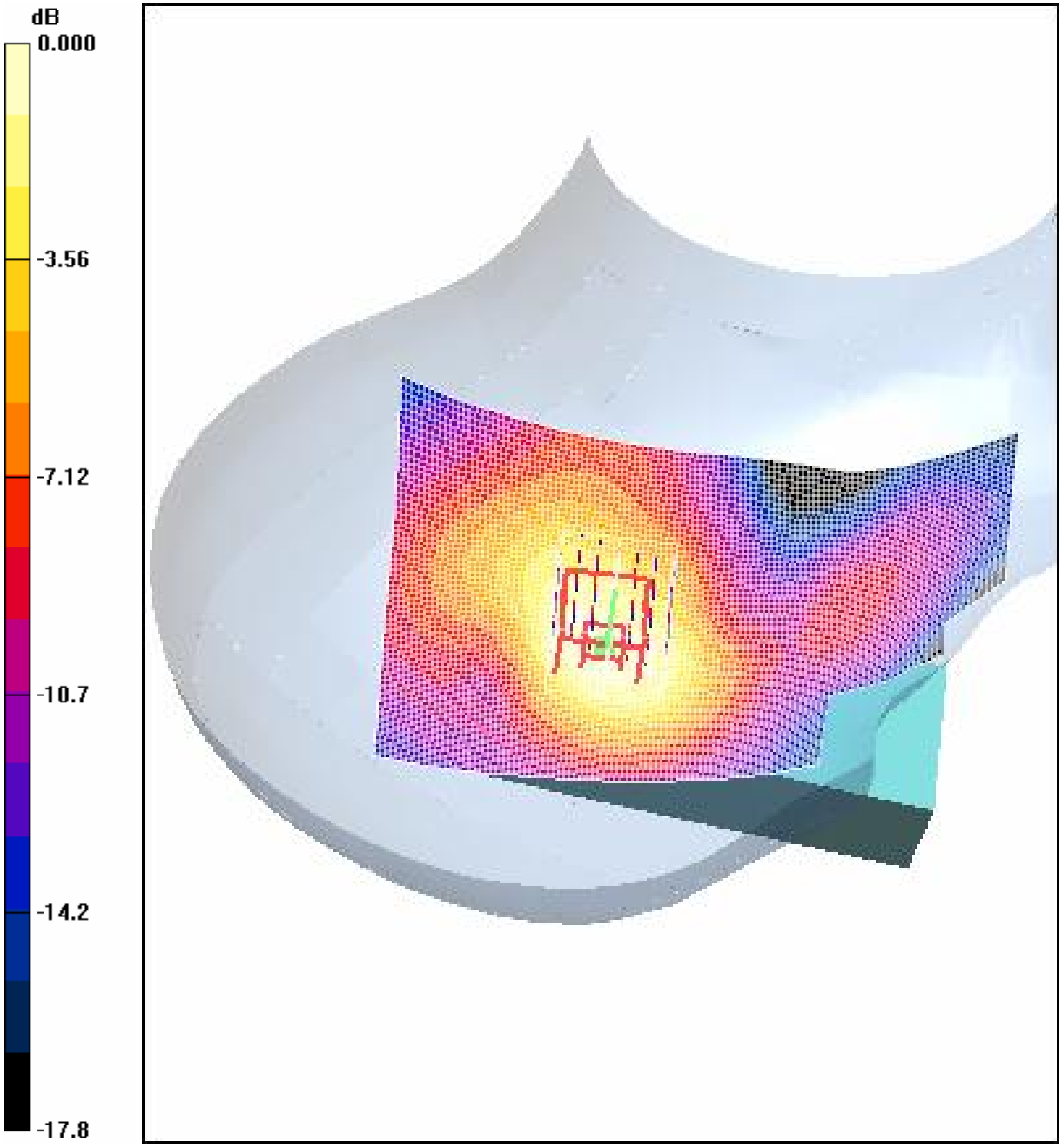
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900 Medium parameters used: f = 1909.8 MHz; σ = 1.47 mho/m; ε_r = 40; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.93, 4.93, 4.93); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Tilt position - High/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.124 mW/g

Tilt position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.26 V/m; Power Drift = 0.097 dB
Peak SAR (extrapolated) = 0.185 W/kg
SAR(1 g) = 0.114 mW/g; SAR(10 g) = 0.067 mW/g
Maximum value of SAR (measured) = 0.124 mW/g



0 dB = 0.124mW/g

4.58 FCC-OET65-Body-Worn-GSM1900-Low-Slide-On

Date/Time: 2005-12-26 14:28:45

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-Low-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

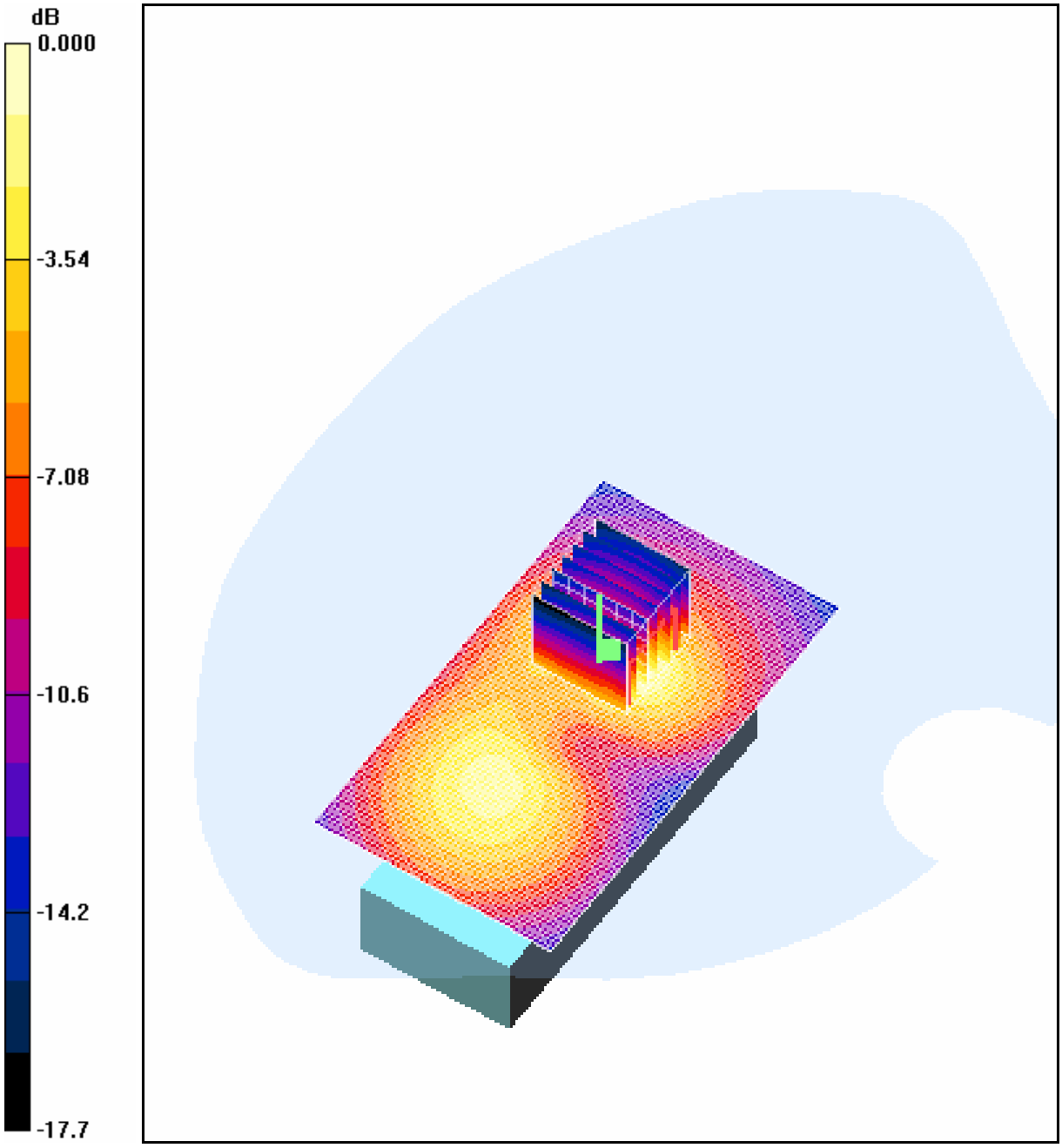
Communication System: GSM1900-GSM Mode; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1850.2 MHz; σ = 1.49 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.509 mW/g

Body Worn - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.30 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 0.780 W/kg
SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.253 mW/g
Maximum value of SAR (measured) = 0.517 mW/g



0 dB = 0.517mW/g

4.59 FCC-OET65-Body-Worn-GSM1900-Mid-Slide-On

Date/Time: 2005-12-26 14:55:54

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-Mid-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

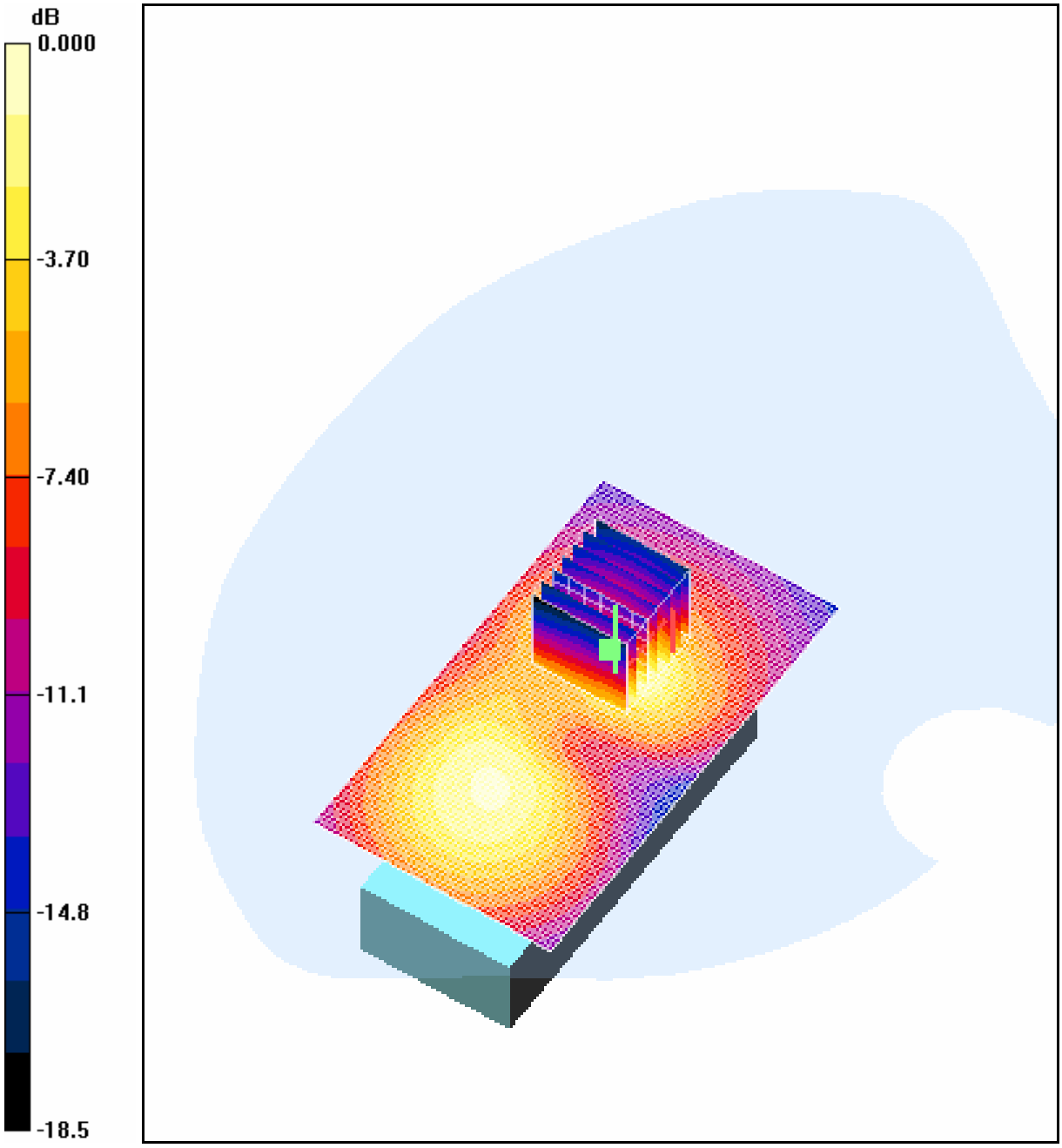
Communication System: GSM1900-GSM Mode; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.555 mW/g

Body Worn - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.54 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 0.901 W/kg
SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.280 mW/g
Maximum value of SAR (measured) = 0.589 mW/g



0 dB = 0.589mW/g

4.60 FCC-OET65-Body-Worn-GSM1900-High-Slide-On

Date/Time: 2005-12-26 15:26:57

Test Laboratory: SGS-GSM

FCC-OET65-Body-Worn-GSM1900-High-Slide-On

DUT: GSM50120O_Body; Type: Body; Serial: 20051221

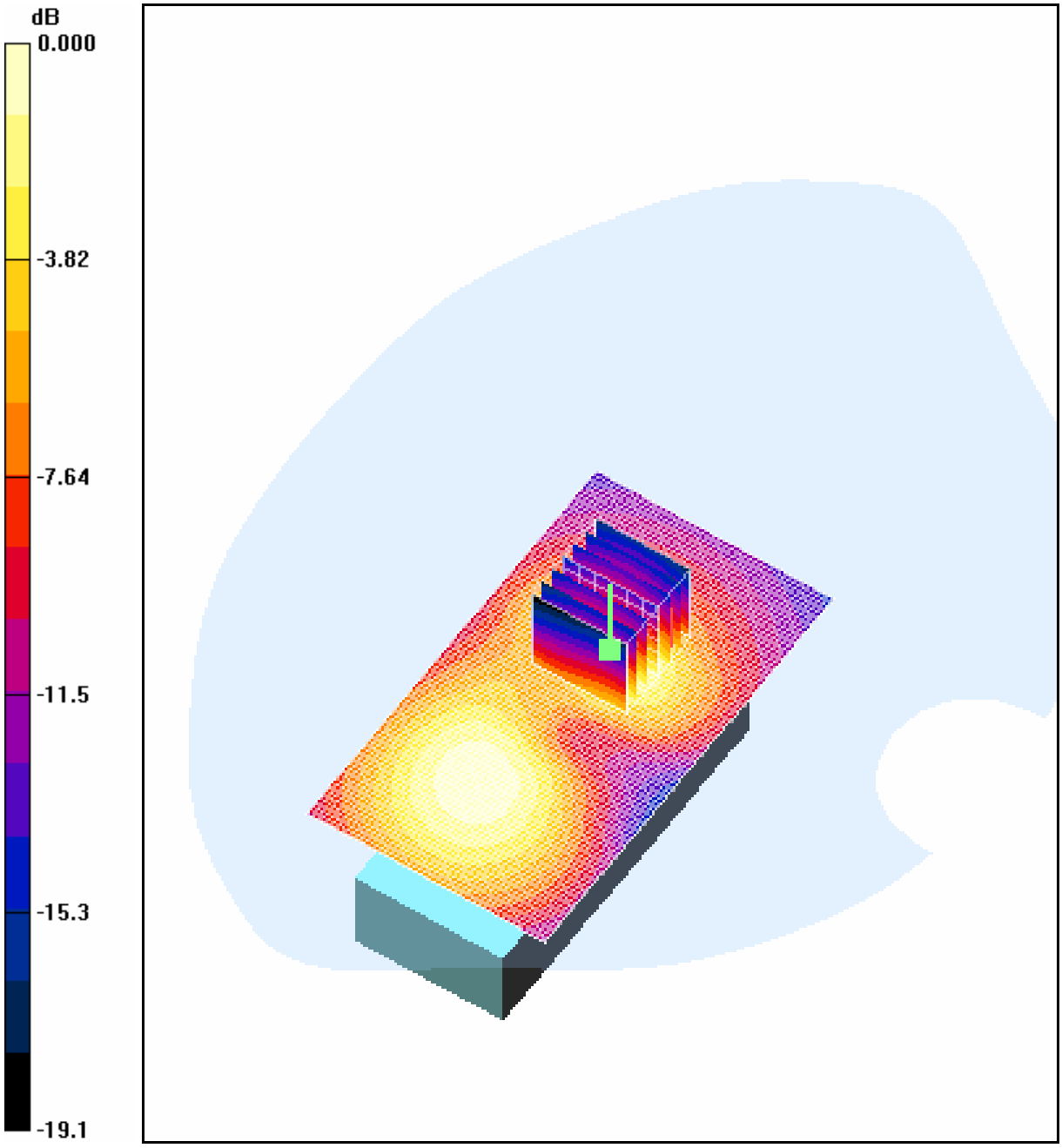
Communication System: GSM1900-GSM Mode; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900-Body Medium parameters used: f = 1909.8 MHz; σ = 1.55 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3088; ConvF(4.53, 4.53, 4.53); Calibrated: 2005-9-13
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn569; Calibrated: 2005-11-17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1283
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Body Worn - High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.427 mW/g

Body Worn - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.89 V/m; Power Drift = 0.153 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.216 mW/g
Maximum value of SAR (measured) = 0.460 mW/g



0 dB = 0.460mW/g

Appendix

1. Photographs of Test Setup

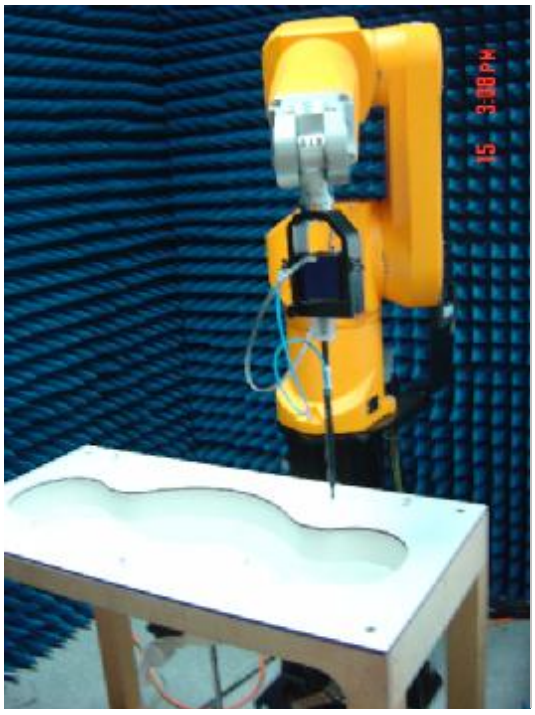


Fig.1 Photograph of the SAR measurement System

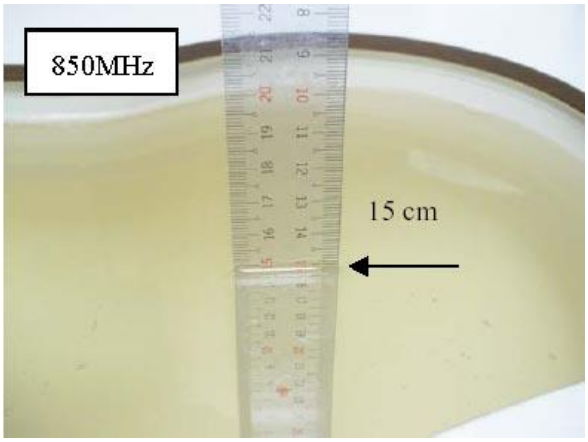


Fig.2 Photograph of the Tissue Simulant Fluid Liquid depth 15cm for Left-Head Side

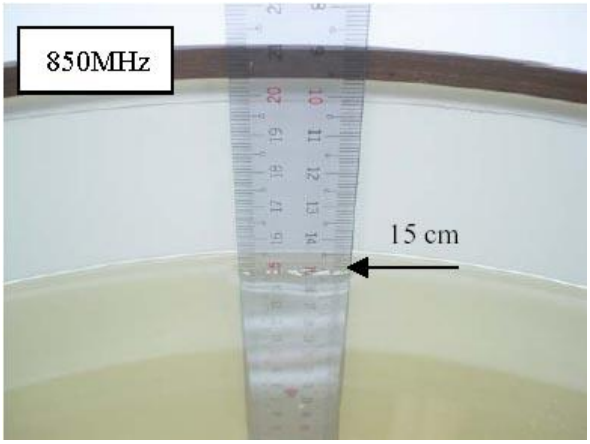


Fig.3 Photograph of the Tissue Simulant Fluid Liquid depth 15cm for Body-Worn

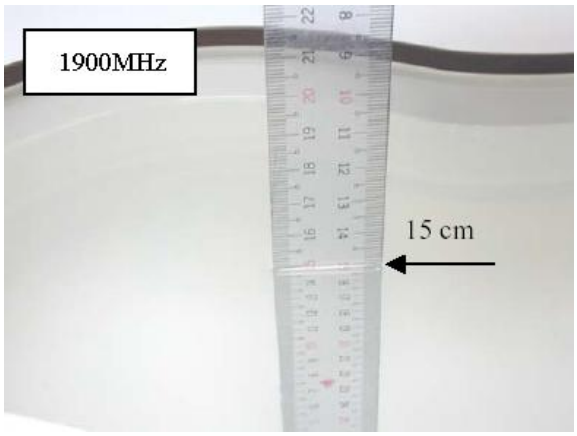


Fig.4 Photograph of the Tissue Simulant Fluid Liquid depth 15cm for Right-Head Side

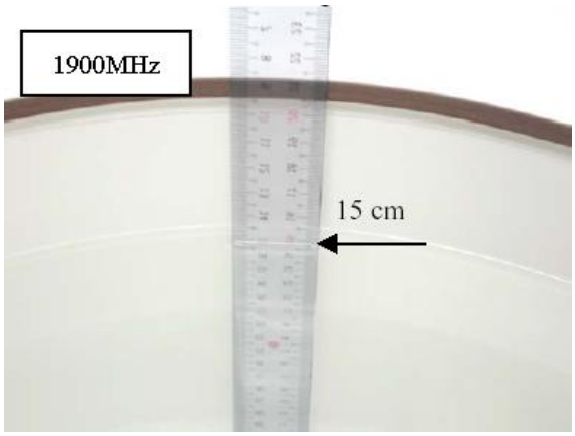


Fig.5 Photograph of the Tissue Simulant Fluid Liquid depth 15cm for Body-Worn

Fig.6 Photograph of the Left Hand Side Cheek status-Phone Slide Off

Fig.7 Photograph of the Left Hand Side Cheek status-Phone Slide On

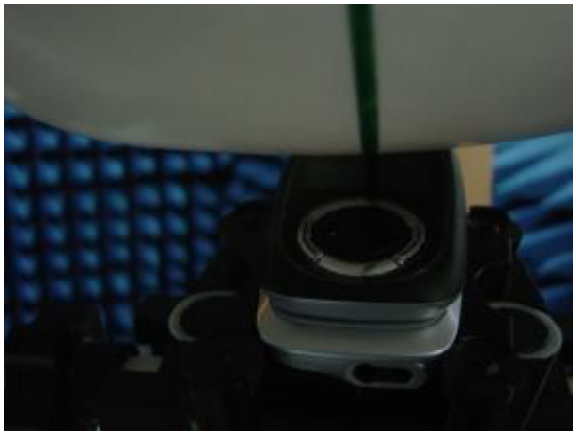


Fig.8 Photograph of the Left Hand Side Tilt status-Phone Slide Off

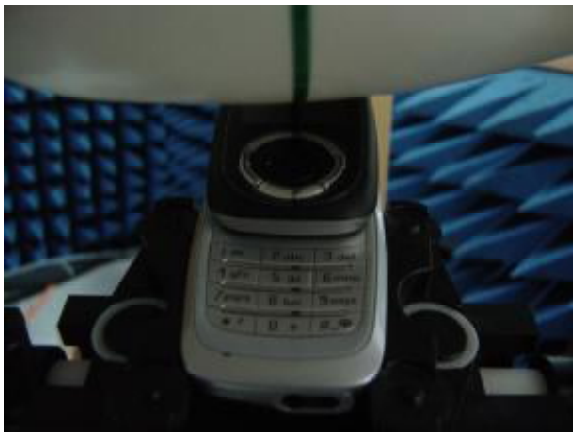


Fig.9 Photograph of the Left Hand Side Tilt status-Phone Slide On

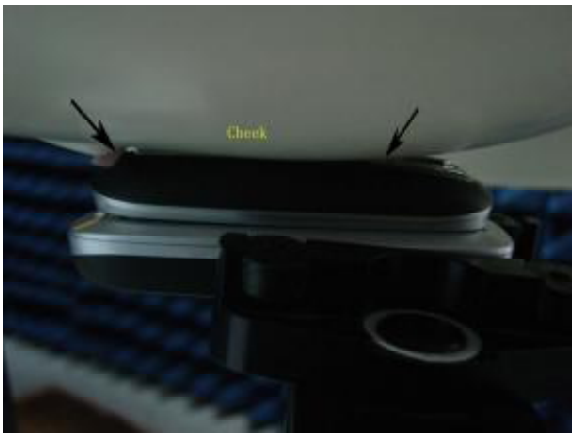


Fig.10 Photograph of the Right Hand Side Cheek status-Phone Slide Off

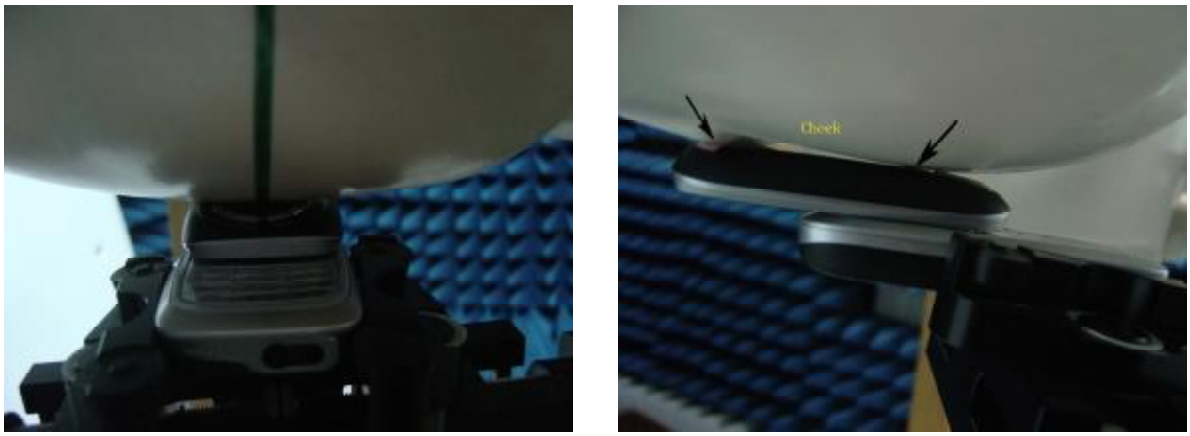


Fig.11 Photograph of the Right Hand Side Cheek status-Phone Slide On

Fig.12 Photograph of the Right Hand Side Tilt status-Phone Slide Off

Fig.13 Photograph of the Right Hand Side Tilt status-Phone Slide On

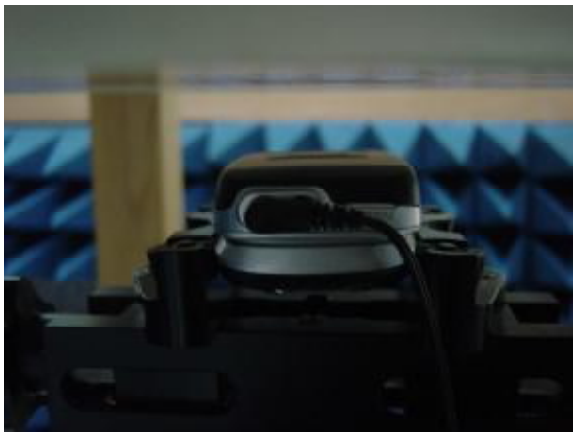



Fig.14 Photograph of the BodyWorn status-Phone Slide Off


Fig.15 Photograph of the BodyWorn status-Phone Slide On

2. Photographs of the EUT


Fig.16 Front View

Fig.17 Back View

3. Photographs of the battery

Fig.18 Front view of battery

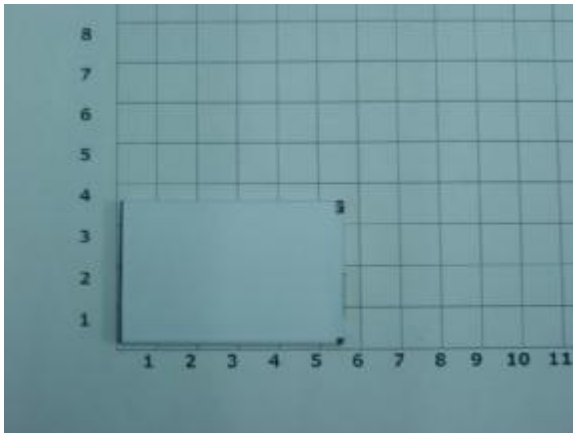


Fig.19 Back view of battery

4. Photograph of the charger

Fig.20 Charger

5. Probe Calibration certificate

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

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

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client **SGS-CSTS (MTT)**

Certificate No: ES3-3088_Sep05

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3088
Calibration procedure(s)	QA CAL-01.v5 Calibration procedure for dosimetric E-field probes
Calibration date:	September 13, 2005
Condition of the calibrated item	In Tolerance

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41495277	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41498087	3-May-05 (METAS, No. 251-00466)	May-06
Reference 3 dB Attenuator	SN: S5054 (3c)	11-Aug-05 (METAS, No. 251-00499)	Aug-06
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-05 (METAS, No. 251-00467)	May-06
Reference 30 dB Attenuator	SN: S5129 (30b)	11-Aug-05 (METAS, No. 251-00500)	Aug-06
Reference Probe ES3DV2	SN: 3013	7-Jan-05 (SPEAG, No. ES3-3013_Jan05)	Jan-06
DAE4	SN: 654	29-Nov-04 (SPEAG, No. DAE4-654_Nov04)	Nov-05

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov 05

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: September 15, 2005

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

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

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

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

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

Methods Applied and Interpretation of Parameters:

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

Probe ES3DV3

SN:3088

Manufactured: July 20, 2005
Calibrated: September 13, 2005

Calibrated for DASY Systems
(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ES3DV3 SN:3088

Sensitivity in Free Space[A]

Diode Compression[B]

NormX	**1.32** ± 10.1%	$\mu V/(V/m)^2$	DCP X	**95** mV
NormY	**1.24** ± 10.1%	$\mu V/(V/m)^2$	DCP Y	**95** mV
NormZ	**1.23** ± 10.1%	$\mu V/(V/m)^2$	DCP Z	**95** mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		**3.0 mm**	**4.0 mm**
SAR_{be} [%]	Without Correction Algorithm	5.8	2.7
SAR_{be} [%]	With Correction Algorithm	0.0	0.1

TSL **1750 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		**3.0 mm**	**4.0 mm**
SAR_{be} [%]	Without Correction Algorithm	7.6	4.5
SAR_{be} [%]	With Correction Algorithm	0.1	0.2

Sensor Offset

Probe Tip to Sensor Center	**2.0** mm

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

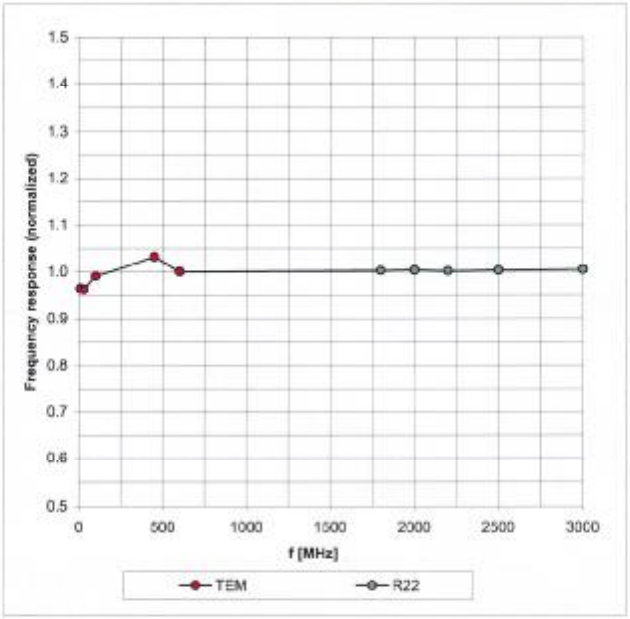
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ES3DV3 SN:3088 September 13, 2005

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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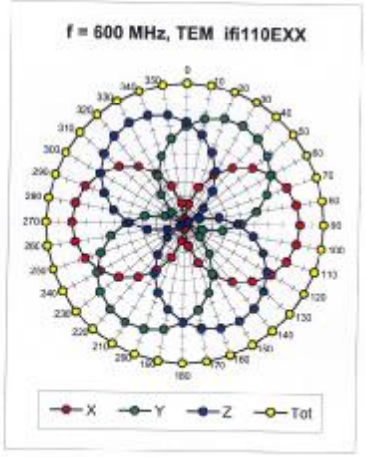
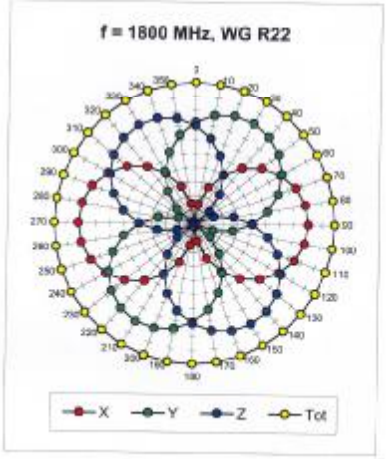
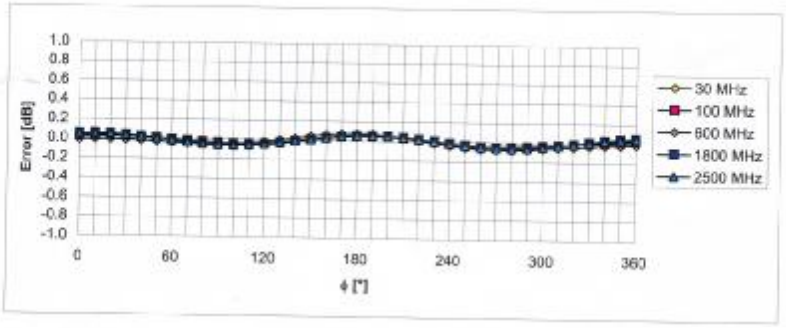
Receiving Pattern (ϕ), ϑ = 0°



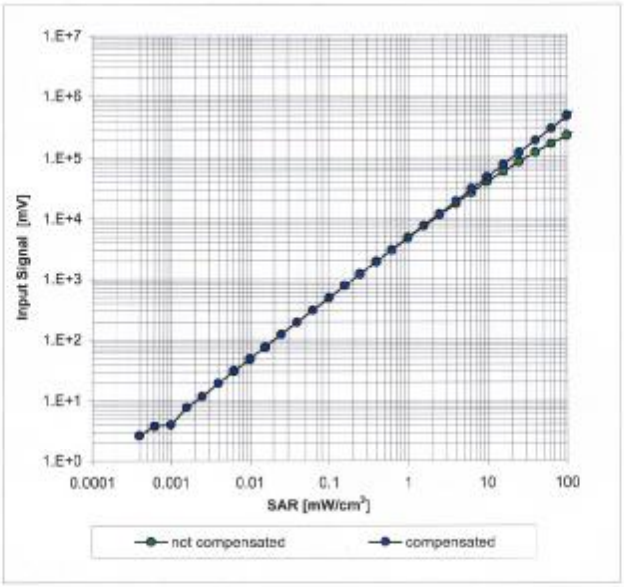


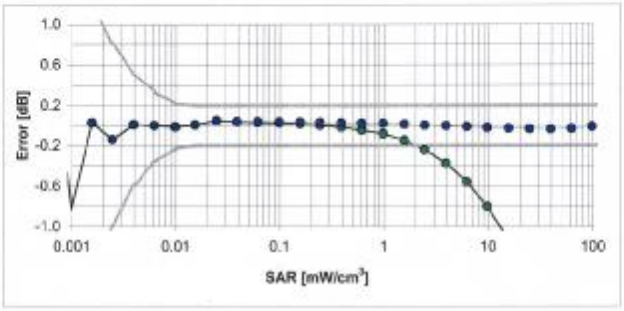


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

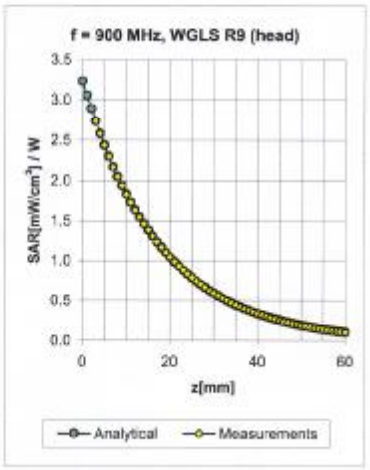
(Waveguide R22, f = 1800 MHz)

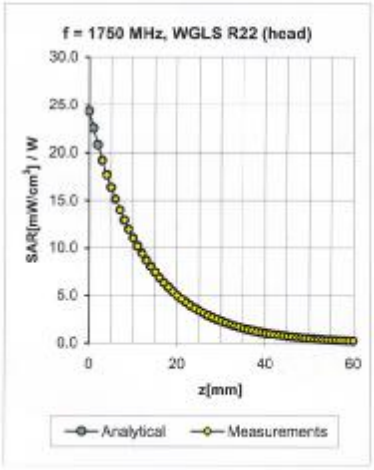




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment





f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.47	1.40	5.91 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.24	2.39	4.97 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.27	2.28	4.93 ± 11.0% (k=2)
2000	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.25	2.34	4.87 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.61	1.25	5.83 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.28	2.53	4.61 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.28	2.57	4.53 ± 11.0% (k=2)
2000	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.32	2.11	4.47 ± 11.0% (k=2)

[C] The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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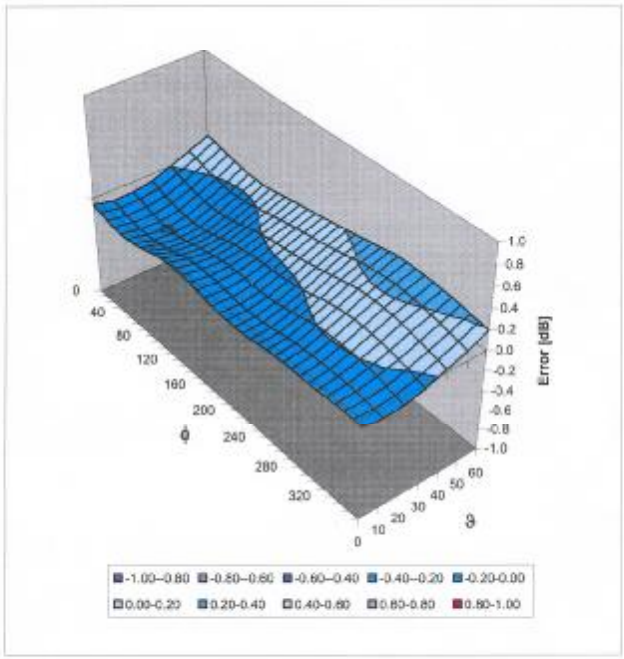
Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



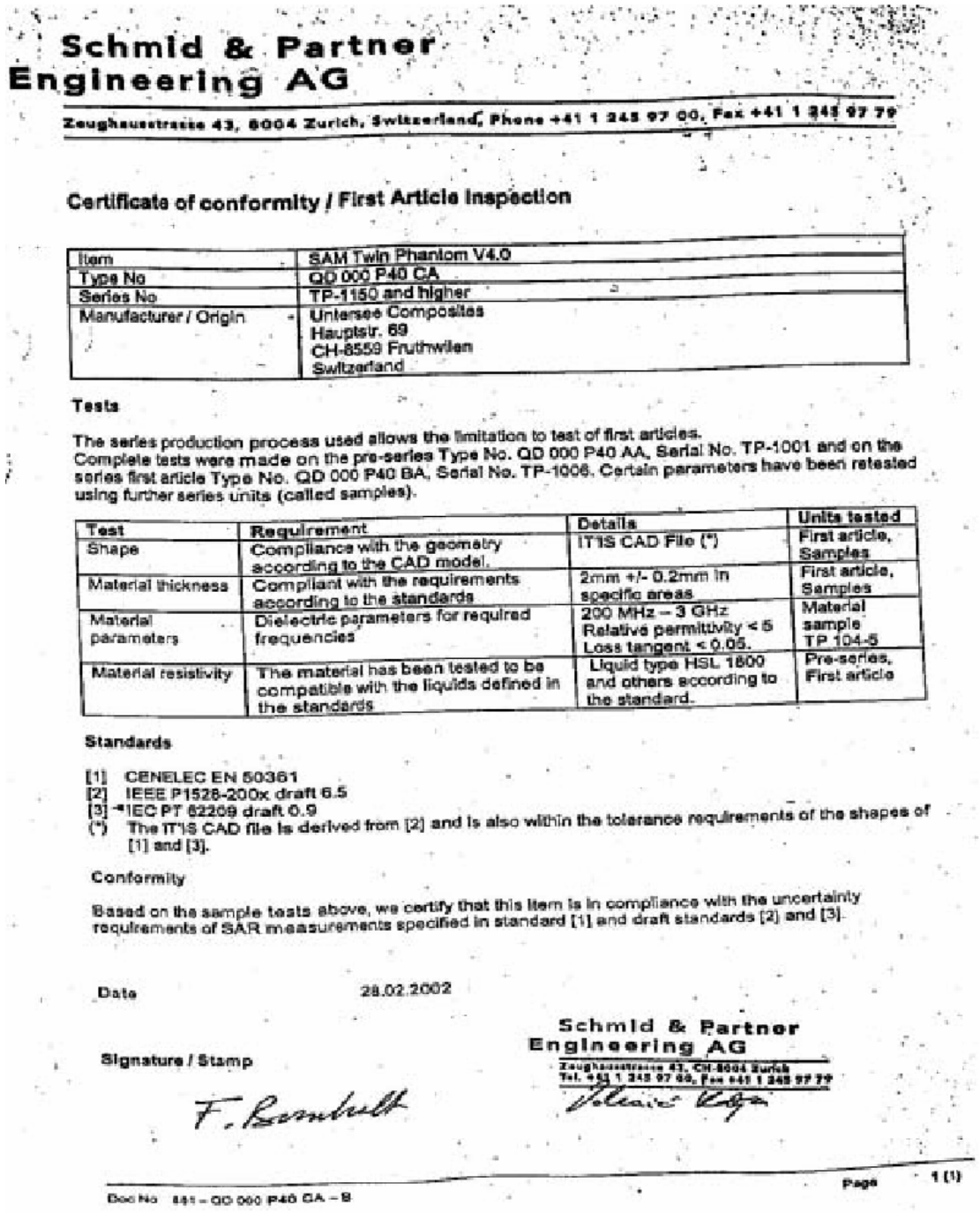
Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

6. Uncertainty analysis

Error Description	Tol. (± %)	Prob. dist.	Div.	(c_i) (1g)	(c_i) (10g)	Std. unc. (± %) (1g)	(10g)	(v_i)
Measurement System								
Probe Calibration	4.8	N	1	1	1	4.8	4.8	∞
Axial Isotropy	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
Hemispherical Isotropy	0	R	$\sqrt{3}$	1	1	0	0	∞
Boundary Effects	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
System Detection Limit	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Readout Electronics	1.0	N	1	1	1	1.0	1.0	∞
Response Time	0	R	$\sqrt{3}$	1	1	0	0	∞
Integration Time	0	R	$\sqrt{3}$	1	1	0	0	∞
RF Ambient Conditions	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe Positioner	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
Probe Positioning	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Algorithms for Max. SAR Eval.	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Dipole								
Dipole Axis to Liquid Distance	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
Input power and SAR drift meas.	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
Phantom and Tissue Param.								
Phantom Uncertainty	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Liquid Conductivity (target)	5.0	R.	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid Permittivity (target)	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2	∞
Combined Stdandard Uncertainty						8.4	8.1	∞
Coverage Factor for 95%		kp=2						
Expanded Uncertainty						16.8	16.2	

Dasy4 Uncertainty Budget

7. Phantom description



Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 CA
Series No	TP-1150 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

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

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	ITIS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

[1] CENELEC EN 50361
[2] IEEE P1528-200x draft 6.5
[3] IEC PT 62209 draft 0.9
(*) The ITIS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date 28.02.2002

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Signature / Stamp

F. Bomholt

Doc No 881 – QD 000 P40 CA – B

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The end