

Test Of: Sony Ericsson Mobile Communications AB.
 GC89 Mobile Station.
 To: OET Bulletin 65 Supplement C: (2001-01)

20. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level	Calculated Uncertainty
Specific Absorption Rate	GSM 850	95%	± 17.12
Specific Absorption Rate	GSM 1900	95%	± 17.12

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

Measurement uncertainties in SAR measurements are difficult to quantify due to several variables including biological, physiological, and environment. However, the estimated measurement uncertainties in SAR are less than 30%.

According to ANSI/IEEE C95.3, the overall uncertainties are difficult to assess and will vary with the type of meter and usage situation. However, accuracy’s of ±1 to 3 dB can be expected in practice, with greater uncertainties in near-field situations and at higher frequencies (shorter wavelengths), or areas where large reflecting objects are present. Under optimum measurement conditions, SAR measurement uncertainties of at least ±2 dB can be expected.

According to CENELEC, typical worst-case uncertainty of field measurements is ±5 dB. For well-defined modulation characteristics the uncertainty can be reduced to ±3 dB.

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Measurement Uncertainty (Continued)

Specific Absorption Rate Uncertainty at 850 MHz, GSM Modulation Scheme calculated in accordance with IEEE 1528-200X

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i	Standard Uncertainty		U _i or U _{eff}	Note
							+ u (dBμV)	- u (dBμV)		
B	Probe calibration	8.900	8.900	normal (k=2)	2.0000	1.0000	4.450	4.450	∞	
B	Axial Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Hemispherical Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞	
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞	
B	Linearity	2.330	2.330	Rectangular	1.7321	1.0000	1.345	1.345	∞	
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞	
B	Readout Electronics	0.650	0.650	normal (k=2)	2.0000	1.0000	0.325	0.325	∞	
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞	
B	Integration Time	0.005	0.005	Rectangular	1.7321	1.0000	0.003	0.003	∞	
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞	
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞	
B	Extrapolation and integration/ Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞	
A	Test Sample Positioning	0.584	0.584	normal (k=1)	1.0000	1.0000	0.584	0.584	10	
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10	
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Drit of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Permittivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
	Combined standard uncertainty			t-distribution			8.74	8.74	>500	
	Expanded uncertainty			k = 1.96			17.12	17.12	>500	

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Measurement Uncertainty (Continued)

Specific Absorption Rate Uncertainty at 1900 MHz, GSM Modulation Scheme calculated in accordance with IEEE 1528-200X

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C _i	Standard Uncertainty		U _i or U _{eff}	Note
							+ u (dBμV)	- u (dBμV)		
B	Probe calibration	8.900	8.900	normal (k=2)	2.0000	1.0000	4.450	4.450	∞	
B	Axial Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Hemispherical Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞	
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞	
B	Linearity	2.330	2.330	Rectangular	1.7321	1.0000	1.345	1.345	∞	
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞	
B	Readout Electronics	0.650	0.650	normal (k=2)	2.0000	1.0000	0.325	0.325	∞	
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞	
B	Integration Time	0.005	0.005	Rectangular	1.7321	1.0000	0.003	0.003	∞	
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞	
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞	
B	Extrapolation and integration/ Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞	
A	Test Sample Positioning	0.584	0.584	normal (k=1)	1.0000	1.0000	0.584	0.584	10	
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10	
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Permittivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
	Combined standard uncertainty			t-distribution			8.74	8.74	>500	
	Expanded uncertainty			k = 1.96			17.12	17.12	>500	

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Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.
A034	Narda 20W Termination	Narda	374BNM	8706
A1094	Sony MVC FD-81	Sony	MVC - FD81	125805
A1097	SMA Directional Coupler	MiDISCO	MDC6223-30	None
A1137	3dB Attenuator	Narda	779	04690
A1174	Dielectric Probe Kit	Agilent Technologies	85070C	Us99360072
A1185	Probe	Schmid & Partner	ET3 DV6	1528
A1186	Probe	Schmid & Partner	ET3 DV6	1529
A1190	1800 MHz Validation Dipole	Schmid & Partner	D1800V2	264
A1235	900 MHz Validation Dipole	Schmid & Partner	D900V2	124
A1238	SAM Phantom	Schmid & Partner	001	001
A1410	Attenuator	Omni Spectra	FSC 16179	20510-3
A1497	Amplifier	Mini-Circuits	zhl-42w (sma)	e020105
A215	20 dB Attenuator	Narda	766-20	9402
A512	Wave Guide Antenna	EMCO	3115	3993
C1025	Cable	Rosenberger	FA210A-1-020m	FA00B 7564
C1052	Cable	Utiflex	FA210A0030M3030	001
C1053	Cable	Utiflex	FA210A0003M3030	001
C1054	Cable	Utiflex	FA210A0001M3050A	001
C323	Cable	Rosenberger	UFA 210A-1-0788-50x50	96A0121
G046	Signal Generator	Gigatronics	7100/.01-20	749474
G0528	Robot Power Supply	Schmid & Partner	DASY	None
G088	PSU	Thurlby Thandar	CPX200	100700
L0733	Anritsu MT8820A	Anritsu	MT8820A	6K0001055
M053	HP 8594A Spectrum Analyser	HP	8594A	3108U00205
M095	URY Power Meter	Rohde & Schwarz	URY	891 491/078
M509	High Accuracy Digital Thermometer	Testo	110	40378800433
M1015	Network Analyser	Agilent Technologies	8753ES	US39172406

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Test Equipment Used (Continued)

RFI No.	Instrument	Manufacturer	Type No.	Serial No.
M1047	Robot Arm	Staubli	RX908 L	F00/SD89A1/A/01
M1069	Diode Power Sensor	Rohde & Schwarz	NRV-Z2	838824/010
M1093	Communications Test Set	Will'tek	4202S	0513018
M1071	Spectrum Analyser 9KHz to 12.8GHz	Agilent	HP8590E	3647U00514
M1129	Insertion Unit	Rohde & Schwarz	URY-Z2	890242/16
M1144	Testo 110 Immersion Probe & Thermometer	Testo	Testo 110	03100047
M136	Temperature/Humidity/Pressure Meter	RS Components	None	None
S256	Site 56	RFI	N/A	N/A

NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

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Appendix 2. SAR Distribution Scans

This appendix contains SAR distribution scans.

Scan Reference Number	Title
SCN/70868_08_001	DELL Laptop 0 Degrees to Phantom with Integral Antenna Flat 189
SCN/70868_08_002	DELL Laptop 90 Degrees to Phantom with Integral Antenna Flat 189
SCN/70868_08_003	DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 189
SCN/70868_08_004	DELL Laptop 0 Degrees to Phantom with External Antenna 90 Degrees Flat 189
SCN/70868_08_005	DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 189
SCN/70868_08_006	DELL Laptop 90 Degrees to Phantom with External Antenna 90 Degrees Flat 189
SCN/70868_08_007	DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 128
SCN/70868_08_008	DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 251
SCN/70868_08_009	DELL Laptop 0 Degrees to Phantom with Integral Antenna Flat 660
SCN/70868_08_010	DELL Laptop 90 Degrees to Phantom with Integral Antenna Flat 660
SCN/70868_08_011	DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 660
SCN/70868_08_012	DELL Laptop 0 Degrees to Phantom with External Antenna 90 Degrees Flat 660
SCN/70868_08_013	DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 660
SCN/70868_08_014	DELL Laptop 90 Degrees to Phantom with External Antenna 90 Degrees Flat 660
SCN/70868_08_015	DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 512
SCN/70868_08_016	DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 810
SCN/70868_08_017	COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna Flat 189
SCN/70868_08_018	COMPAQ Laptop 90 Degrees to Phantom with Integral Antenna Flat 189
SCN/70868_08_019	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 189
SCN/70868_08_020	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 90 Degrees Flat 189
SCN/70868_08_021	COMPAQ Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 189
SCN/70868_08_022	COMPAQ Laptop 90 Degrees to Phantom with External Antenna 90 Degrees Flat 189
SCN/70868_08_023	COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna Flat 128
SCN/70868_08_024	COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna Flat 251
SCN/70868_08_025	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 128
SCN/70868_08_026	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 251
SCN/70868_08_051	COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna_Flat_660_051
SCN/70868_08_052	COMPAQ Laptop 90 Degrees to Phantom with Integral Antenna Flat 660
SCN/70868_08_053	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 660
SCN/70868_08_054	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 90 Degrees Flat 660

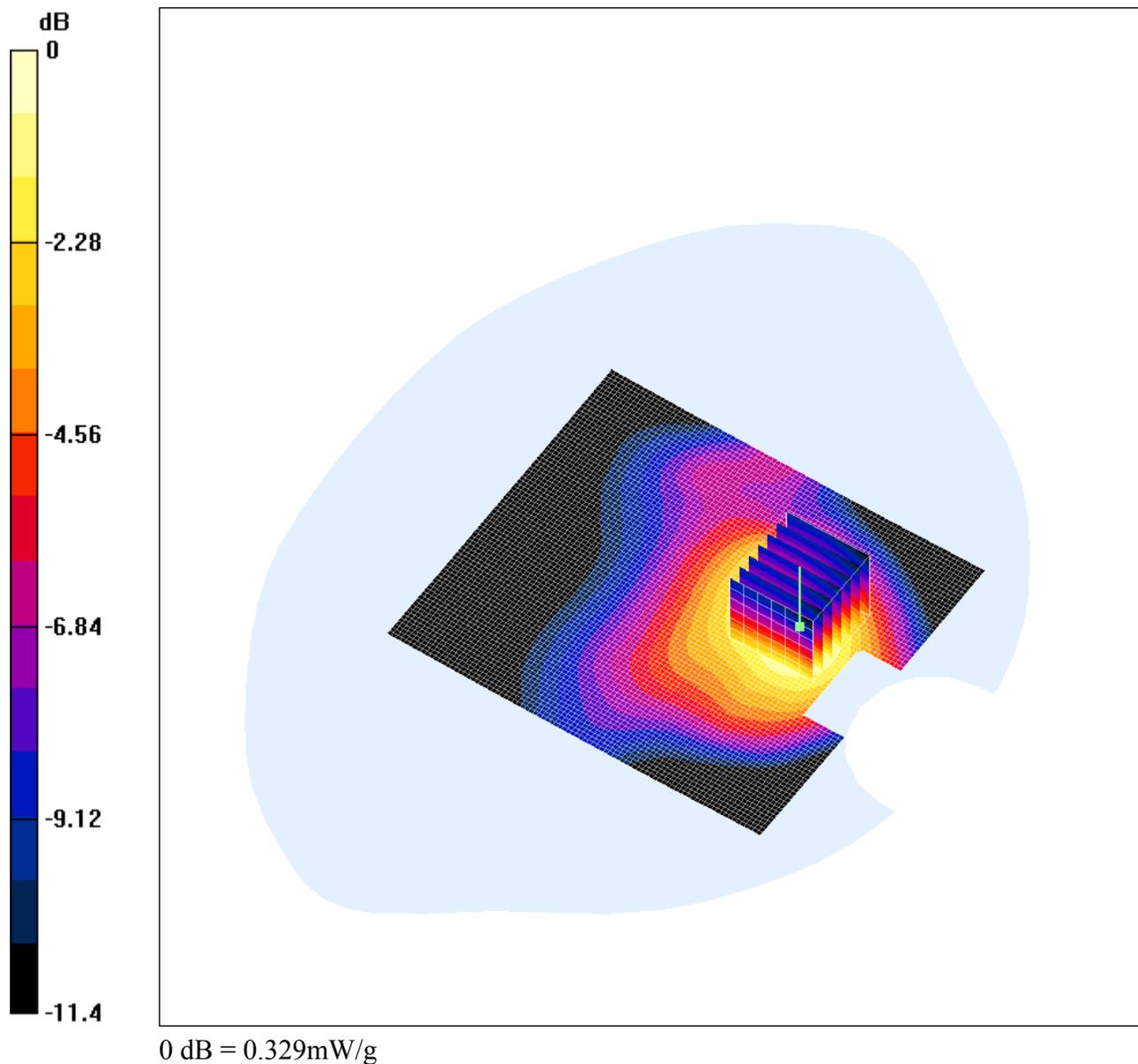
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SAR Distribution Scans (Continued)

Scan Reference Number	Title
SCN/70868_08_055	COMPAQ Laptop 90 Degrees to Phantom with External Antenna 0 Degrees Flat 660
SCN/70868_08_056	COMPAQ Laptop 90 Degrees to Phantom with External Antenna 90 Degrees Flat 660
SCN/70868_08_057	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 512
SCN/70868_08_058	COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees Flat 810
SCN/70868_08_Validation 001	System Performance Check 07/03/05
SCN/70868_08_Validation 002	System Performance Check D1800 08/03/05
SCN/70868_08_Validation 003	System Performance Check 09/03/05
SCN/70868_08_Validation 005	System Performance Check D1800 24/03/05

Date: 07/03/05

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_001_DELL Laptop 0 Degrees to Phantom with Integral Antenna_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$ 53.4; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

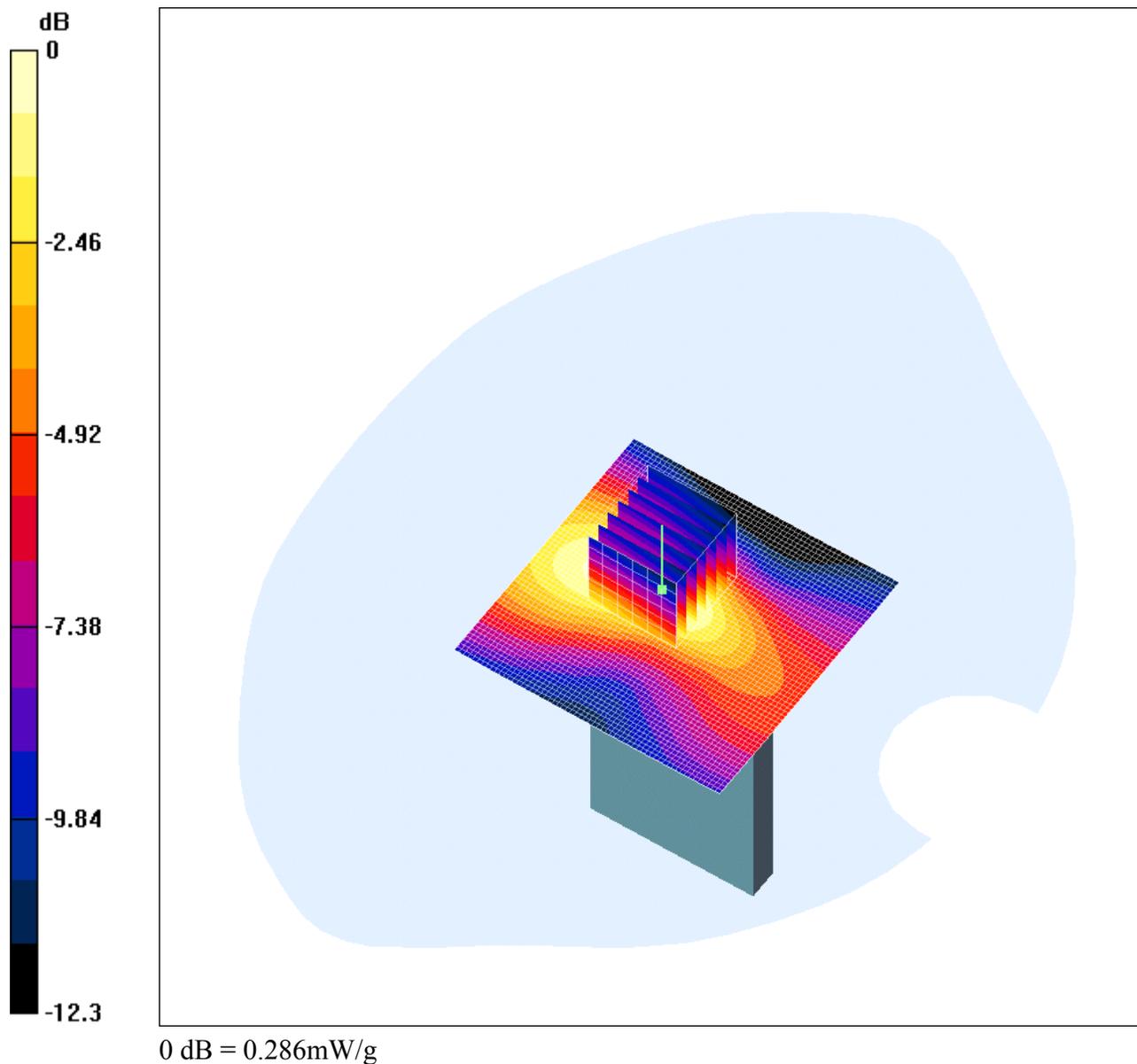
- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.338 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.49 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.460 W/kg
SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 0.329 mW/g

Date/Time: 03/07/05

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_002_DELL Laptop 90 Degrees to Phantom with Integral Antenna_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$ 53.4; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

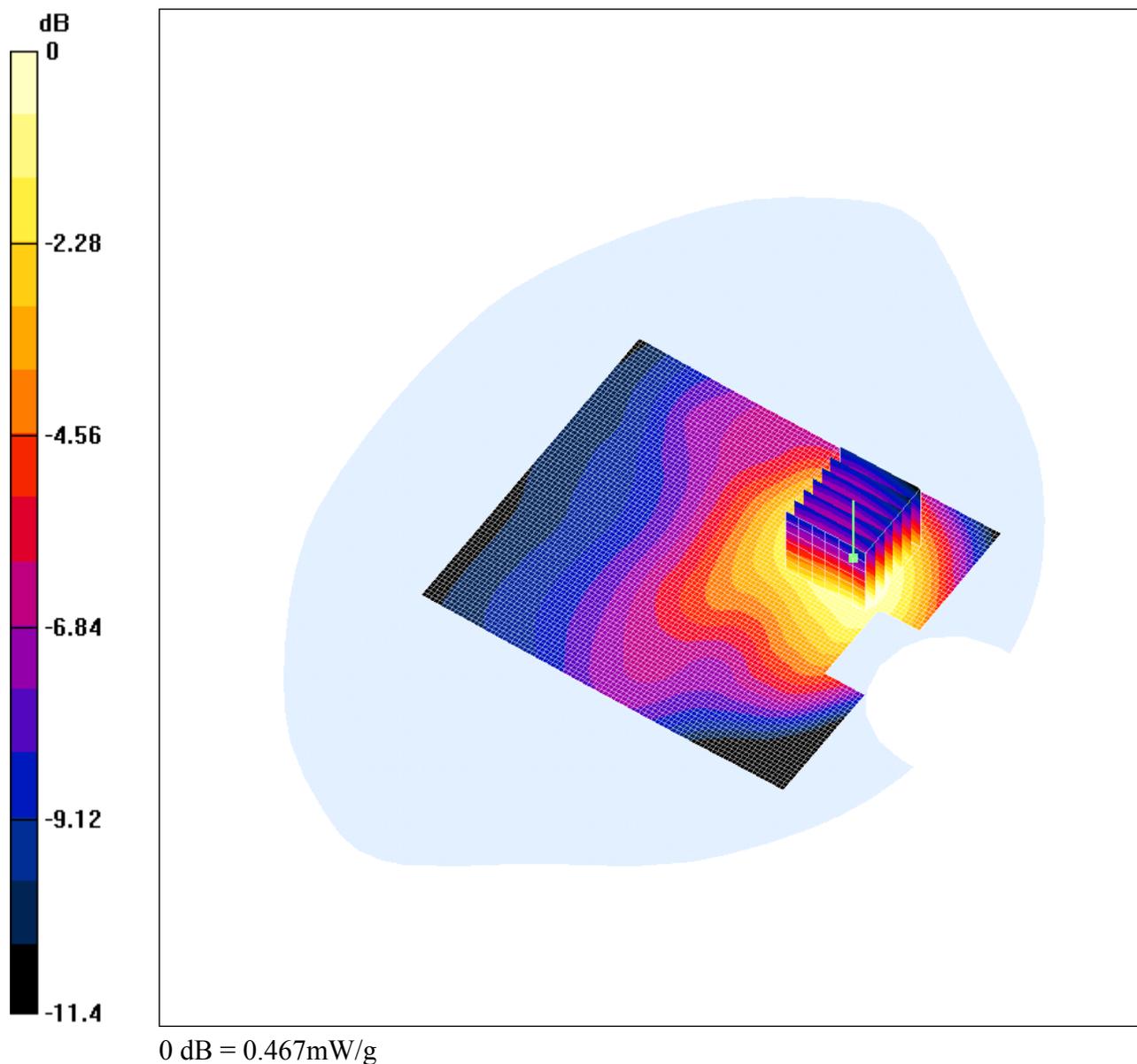
DELL Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.294 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.1 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.442 W/kg
SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.166 mW/g
Maximum value of SAR (measured) = 0.286 mW/g

Date: 07/03/05

70868_08_003

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_003_DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

- **Middle/Area Scan (91x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.469 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

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

Reference Value = 10.9 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.294 mW/g

Maximum value of SAR (measured) = 0.467 mW/g

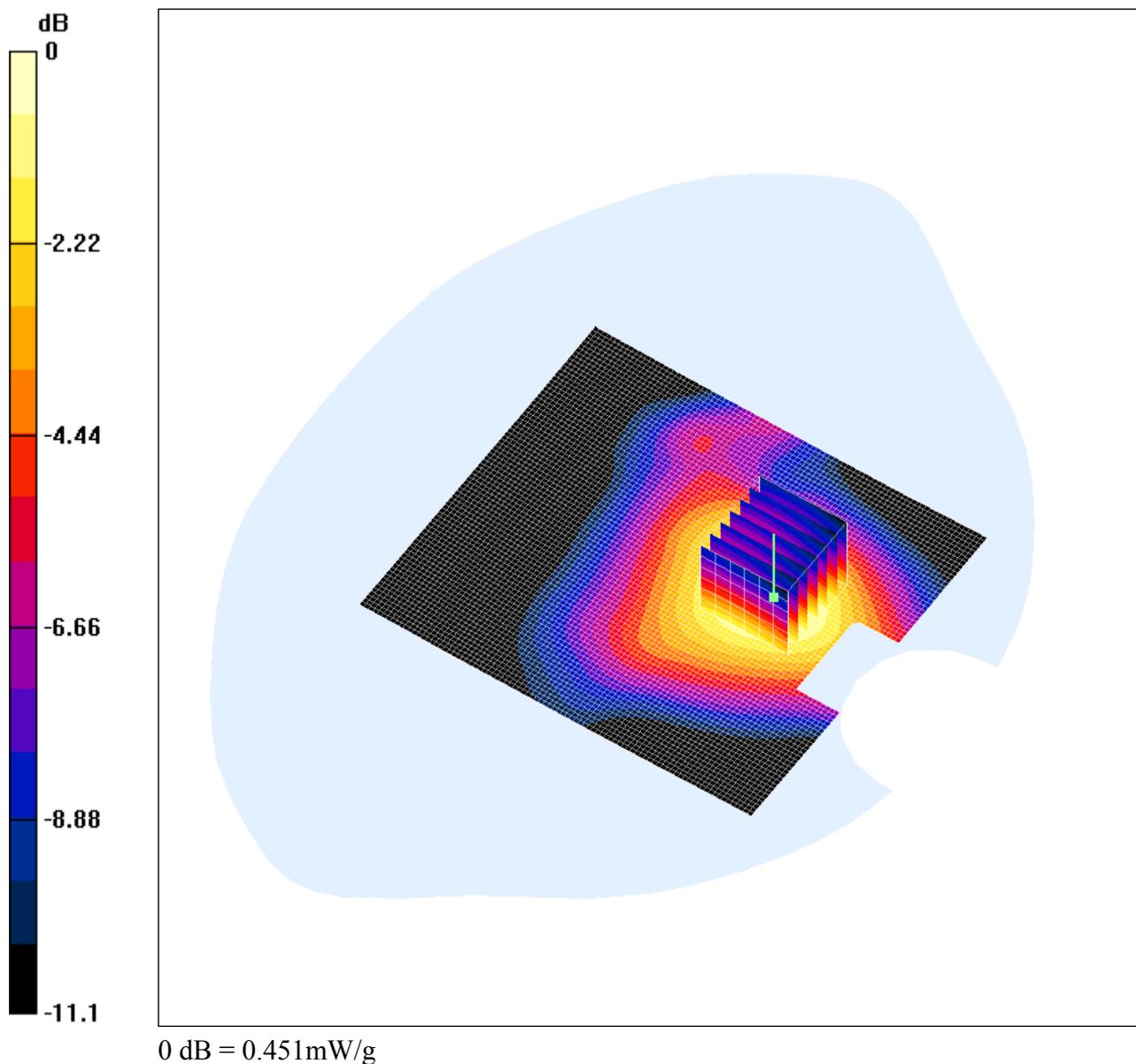
Date: 07/03/05

70868_08_004

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_004_DELL Laptop 0 Degrees to Phantom with External Antenna 90 Degrees_Flat_189

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 90

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.450 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 90

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

Reference Value = 11.3 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.615 W/kg

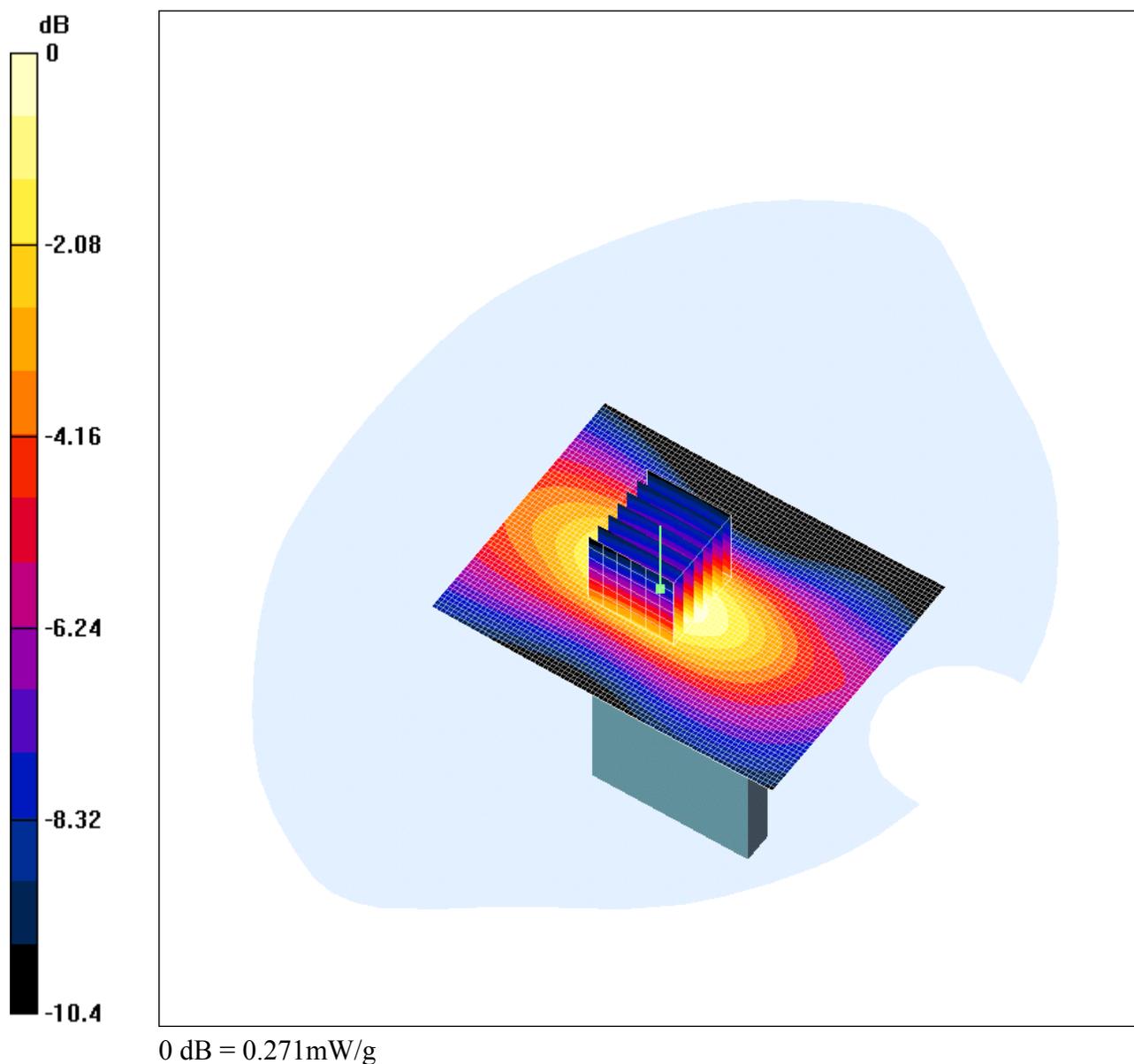
SAR(1 g) = 0.419 mW/g; SAR(10 g) = 0.279 mW/g

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

Date: 07/03/05

70868_08_005

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_005_DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm

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

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

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

Reference Value = 16.6 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.366 W/kg

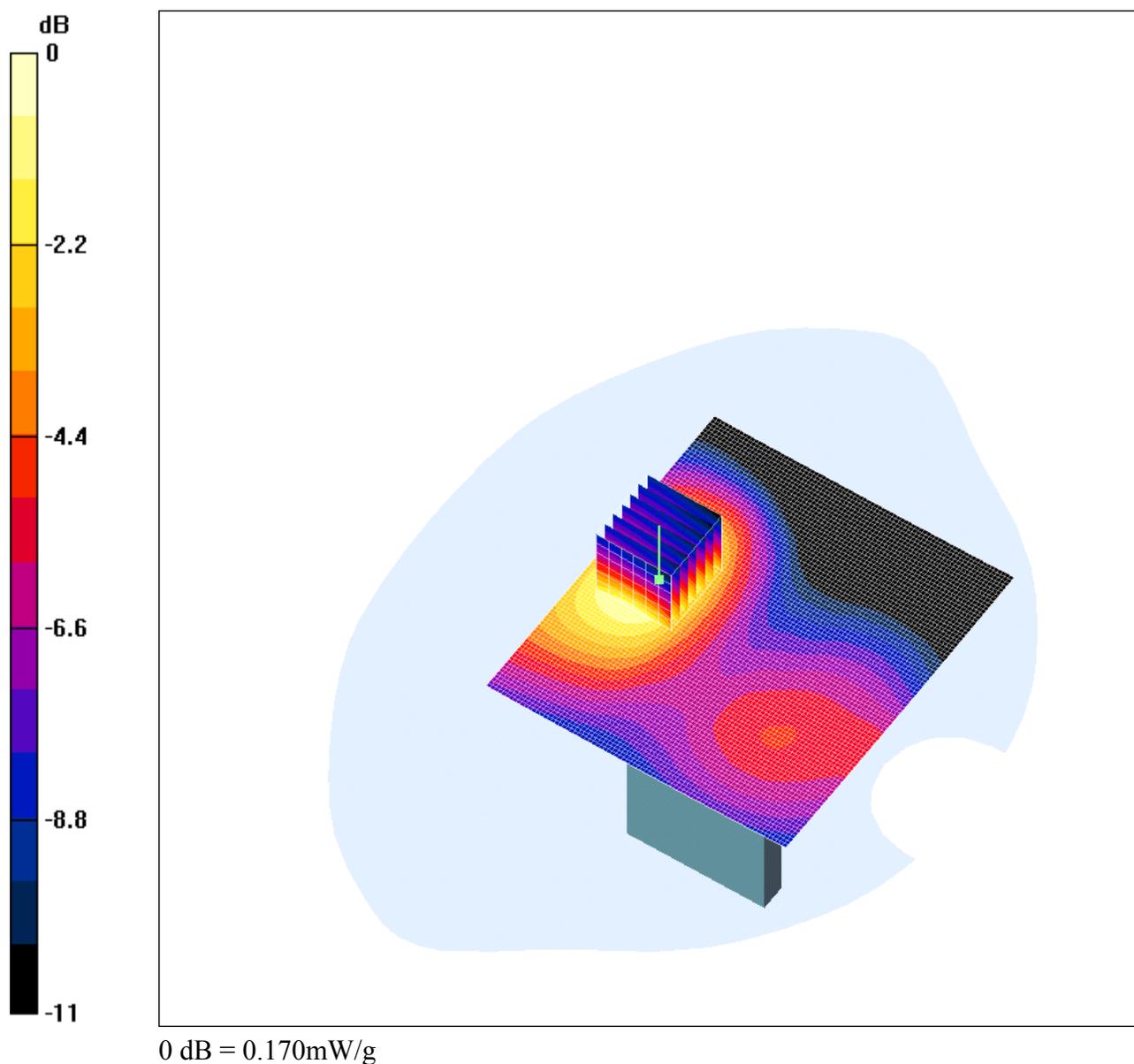
SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.271 mW/g

Date: 07/03/05

70868_08_006

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_006_DELL Laptop 90 Degrees to Phantom with External Antenna 90 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 90

Degrees - Middle/Area Scan (81x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.166 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 90

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

Reference Value = 7.15 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.103 mW/g

Maximum value of SAR (measured) = 0.170 mW/g

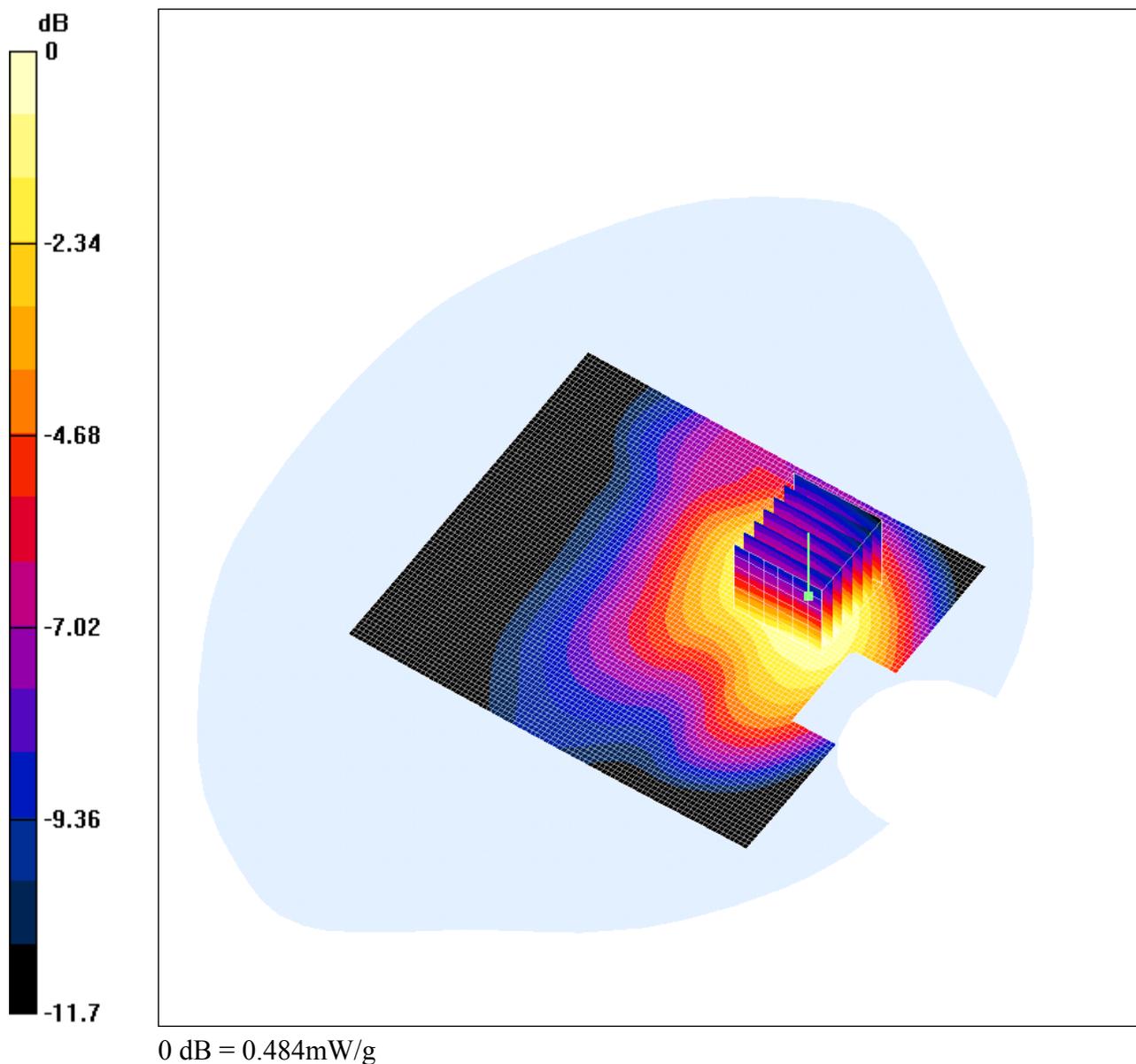
Date: 07/03/05

70868_08_007

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_007_DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_128

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

- **Middle/Area Scan (91x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.496 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

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

Reference Value = 10.7 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.647 W/kg

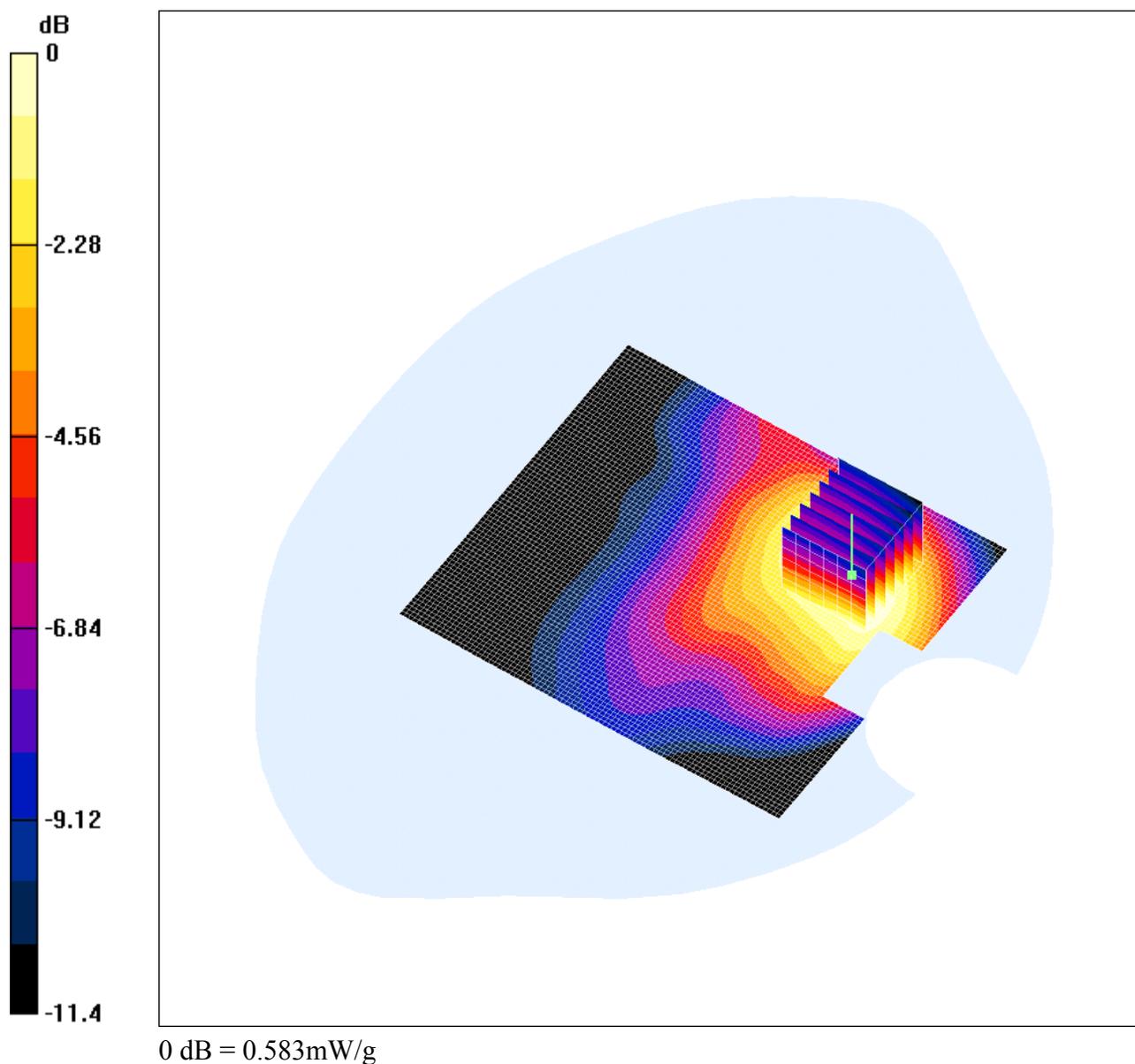
SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.302 mW/g

Maximum value of SAR (measured) = 0.484 mW/g

Date: 07/03/05

70868_08_008

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_008_DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_251**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

- **Middle/Area Scan (91x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.623 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

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

Reference Value = 11.1 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.770 W/kg

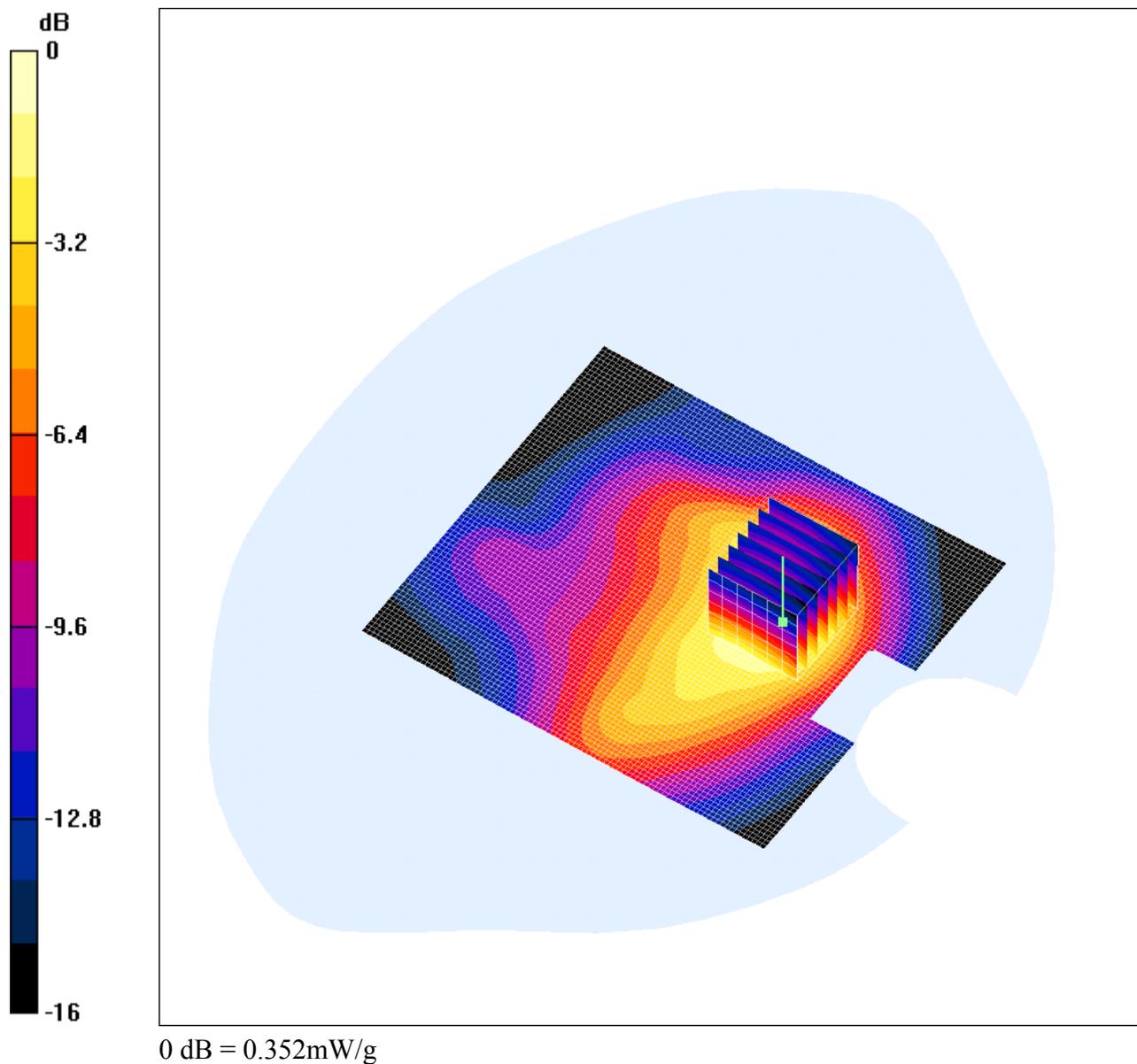
SAR(1 g) = 0.545 mW/g; SAR(10 g) = 0.371 mW/g

Maximum value of SAR (measured) = 0.583 mW/g

Date: 08/03/05

70868_08_009

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_009_DELL Laptop 0 Degrees to Phantom with Integral Antenna_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$ 52.9 ; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.356 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.21 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.524 W/kg

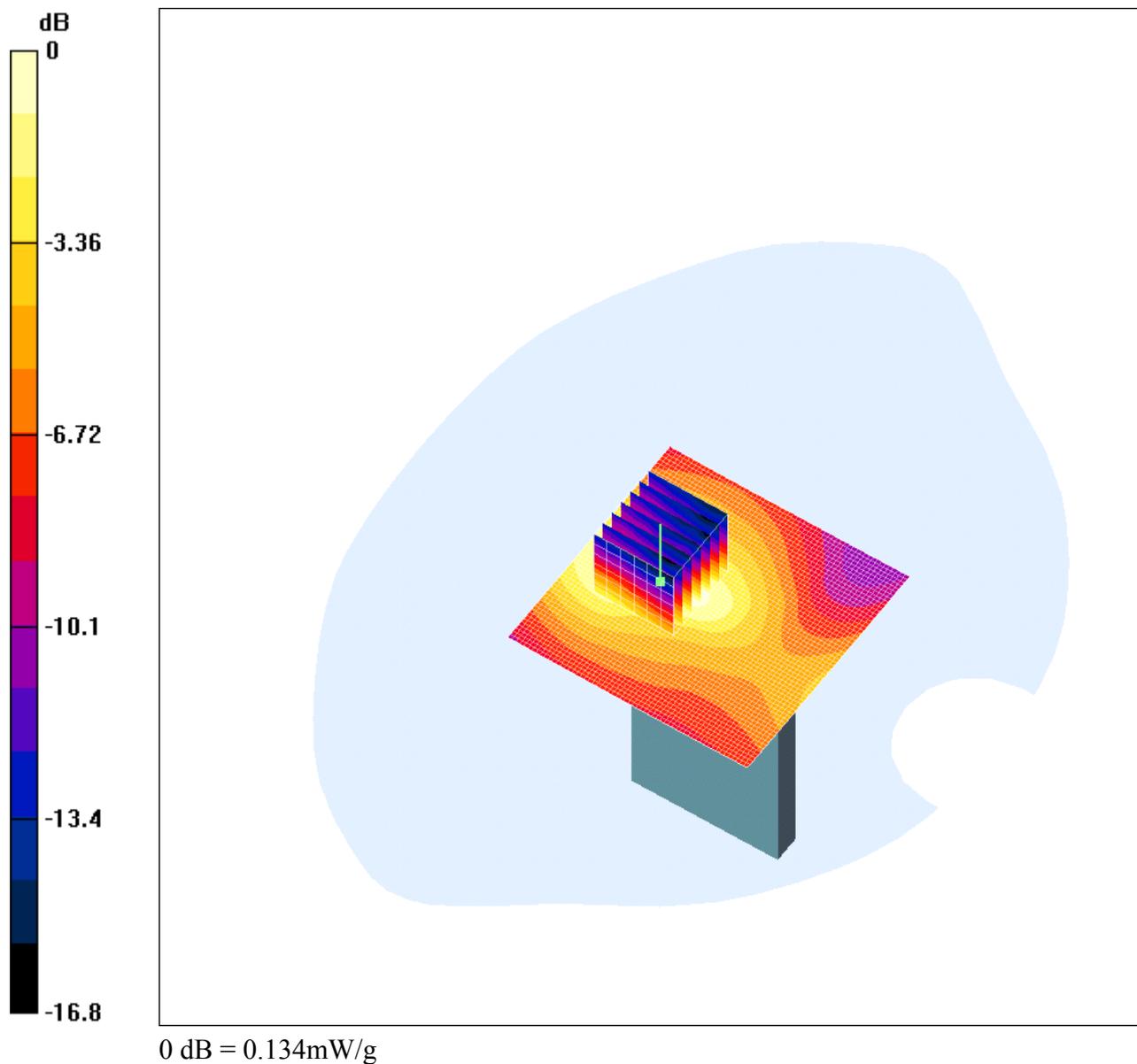
SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.187 mW/g

Maximum value of SAR (measured) = 0.352 mW/g

Date: 08/03/05

70868_08_010

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_010_DELL Laptop 90 Degrees to Phantom with Integral Antenna_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$ 52.9 ; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.139 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.46 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.236 W/kg

SAR(1 g) = 0.122 mW/g; SAR(10 g) = 0.070 mW/g

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

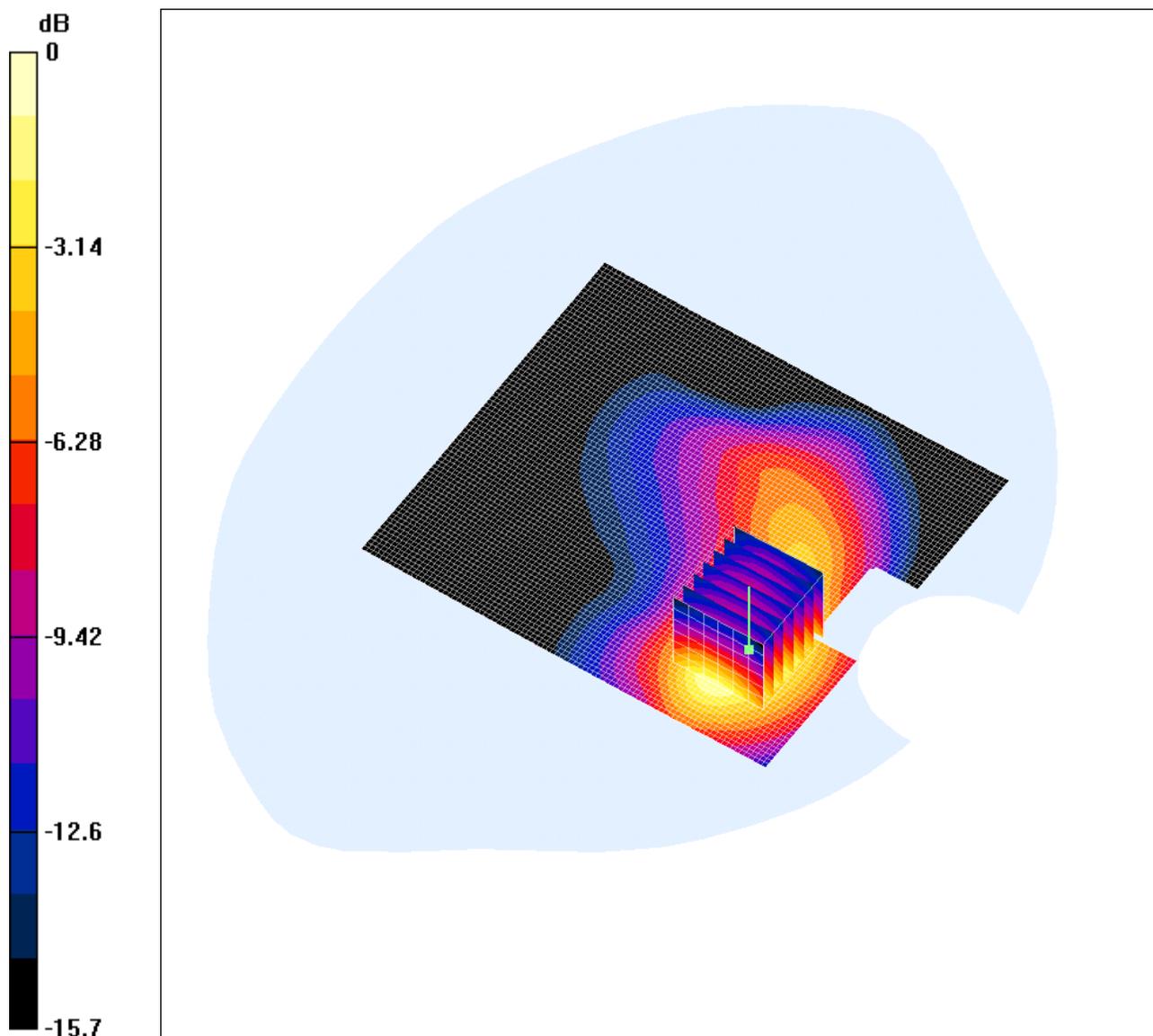
Date: 08/03/05

70868_08_011

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_011_DELL Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_660

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



0 dB = 0.547mW/g

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

- **Middle/Area Scan (91x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.554 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 0 Degrees

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

Reference Value = 4.96 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 0.766 W/kg

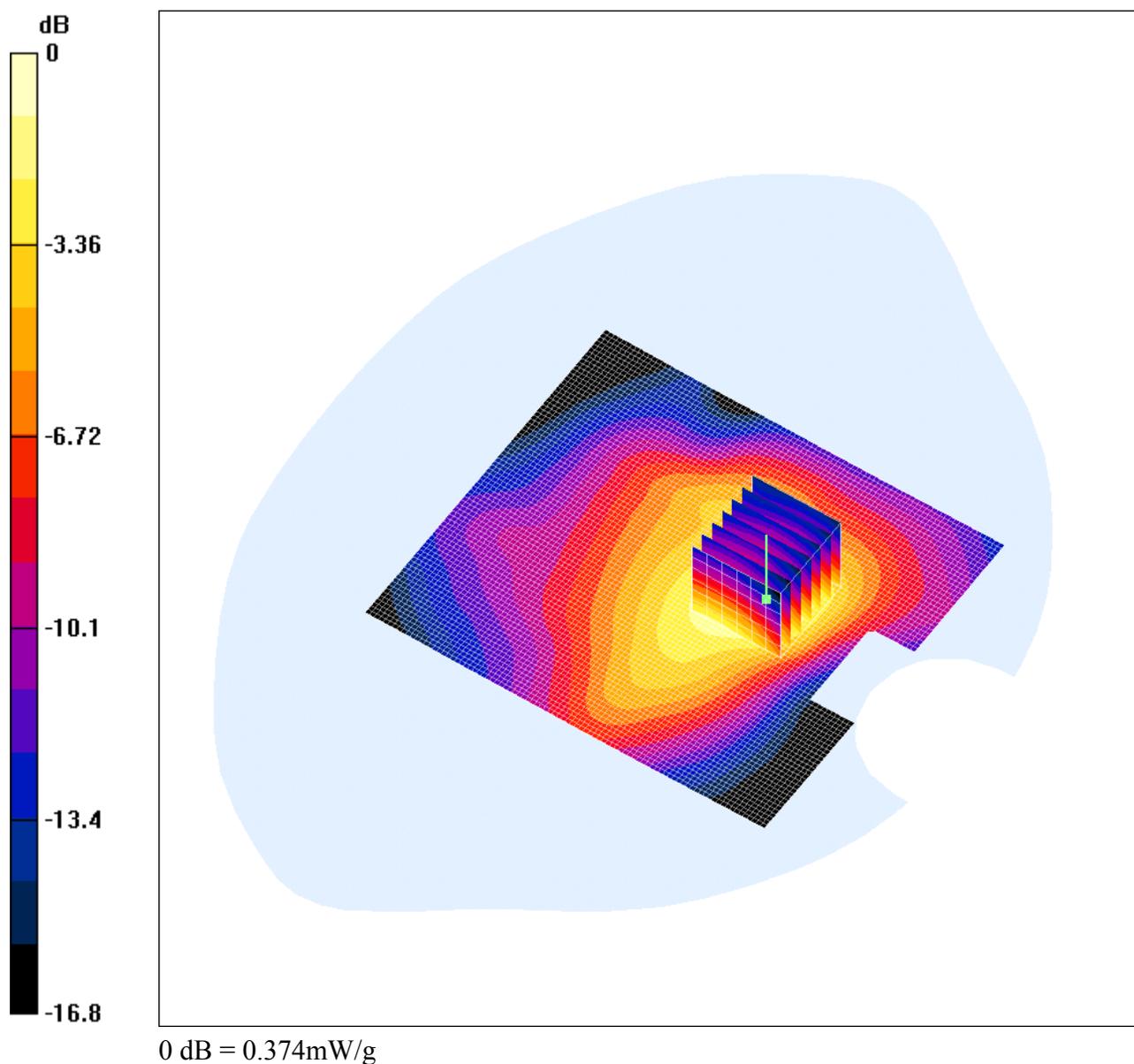
SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.295 mW/g

Maximum value of SAR (measured) = 0.547 mW/g

Date: 08/03/05

70868_08_012

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_012_DELL Laptop 0 Degrees to Phantom with External Antenna 90 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 90

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.359 mW/g

DELL Laptop 0 Degrees to Phantom (15mm Seperation) with External Antenna 90

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

Reference Value = 9.17 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.555 W/kg

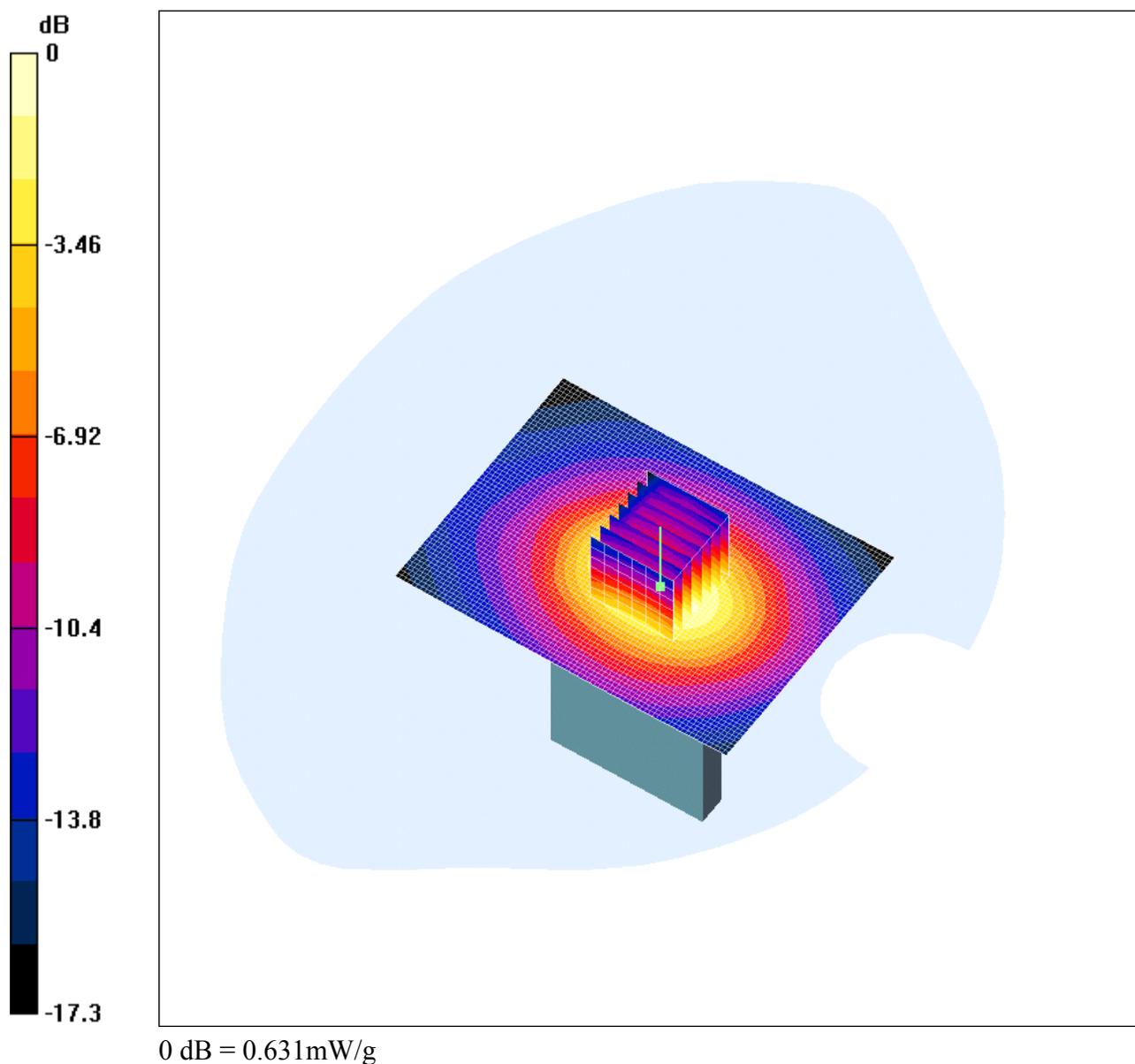
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.192 mW/g

Maximum value of SAR (measured) = 0.374 mW/g

Date: 08/03/05

70868_08_013

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_013_DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.647 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

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

Reference Value = 16.4 V/m; Power Drift = 0.4 dB

Peak SAR (extrapolated) = 0.882 W/kg

SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 0.631 mW/g

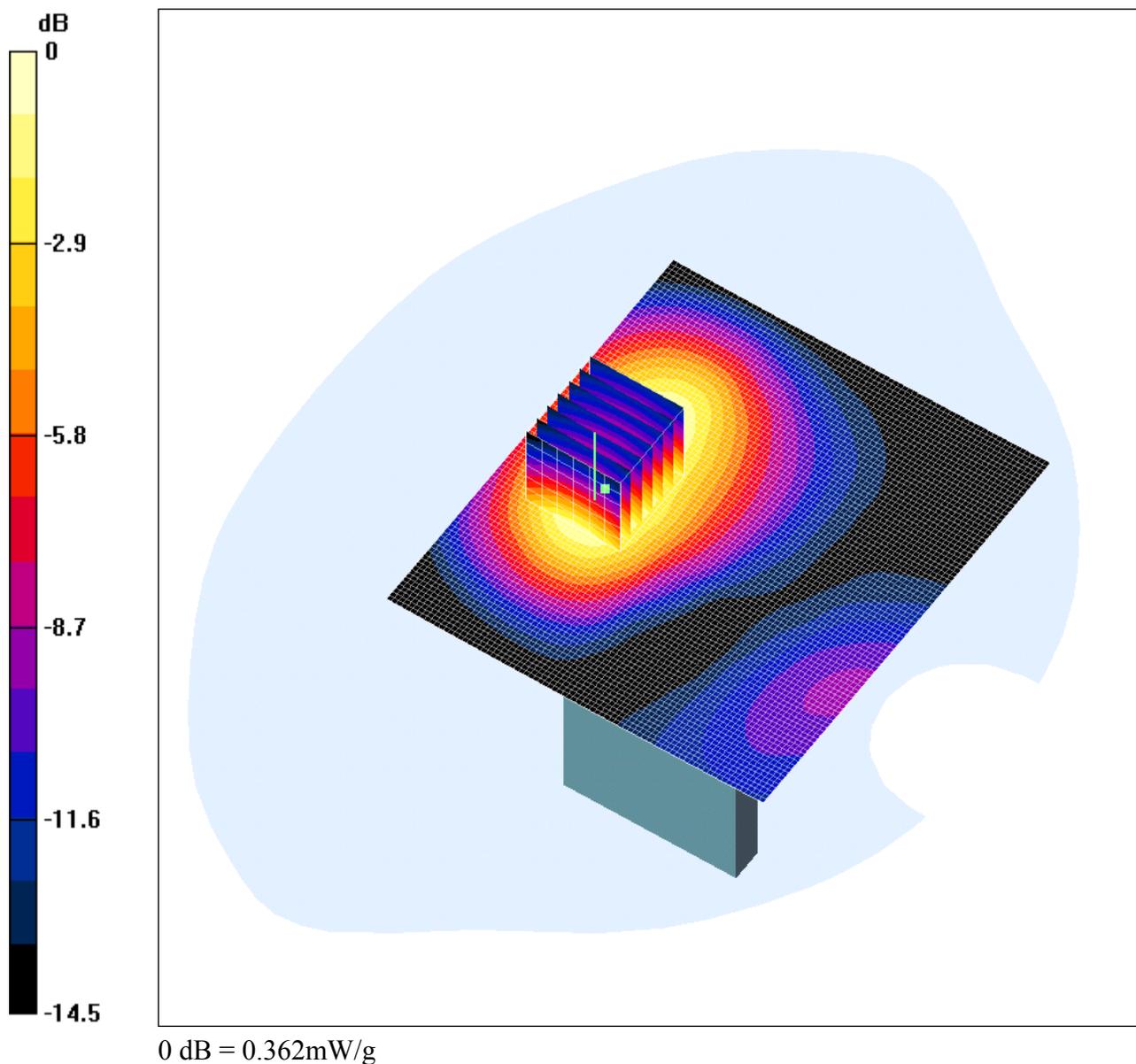
Date: 08/03/05

70868_08_014

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_014_DELL Laptop 90 Degrees to Phantom with External Antenna 90 Degrees_Flat_660

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.65$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

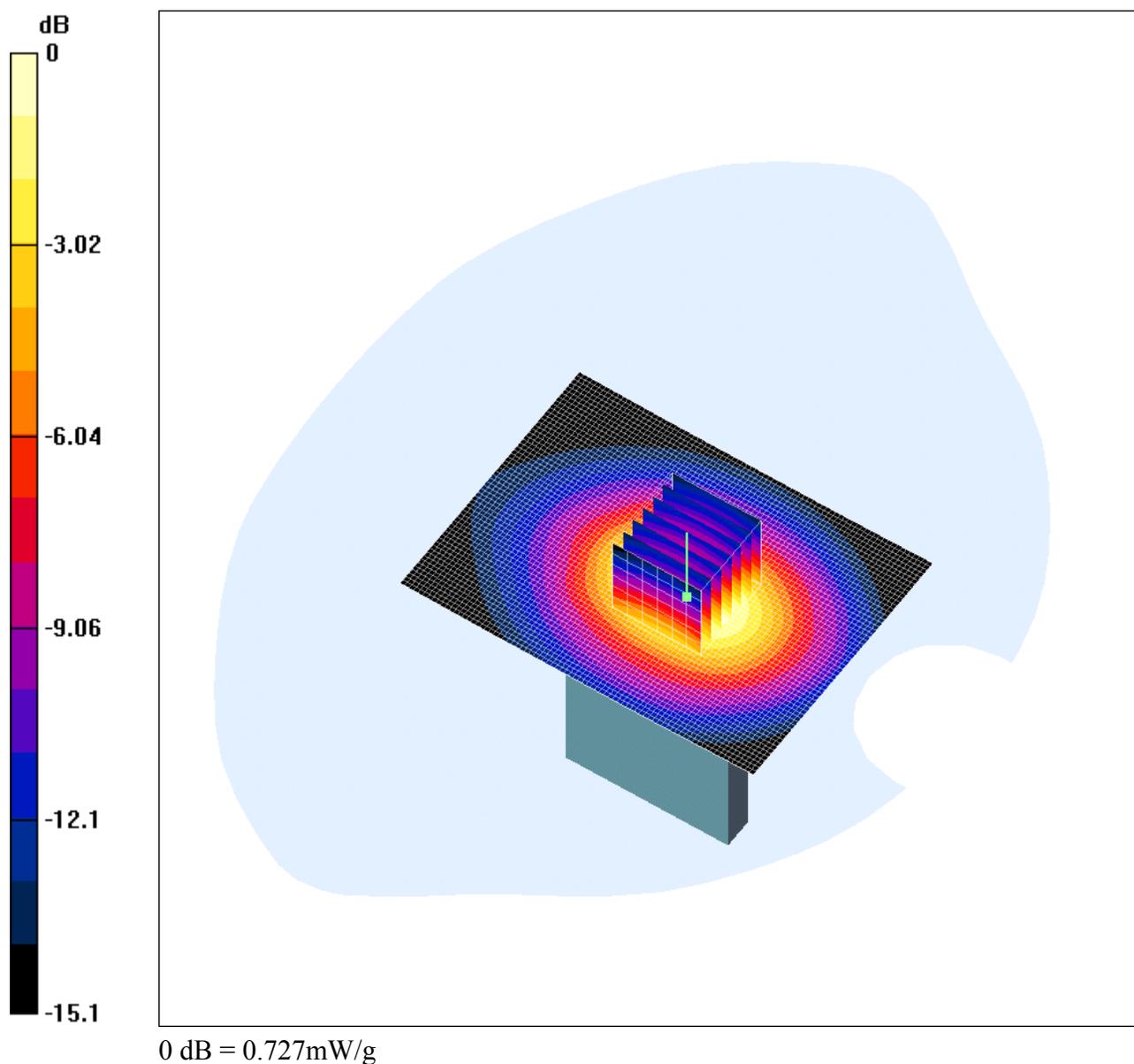
Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Area Scan (81x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.366 mW/g

Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.62 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 0.500 W/kg
SAR(1 g) = 0.334 mW/g; SAR(10 g) = 0.205 mW/g
Maximum value of SAR (measured) = 0.362 mW/g

Date: 08/03/05

70868_08_015

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_015_DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_512**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.62$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.753 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

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

Reference Value = 17.1 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.663 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 0.727 mW/g

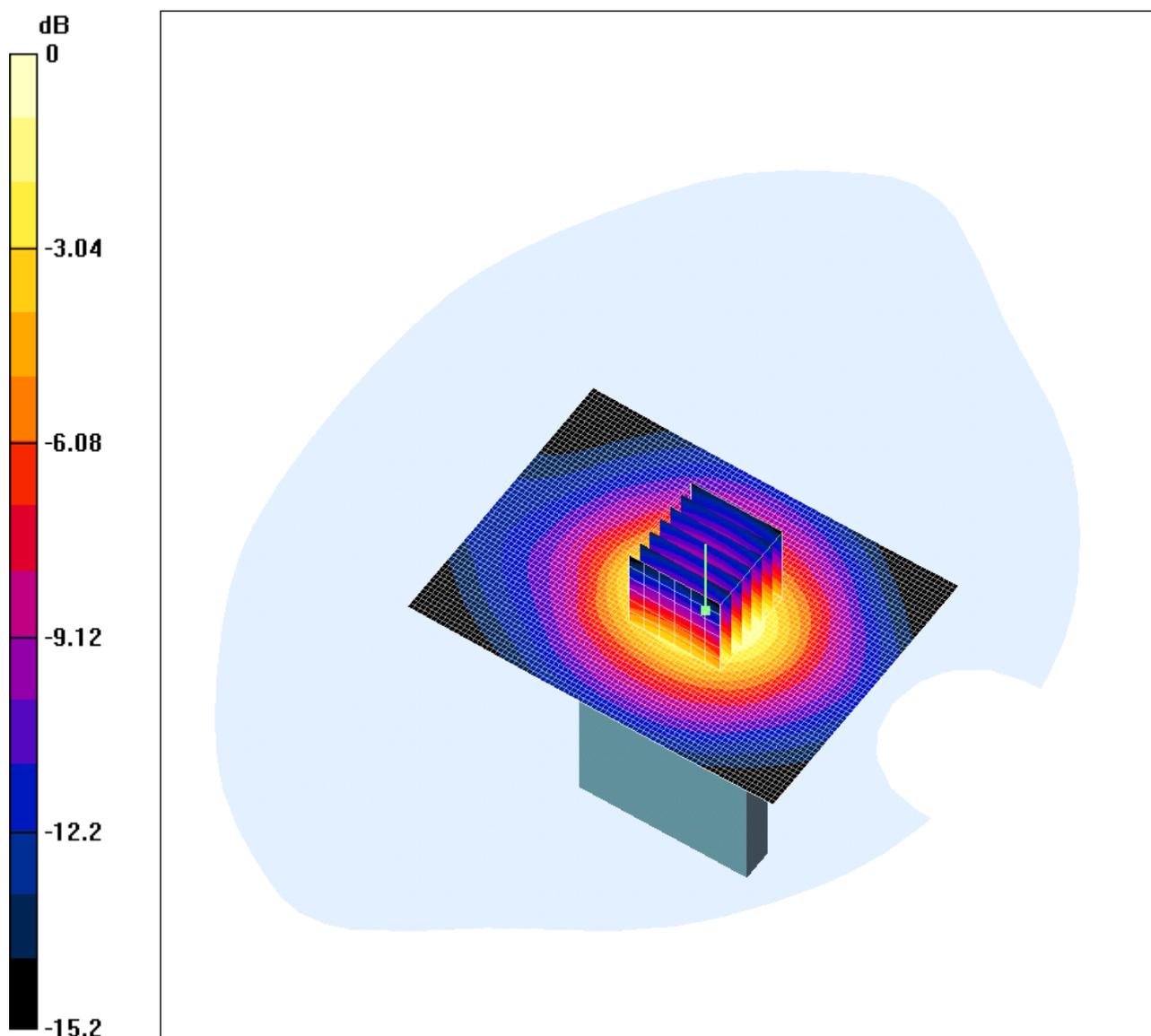
Date: 08/03/05

70868_08_016

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_016_DELL Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_810

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



0 dB = 0.545mW/g

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MHz MSL Medium parameters used (interpolated): $f = 1909.8$ MHz; $\sigma = 1.69$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.24, 4.24, 4.24); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.555 mW/g

DELL Laptop 90 Degrees to Phantom (15mm Seperation) with External Antenna 0

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

Reference Value = 16 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 0.779 W/kg

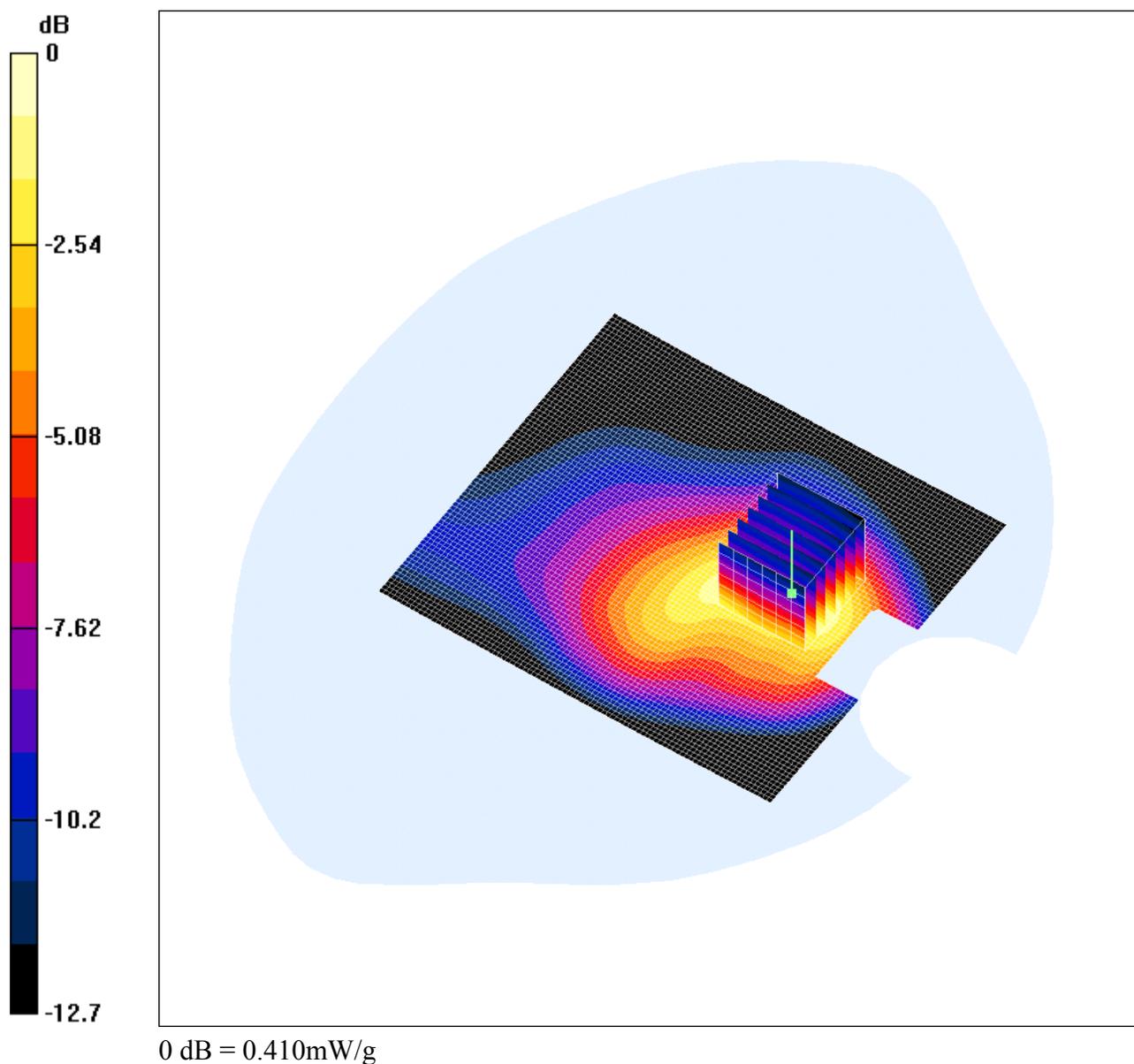
SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.294 mW/g

Maximum value of SAR (measured) = 0.545 mW/g

Date: 09/03/05

70868_08_017

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_017_COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna -

Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.396 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna -

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

Reference Value = 11 V/m; Power Drift = 0.2 dB

Peak SAR (extrapolated) = 0.604 W/kg

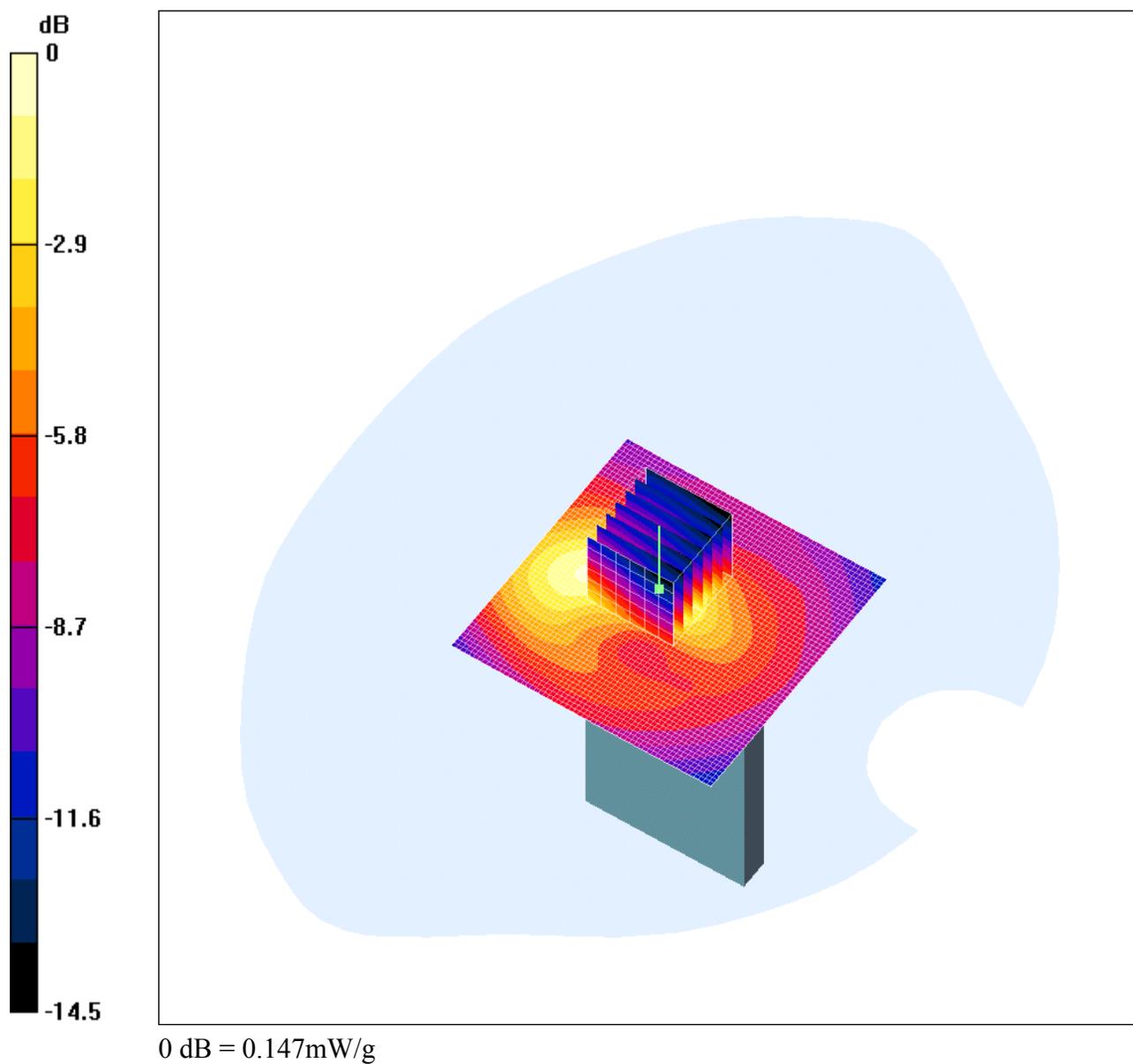
SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.228 mW/g

Maximum value of SAR (measured) = 0.410 mW/g

Date: 09/03/05

70868_08_018

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_018_COMPAQ Laptop 90 Degrees to Phantom with Integral Antenna_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

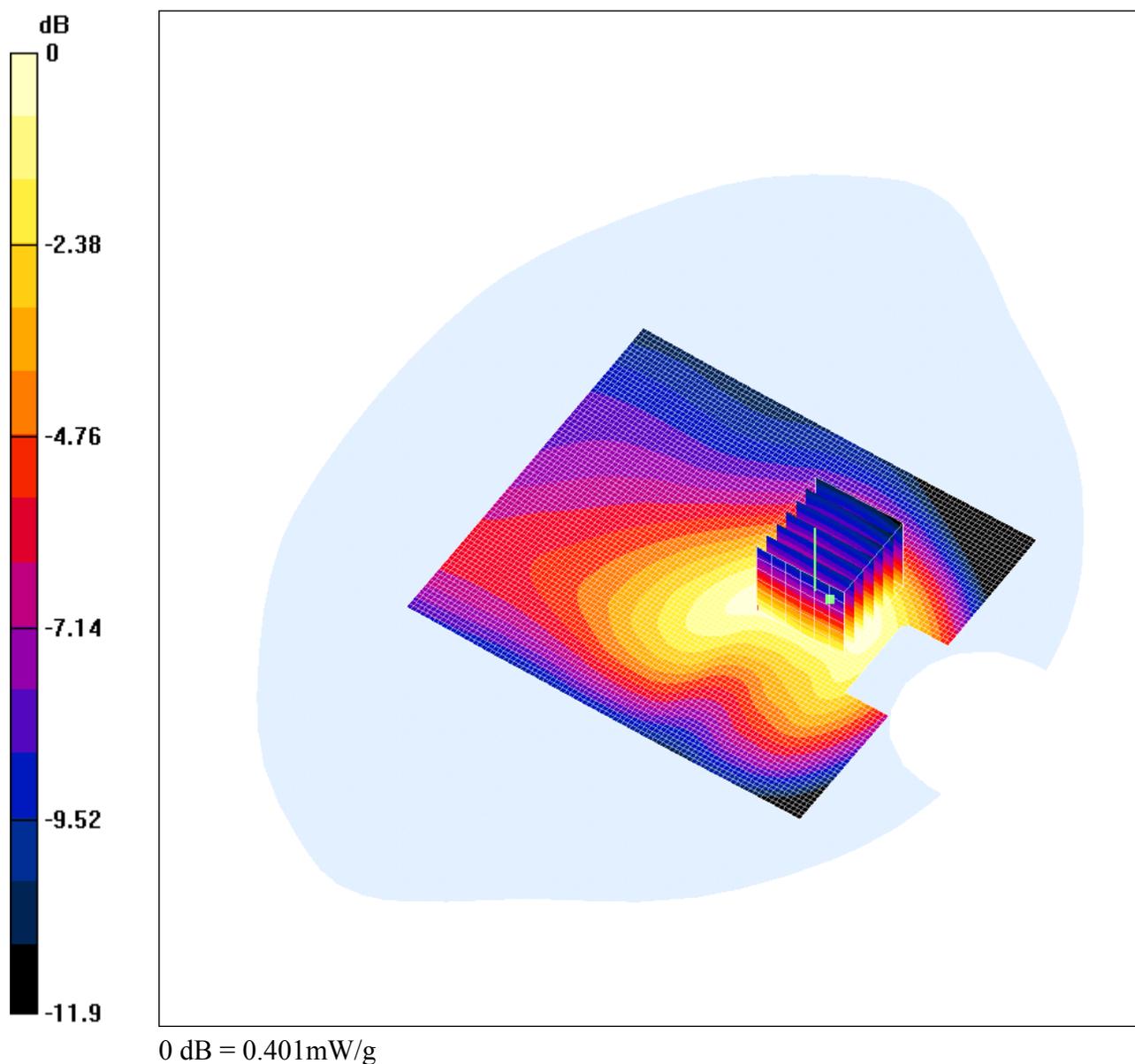
COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.137 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.306 W/kg
SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.073 mW/g
Maximum value of SAR (measured) = 0.147 mW/g

Date: 09/03/05

70868_08_019

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_019_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.413 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 14.1 V/m; Power Drift = 0.0004 dB

Peak SAR (extrapolated) = 0.561 W/kg

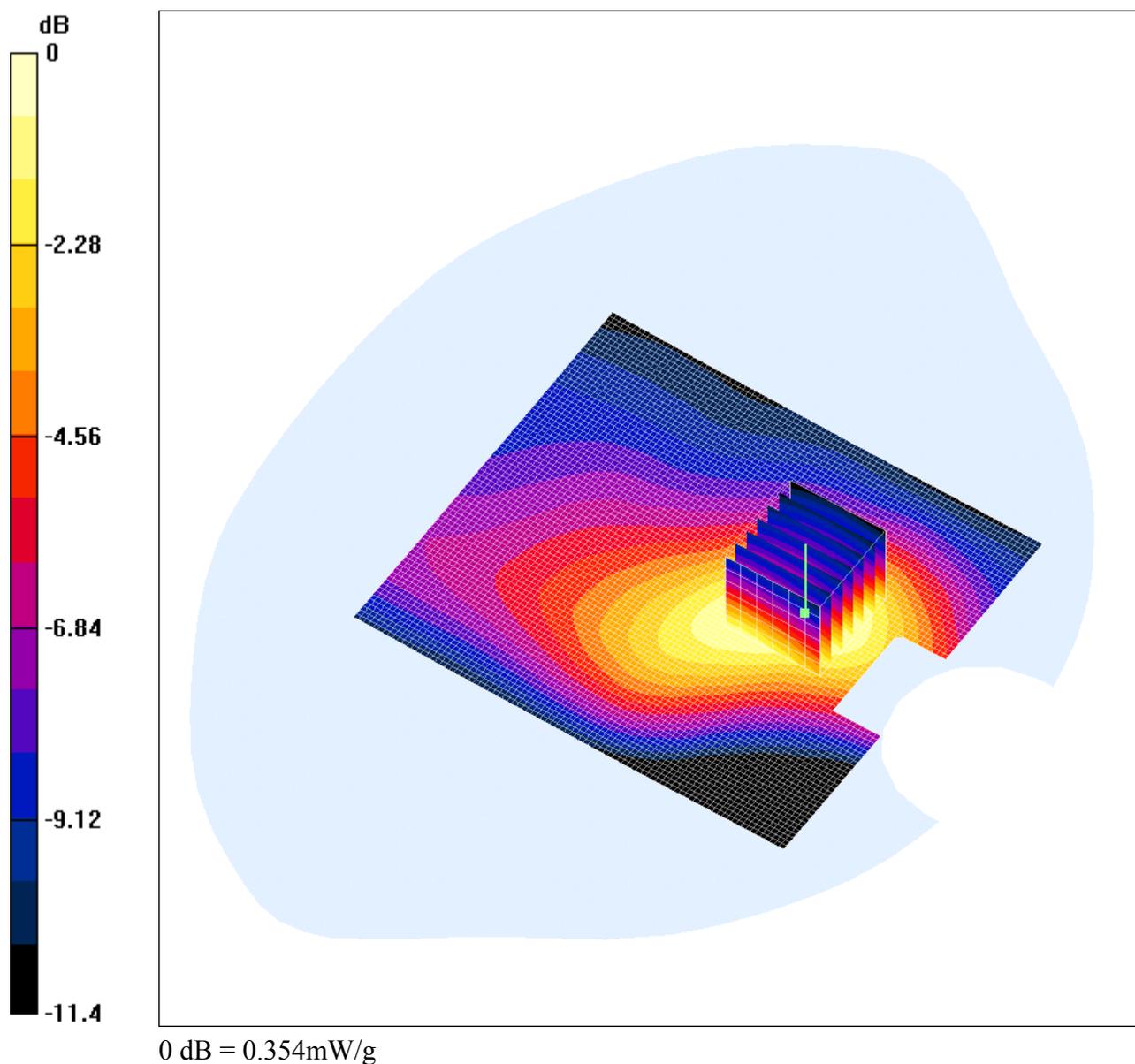
SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.245 mW/g

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

Date: 09/03/05

70868_08_020

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_020_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 90 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.350 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 0.474 W/kg

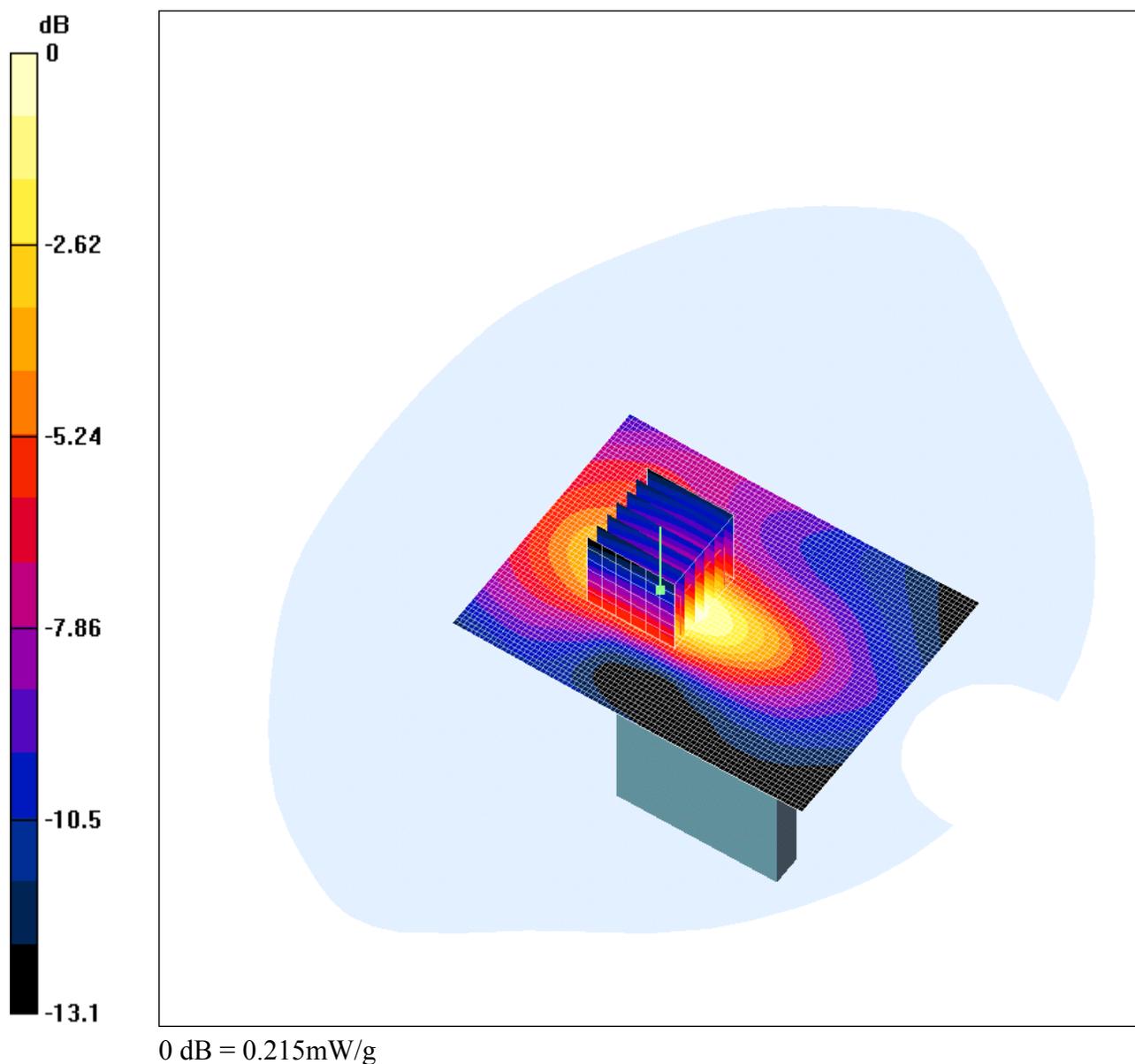
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.213 mW/g

Maximum value of SAR (measured) = 0.354 mW/g

Date: 09/03/05

70868_08_021

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_021_COMPAQ Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 0 Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.210 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 0 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 0.335 W/kg

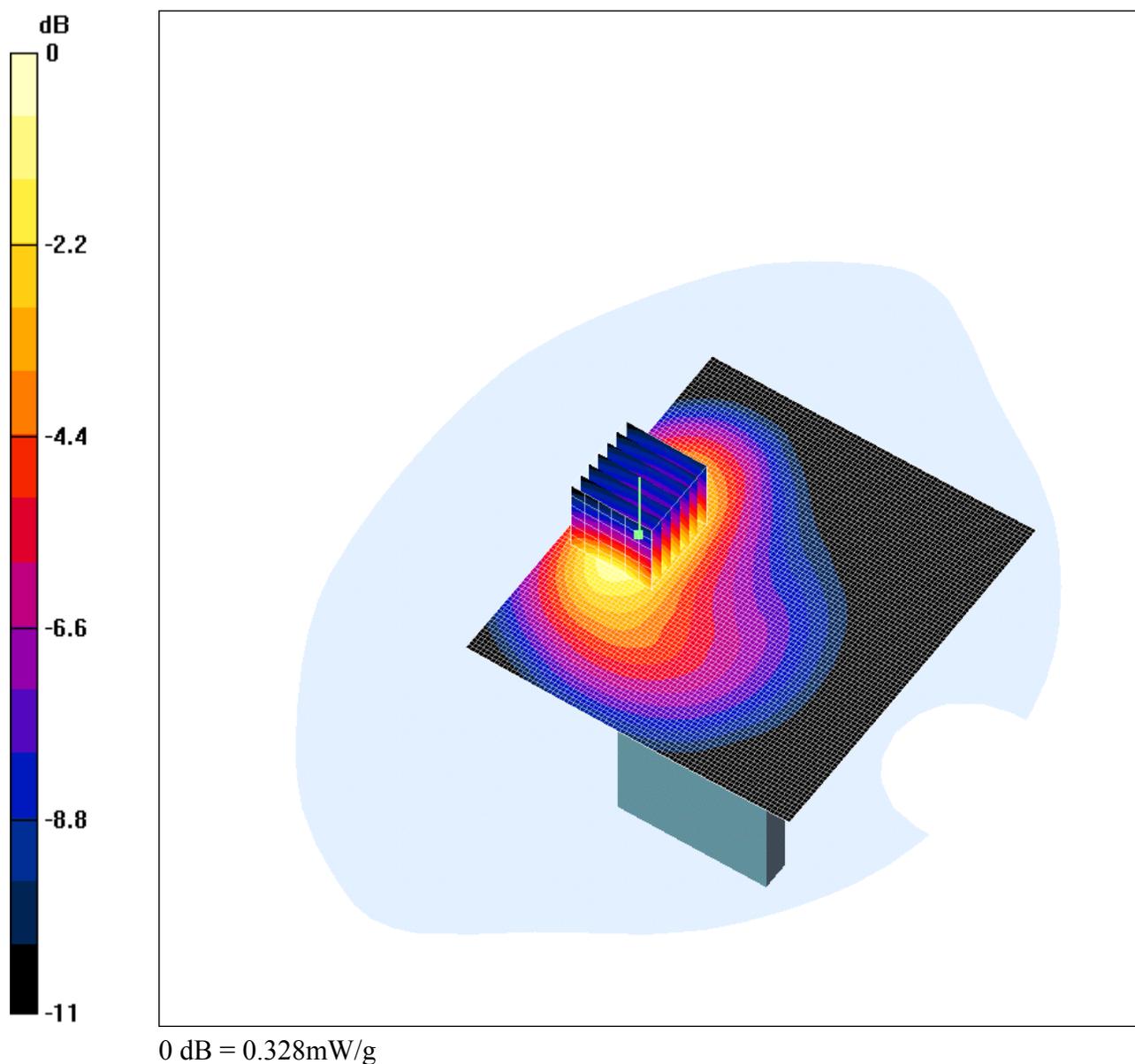
SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.215 mW/g

Date: 09/03/05

70868_08_022

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_022_COMPAQ Laptop 90 Degrees to Phantom with External Antenna 90 Degrees_Flat_189**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Area Scan (81x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.326 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 0.451 W/kg

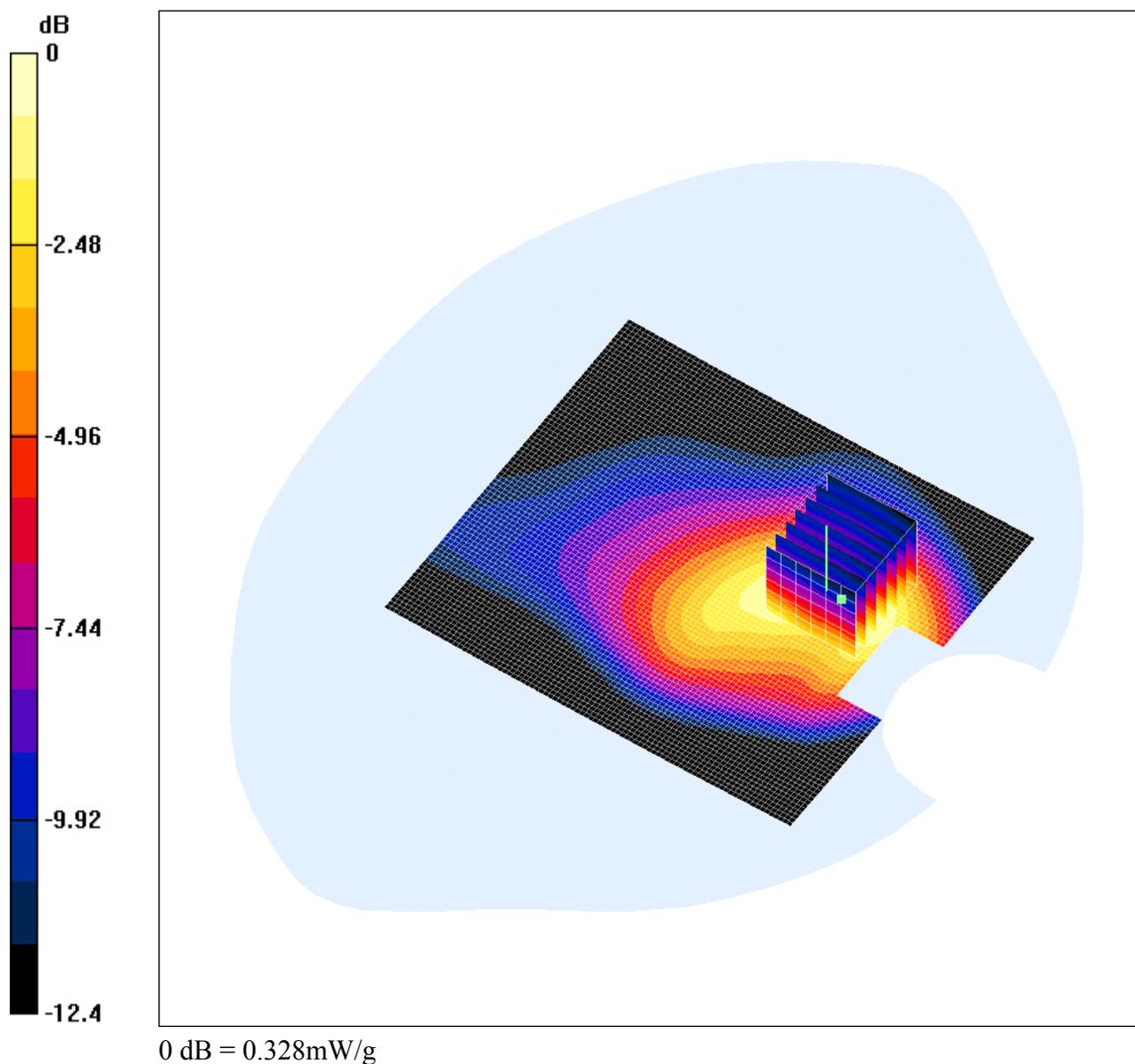
SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.328 mW/g

Date: 09/03/05

70868_08_023

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_023_COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna_Flat_128**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

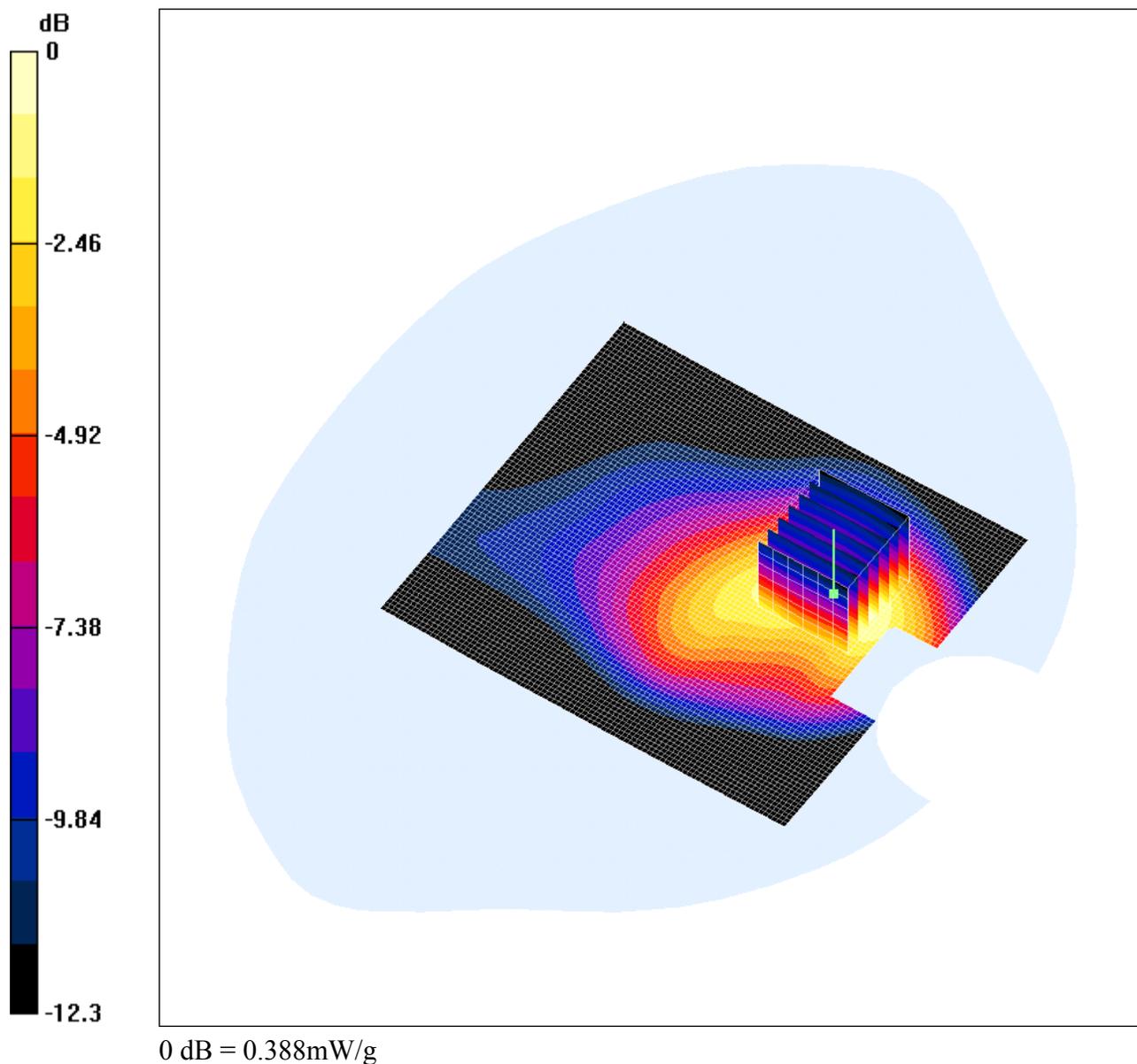
COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.339 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.76 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 0.480 W/kg
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.186 mW/g
Maximum value of SAR (measured) = 0.328 mW/g

Date: 09/03/05

70868_08_024

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_024_COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna_Flat_251**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.390 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 0.569 W/kg
SAR(1 g) = 0.356 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 0.388 mW/g

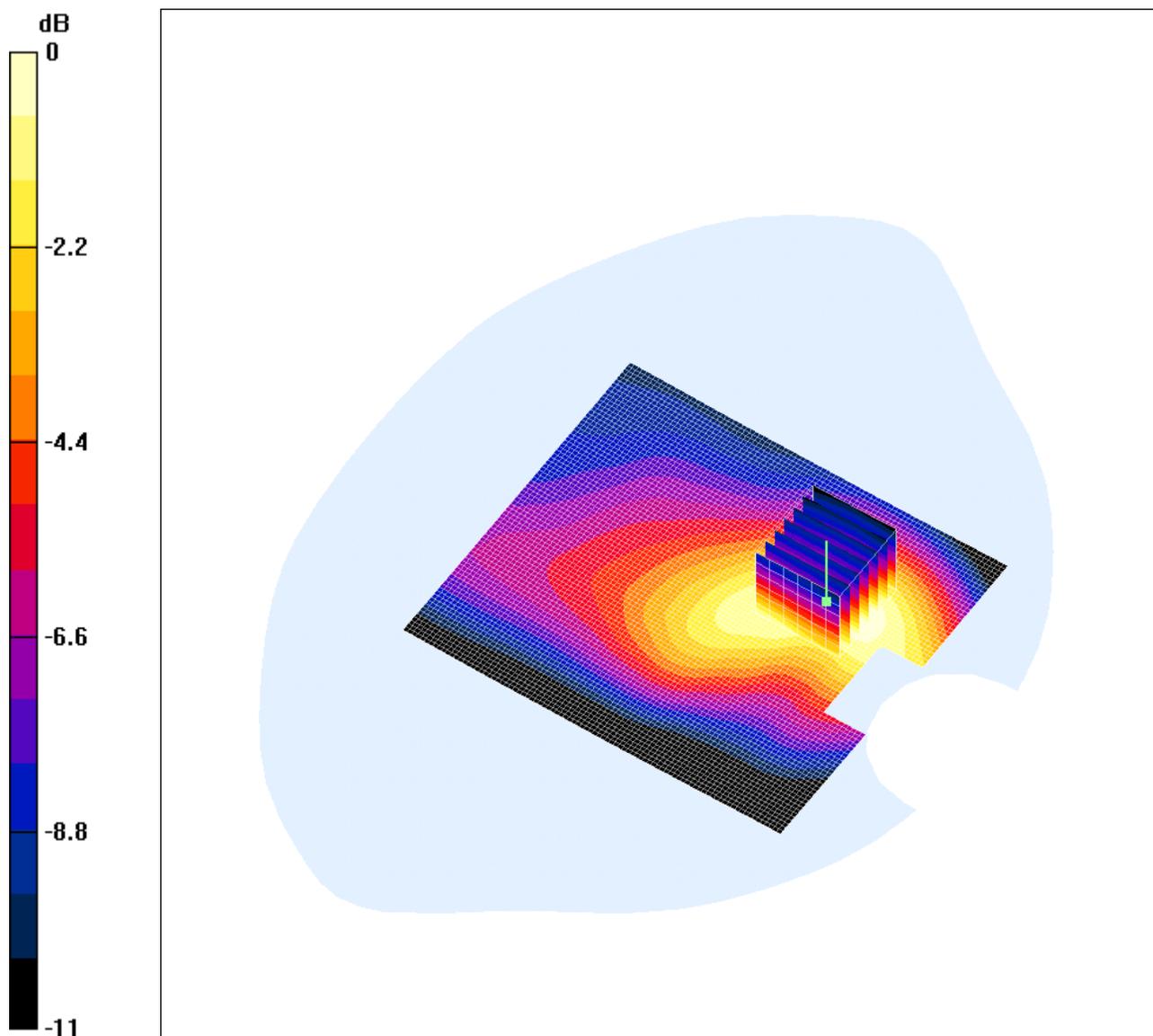
Date: 09/03/05

70868_08_025

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_025_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_128

DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589



0 dB = 0.305mW/g

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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.949$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

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

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 12.6 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 0.408 W/kg

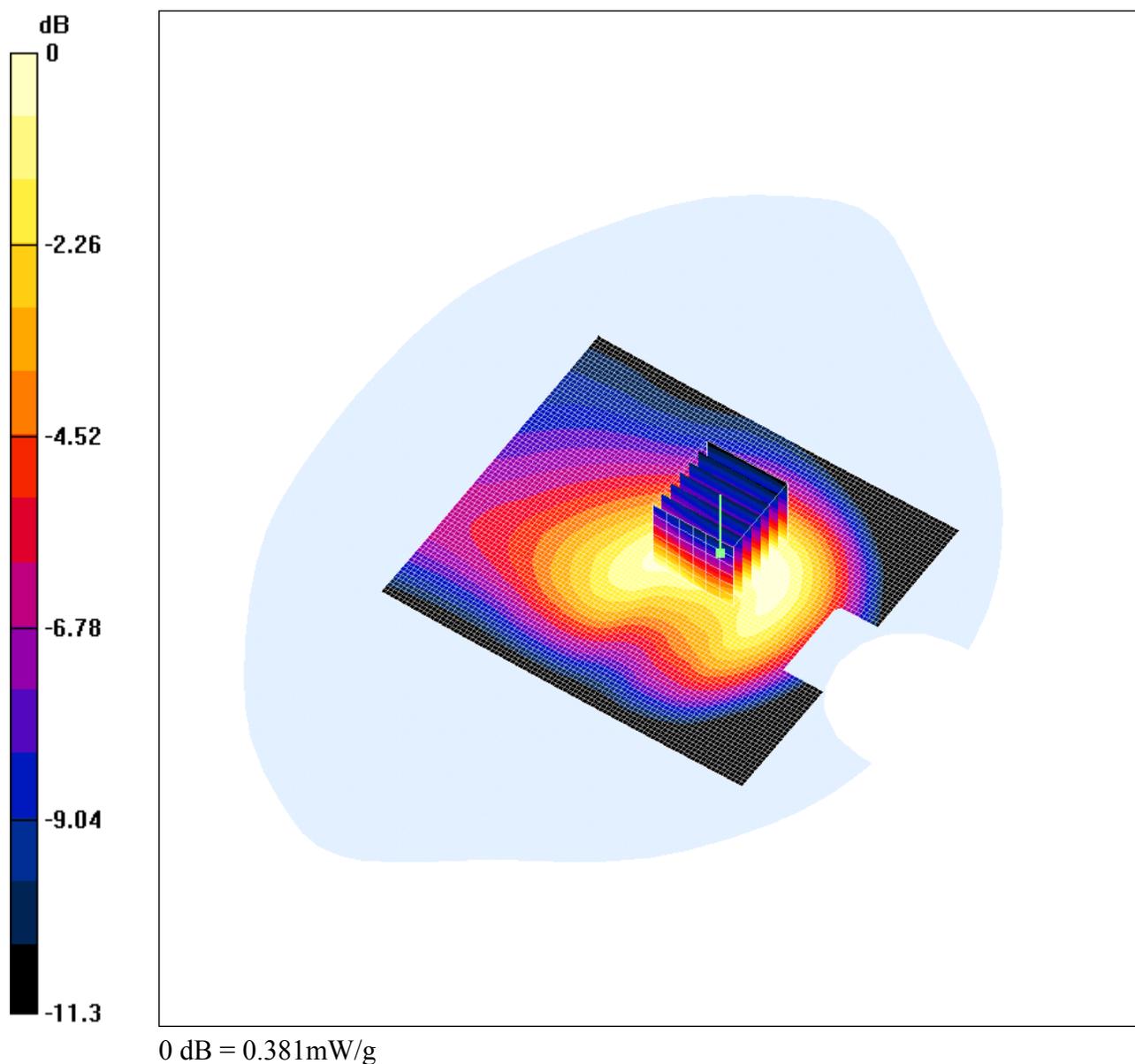
SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.305 mW/g

Date: 09/03/05

70868_08_026

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_026_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_251**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

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

Medium: 900 MHz MSL Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r =$

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

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.07, 6.07, 6.07); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.392 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 17.8 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.533 W/kg

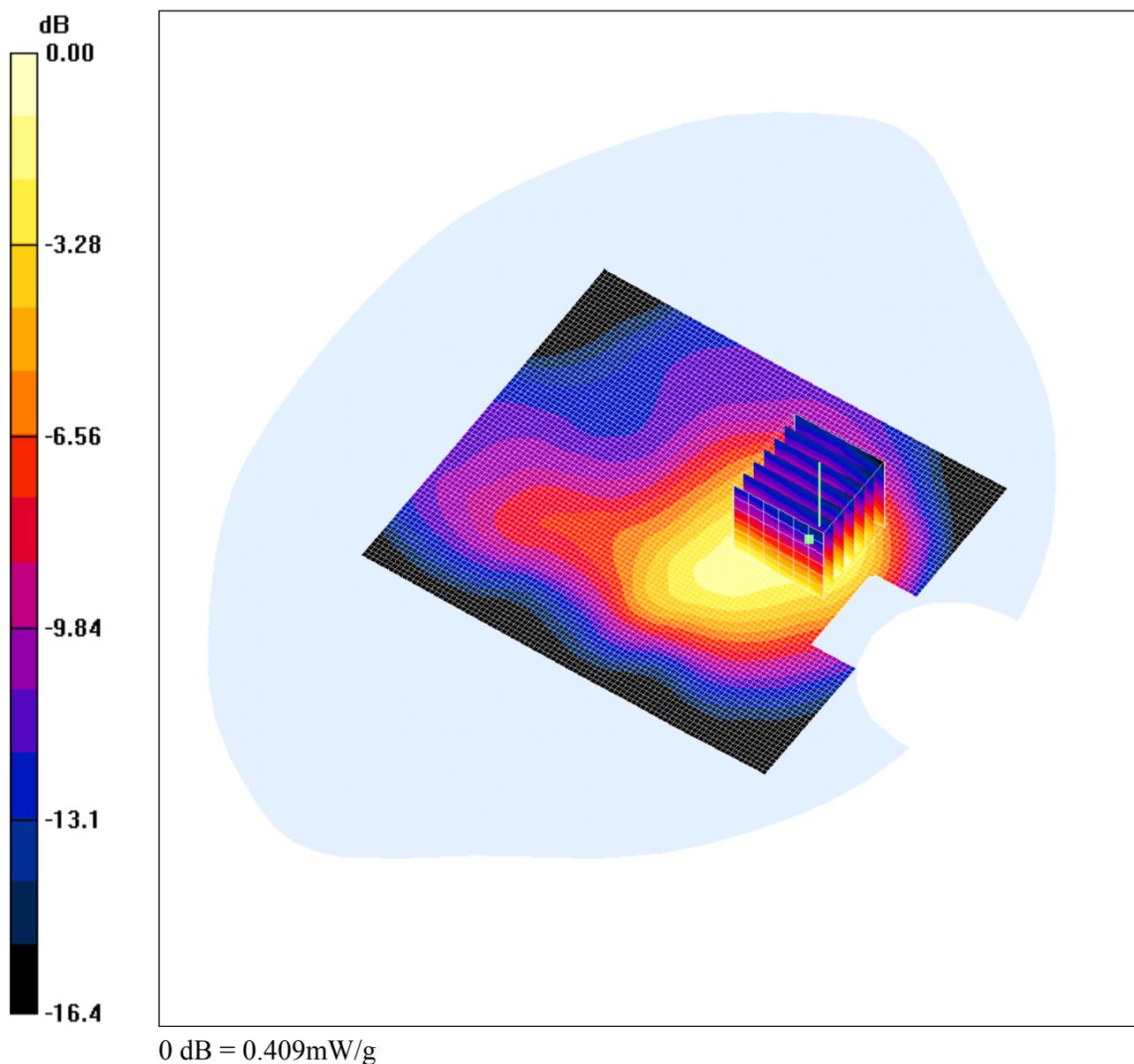
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.381 mW/g

Date: 24/03/2005

70868_08_051

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_051_COMPAQ Laptop 0 Degrees to Phantom with Integral Antenna_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

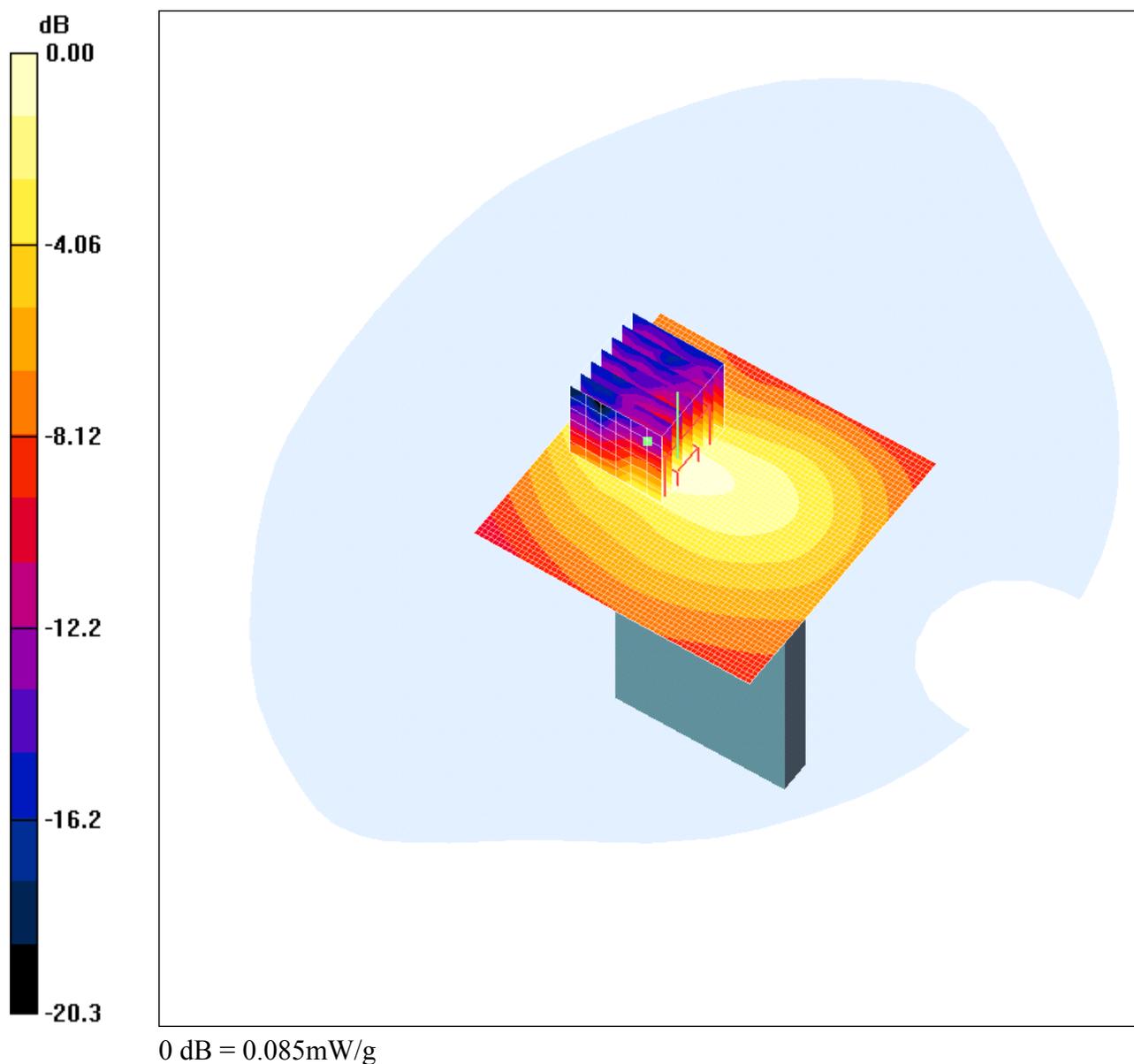
COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.419 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.25 V/m; Power Drift = 0.348 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.213 mW/g
Maximum value of SAR (measured) = 0.409 mW/g

Date: 24/03/2005

70868_08_052

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_052_COMPAQ Laptop 90 Degrees to Phantom with Integral Antenna_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

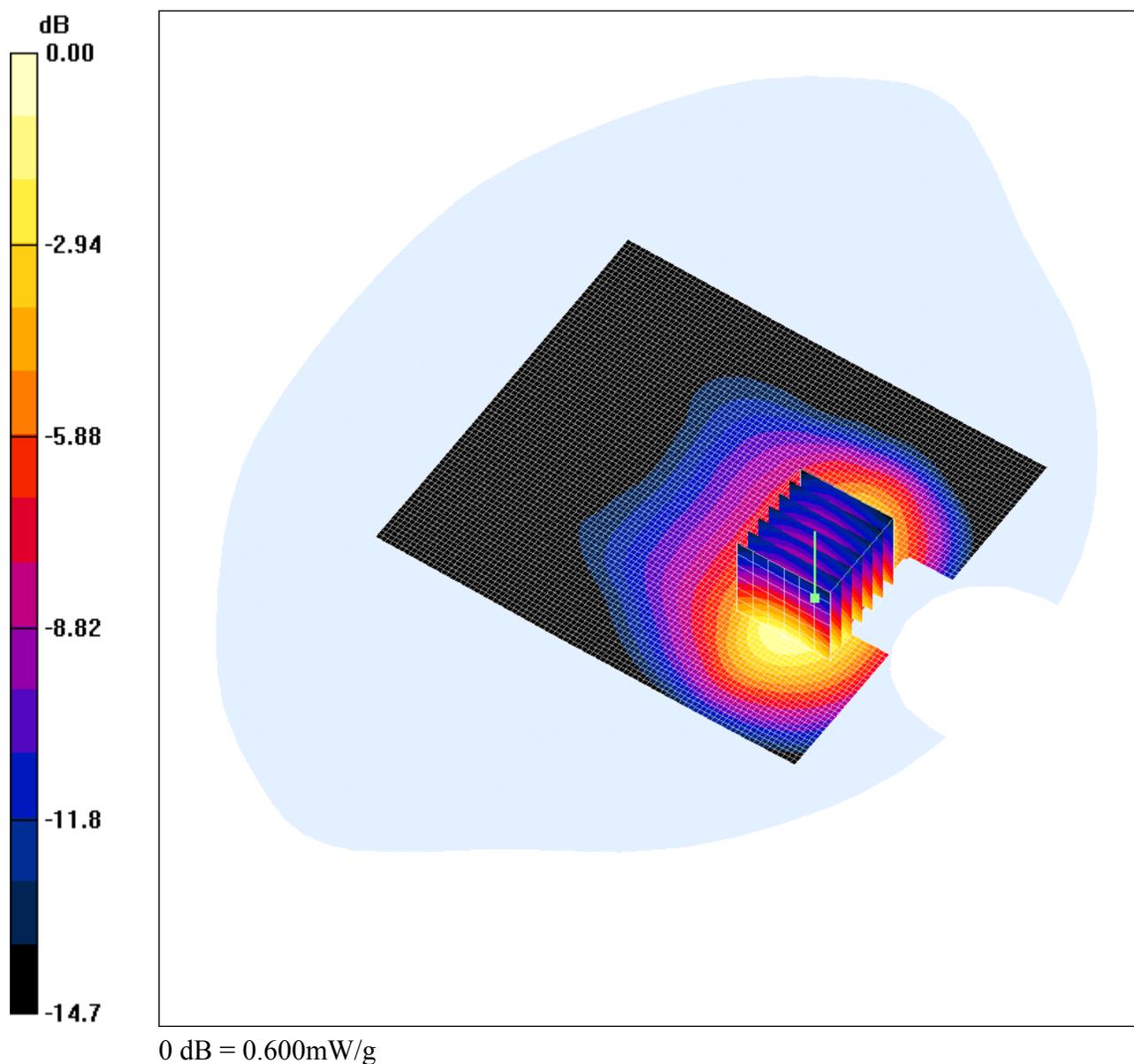
COMPAQ Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.078 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Seperation) with Integral Antenna - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.28 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 0.152 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.085 mW/g

Date: 24/03/2005

70868_08_053

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_053_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.576 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 5.08 V/m; Power Drift = 0.298 dB

Peak SAR (extrapolated) = 0.855 W/kg

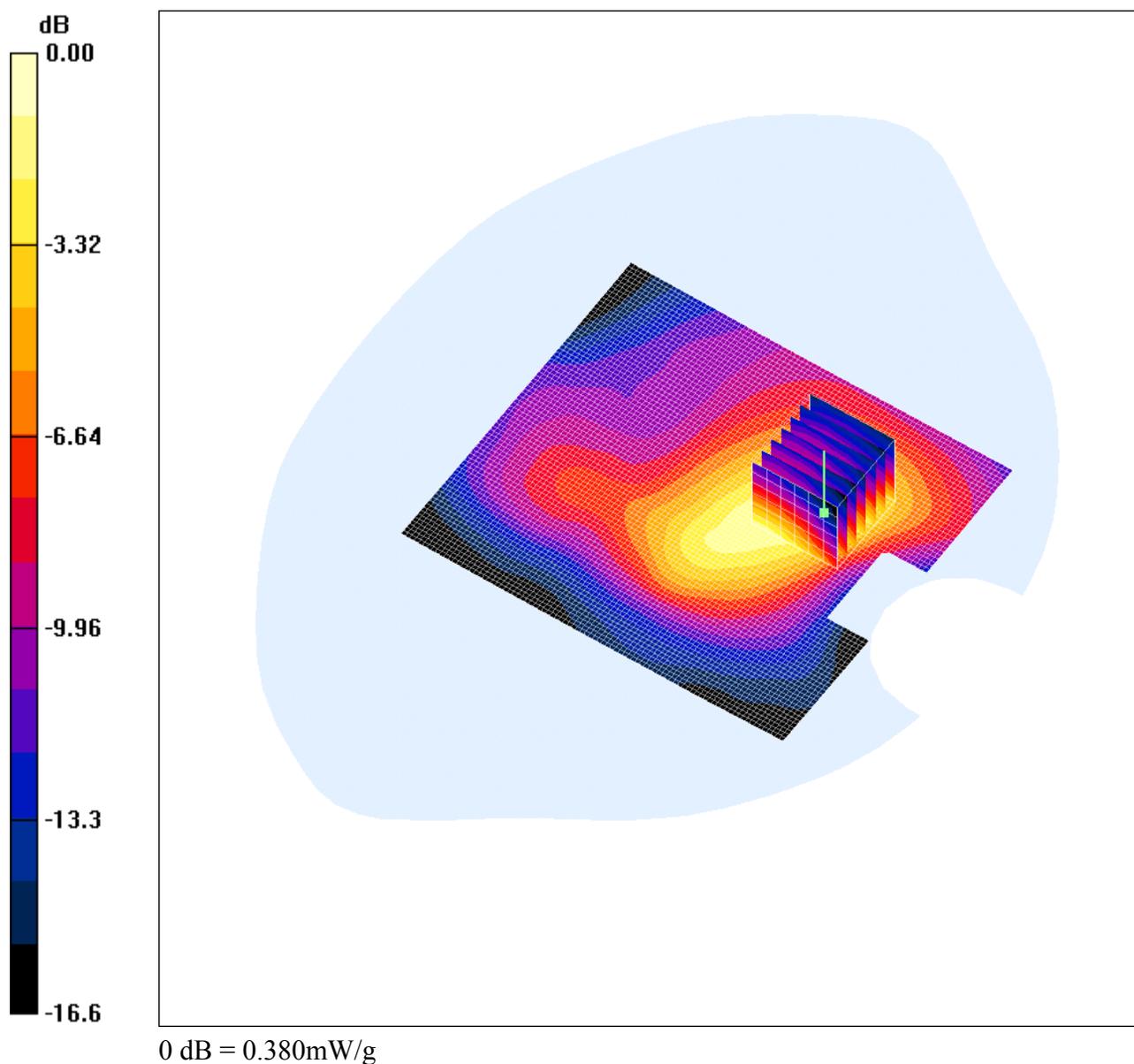
SAR(1 g) = 0.550 mW/g; SAR(10 g) = 0.327 mW/g

Maximum value of SAR (measured) = 0.600 mW/g

Date: 24/03/2005

70868_08_054

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_054_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 90 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3
Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 90

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.360 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 90

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

Reference Value = 8.11 V/m; Power Drift = -0.316 dB

Peak SAR (extrapolated) = 0.571 W/kg

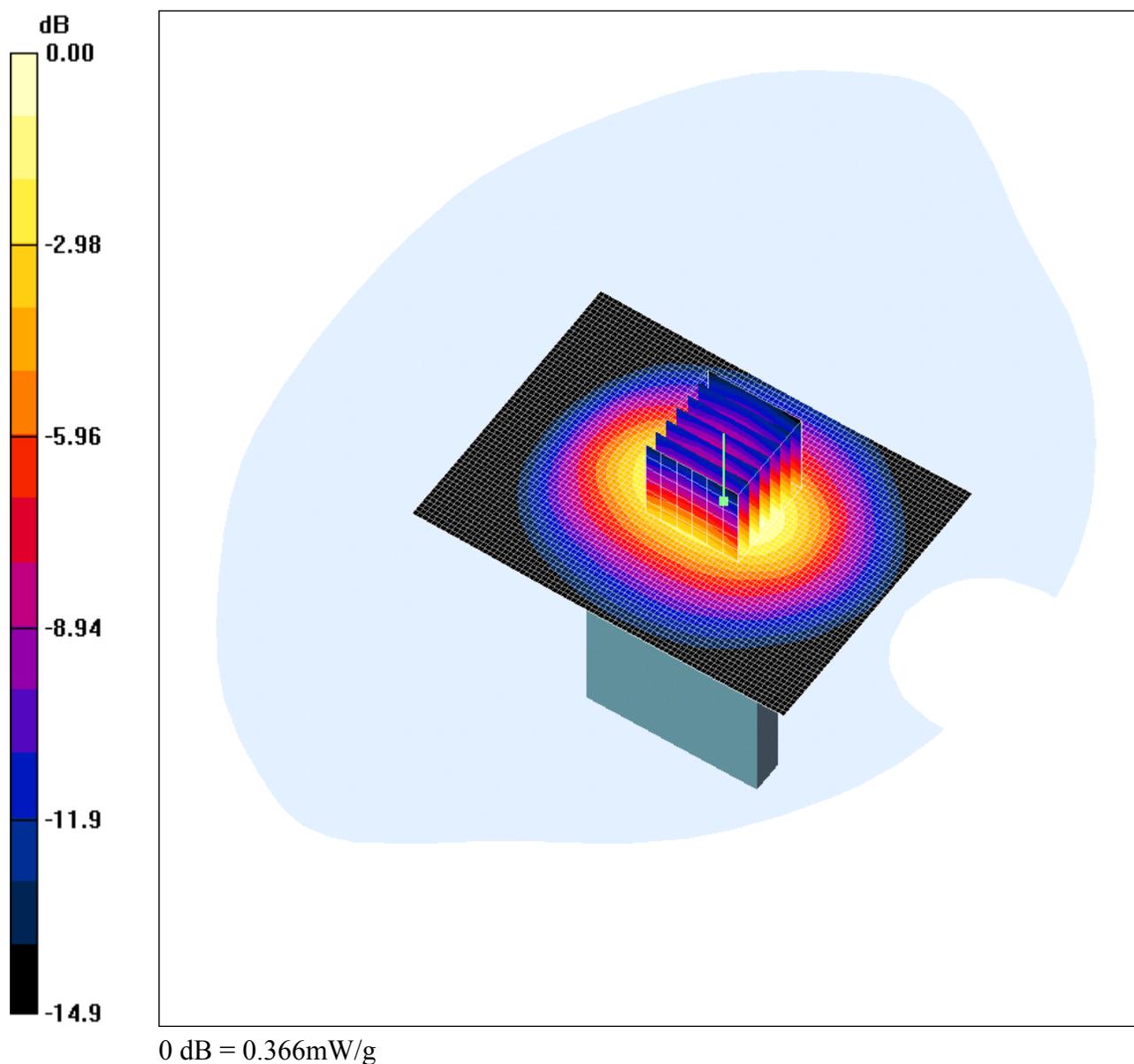
SAR(1 g) = 0.343 mW/g; SAR(10 g) = 0.196 mW/g

Maximum value of SAR (measured) = 0.380 mW/g

Date: 24/03/2005

70868_08_055

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_055_COMPAQ Laptop 90 Degrees to Phantom with External Antenna 0 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 0 Degrees - Middle/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.384 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 0 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.8 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 0.511 W/kg

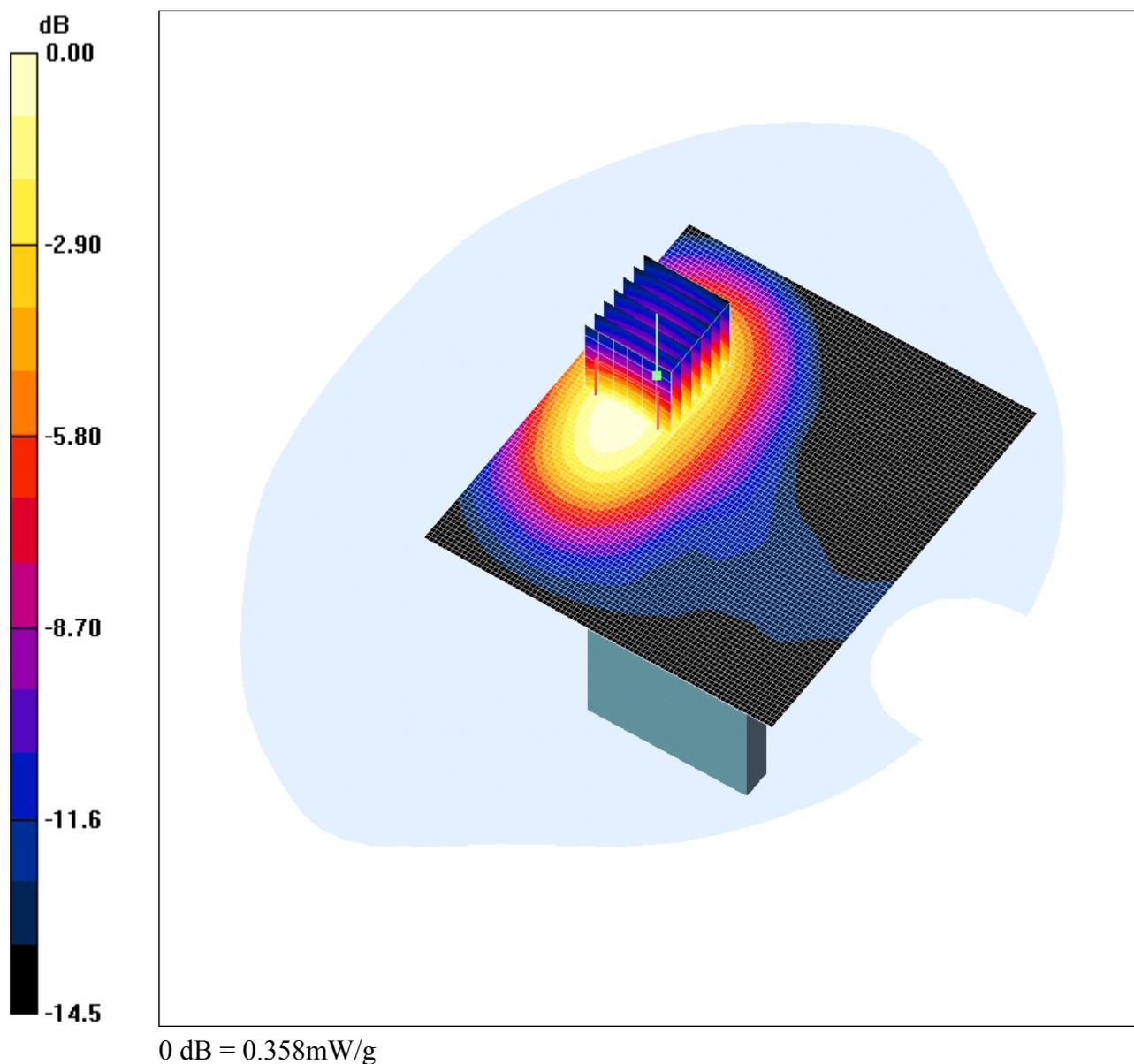
SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.366 mW/g

Date: 24/03/2005

70868_08_056

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_056_COMPAQ Laptop 90 Degrees to Phantom with External Antenna 90 Degrees_Flat_660**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1879.8$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Area Scan (81x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.361 mW/g

COMPAQ Laptop 90 Degrees to Phantom (15mm Separation) with External Antenna 90 Degrees - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.46 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.517 W/kg

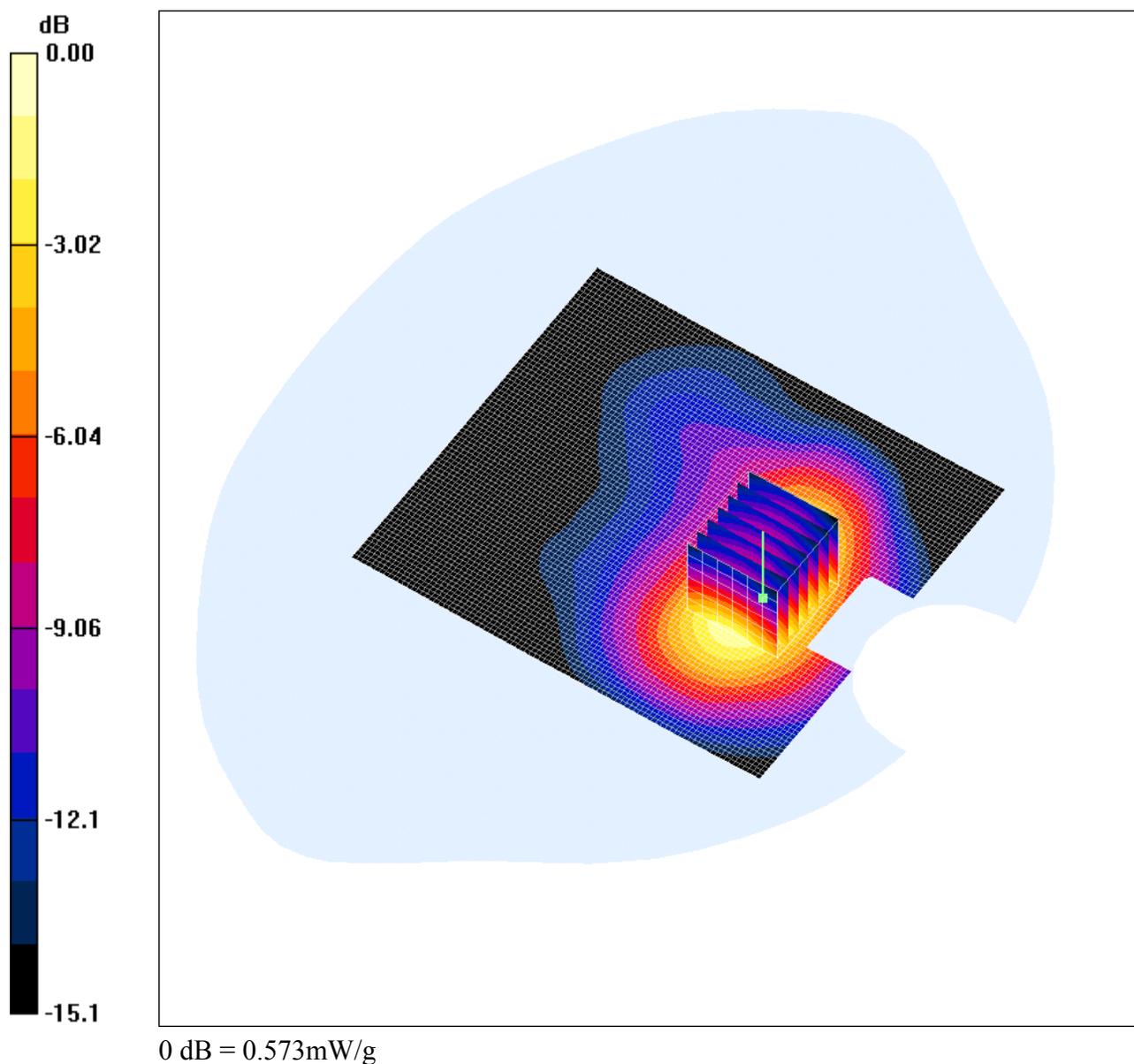
SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.358 mW/g

Date: 24/03/2005

70868_08_057

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_057_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_512**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 51.4$; ρ

= 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.546 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 5.11 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 0.812 W/kg

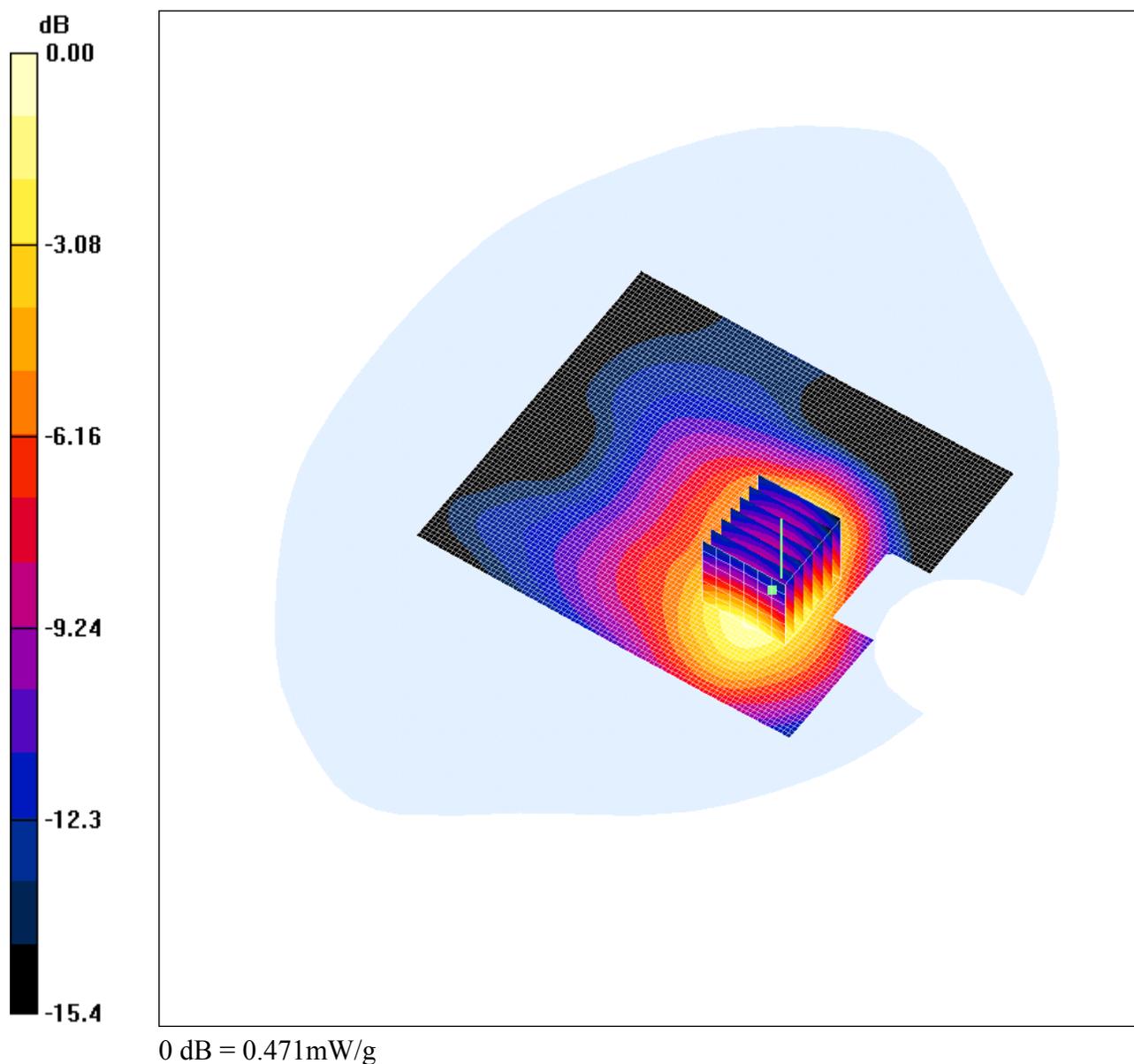
SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.313 mW/g

Maximum value of SAR (measured) = 0.573 mW/g

Date: 24/03/2005

70868_08_058

Test Laboratory: RFI GLOBAL SERVICES LTD.

70868_JD08_058_COMPAQ Laptop 0 Degrees to Phantom with External Antenna 0 Degrees_Flat_810**DUT: Sony Ericsson Mobile Communications AB; Type: GC89; Serial: 004601016299589**

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: 1800 MSL Medium parameters used (interpolated): $f = 1909.8$ MHz; $\sigma = 1.6$ mho/m; $\epsilon_r = 51.2$; $\rho =$

1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.38, 4.38, 4.38); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

Degrees - Middle/Area Scan (91x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.466 mW/g

COMPAQ Laptop 0 Degrees to Phantom (15mm Separation) with External Antenna 0

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

Reference Value = 7.12 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 0.683 W/kg

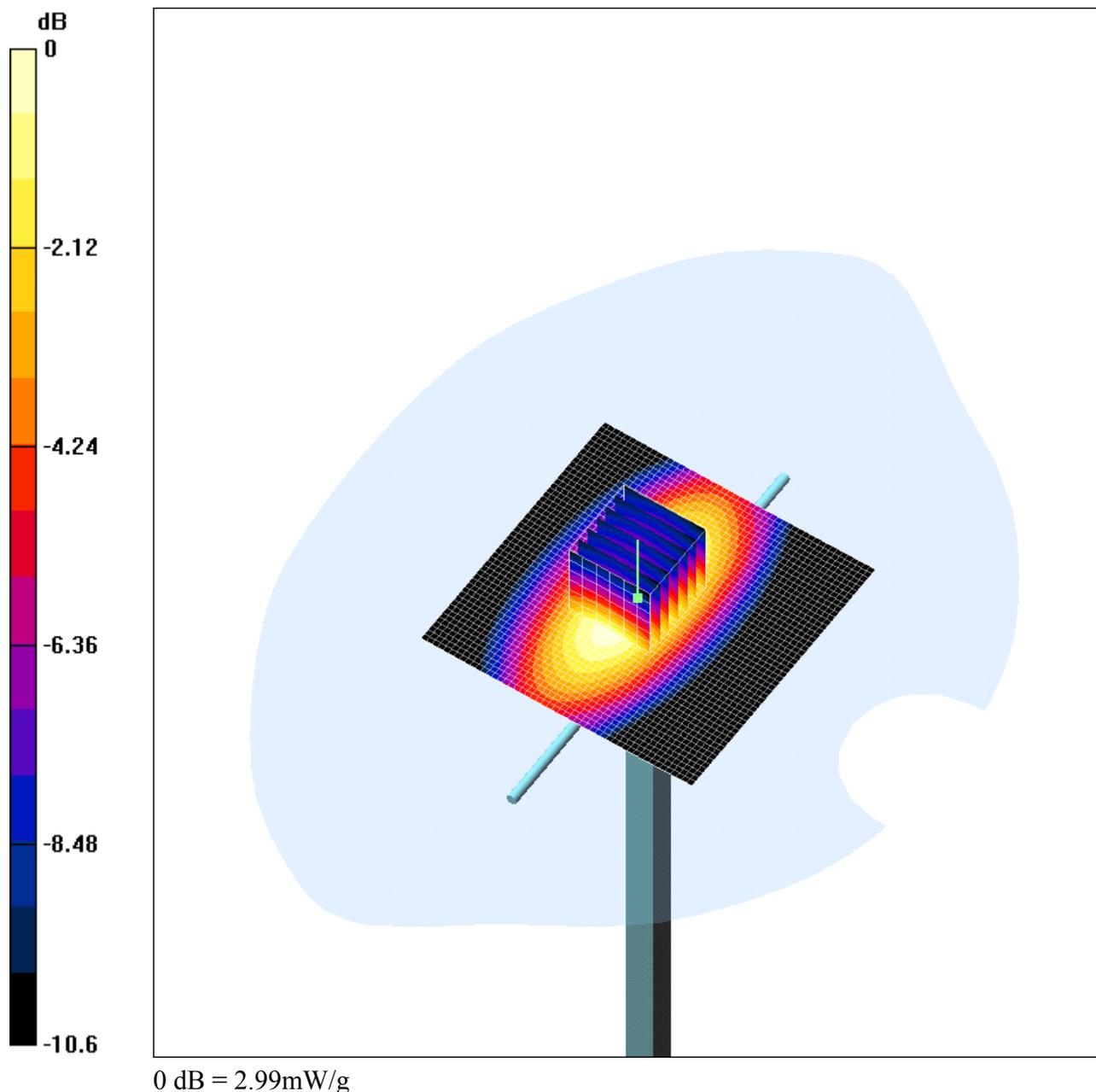
SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.259 mW/g

Maximum value of SAR (measured) = 0.471 mW/g

Date: 07/03/05

70868_08_Validation 001

Test Laboratory: RFI GLOBAL SERVICES LTD.

System Performance Check_07_03_05**DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:124**

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: $f = 900$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(5.86, 5.86, 5.86); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.12 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm,
dy=5mm, dz=5mm
Reference Value = 55.2 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 3.9 W/kg
SAR(1 g) = 2.75 mW/g; SAR(10 g) = 1.8 mW/g
Maximum value of SAR (measured) = 2.99 mW/g

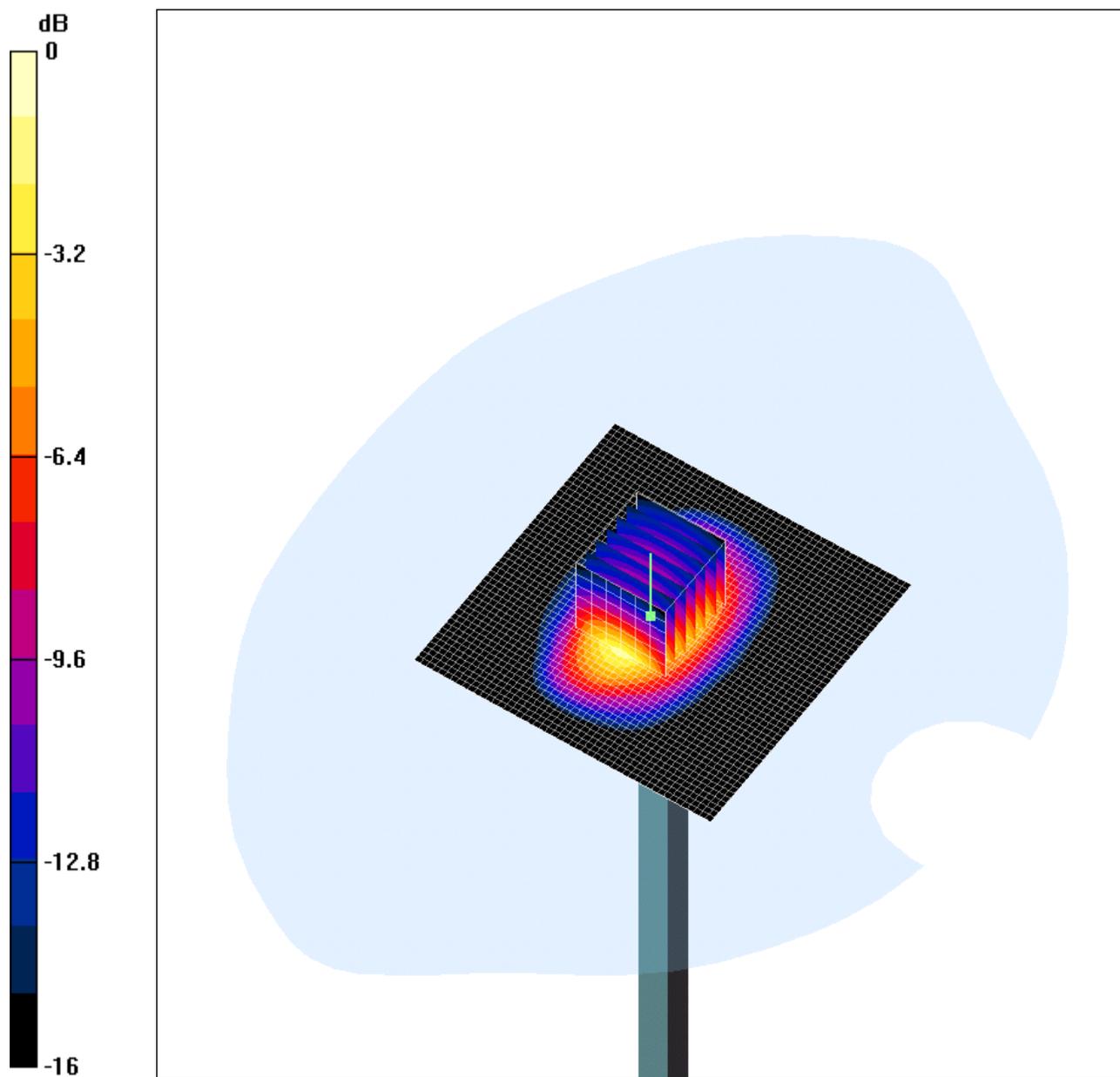
Date: 08/03/05

70868_08_Validation 002

Test Laboratory: RFI GLOBAL SERVICES LTD.

System Performance Check-D1800 08 03 05

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 10.5mW/g

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz MSL Medium parameters used: $f = 1800$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.46, 4.46, 4.46); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 12.9 mW/g

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

Reference Value = 83.2 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 15 W/kg

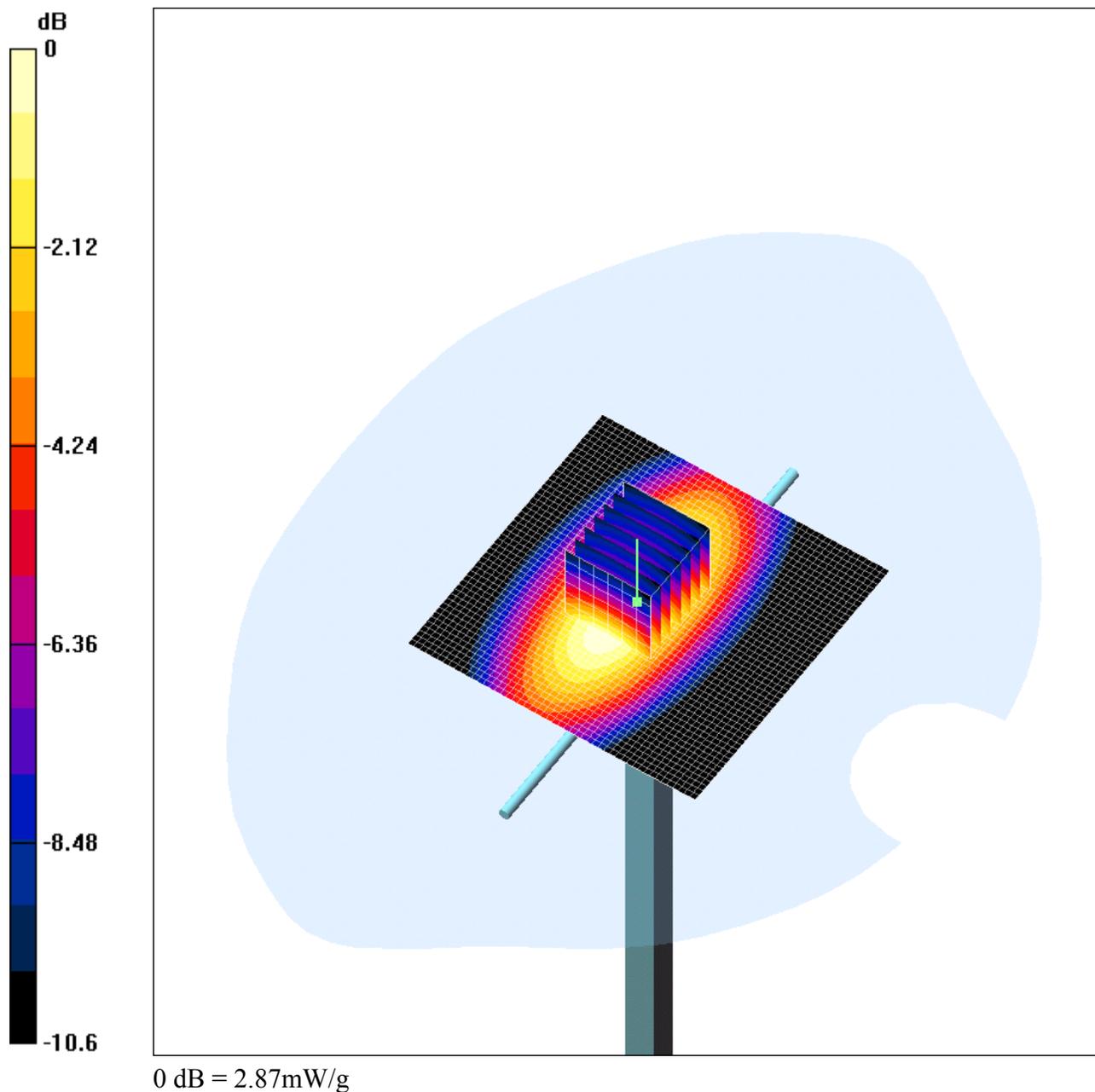
SAR(1 g) = 9.22 mW/g; SAR(10 g) = 4.99 mW/g

Maximum value of SAR (measured) = 10.5 mW/g

Date: 09/03/05

70868_08_Validation 003

Test Laboratory: RFI GLOBAL SERVICES LTD.

System Performance Check_09_03_05**DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:124**

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: $f = 900$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$

kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(5.86, 5.86, 5.86); Calibrated: 15/07/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3 mW/g

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

Reference Value = 53.5 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 3.79 W/kg

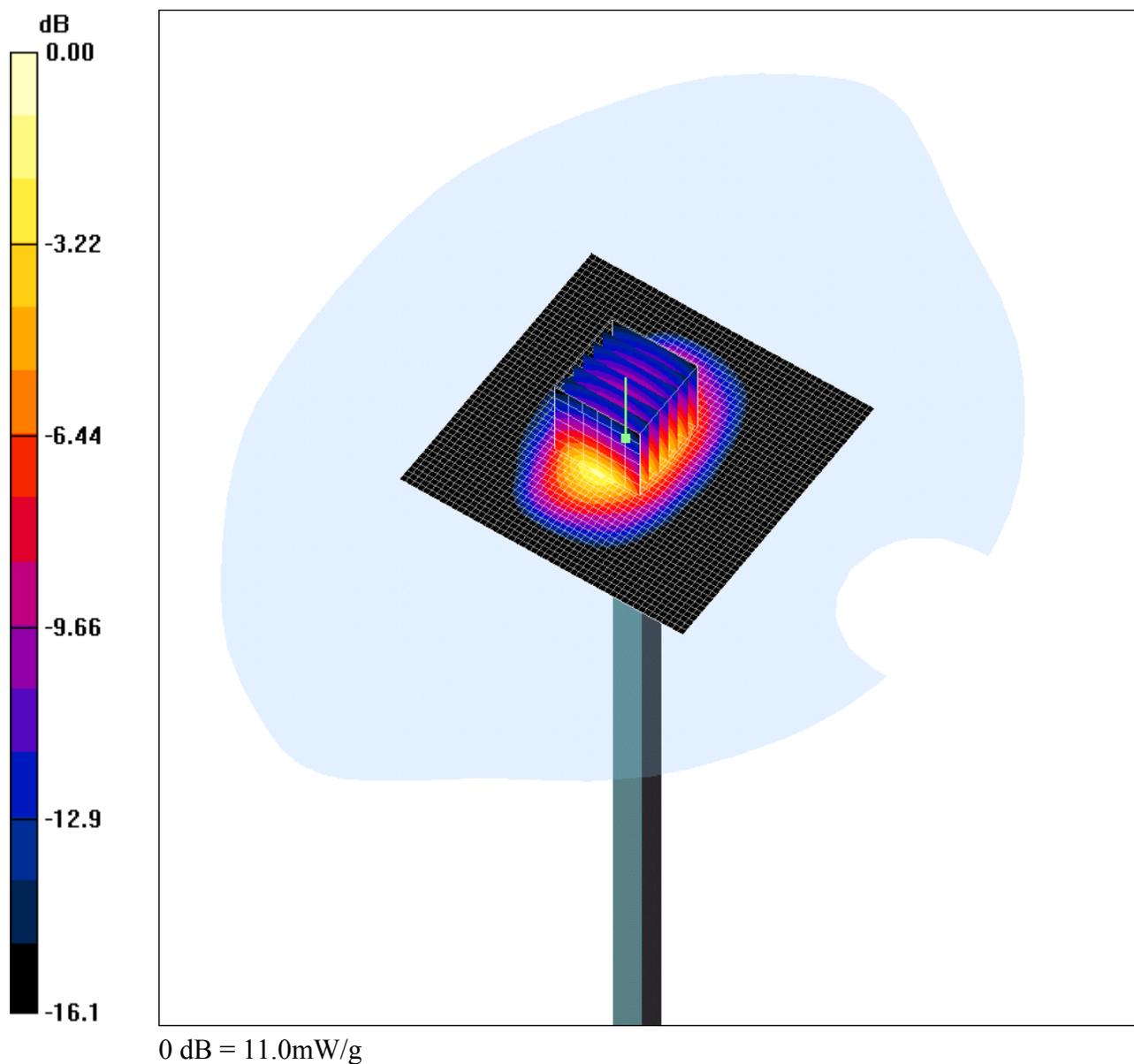
SAR(1 g) = 2.64 mW/g; SAR(10 g) = 1.72 mW/g

Maximum value of SAR (measured) = 2.87 mW/g

Date: 24/03/2005

70868_08_007

Test Laboratory: RFI GLOBAL SERVICES LTD.

System Performance Check-D1800 24 03 05**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264**

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MSL Medium parameters used: $f = 1800$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1529; ConvF(4.58, 4.58, 4.58); Calibrated: 10/06/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 16/06/2004
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 13.4 mW/g

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

Reference Value = 87.0 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 9.61 mW/g; SAR(10 g) = 5.17 mW/g

Maximum value of SAR (measured) = 11.0 mW/g