

SAR Compliance Test Report

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Tested device:	RM-92		
FCC ID:	QFXRM-92	IC:	661Z-RM92
Supplement reports:	-		
Testing has been carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields RSS-102 Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields IEEE 1528 - 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques		
Documentation:	The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test results:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.		
Date and signatures:			
For the contents:	 Digitally signed by Virpi Tuominen DN: CN = Virpi Tuominen, C = FI, O = Nokia, OU = CertT Date: 2005.11.30 17:40:13 +02'00' Virpi Tuominen Senior Design Engineer		

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2005-11-08 to 2005-11-23
SN, HW and SW numbers of tested device	SN: 004400/68/165234/1, HW: 5020, SW: 1.0540.0.4, DUT: 10838 SN: 004400/68/165233/3, HW: 5022, SW: 1.0540.0.4, DUT: 10837
Batteries used in testing	BL-5B, DUT: 10835, 10839, 10843
Headsets used in testing	HS-23, DUT: 10840
Other accessories used in testing	MU-card S64T, DUT: 10836
State of sample	Prototype unit
Notes	-

1.2 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration are given in section 1.2.1 and 1.2.2 respectively. The device conforms to the requirements of the standard(s) when the maximum measured SAR value is less than or equal to the limit.

1.2.1 Head Configuration

Mode	Position	SAR limit (1g avg)	Measured SAR value (1g avg)	Result
WLAN + 3-slot GPRS850	Right, Cheek	1.6 W/kg	0.86 W/kg	PASSED
WLAN + 3-slot GPRS1900	Left, Cheek	1.6 W/kg	0.38 W/kg	PASSED

1.2.2 Body Worn Configuration

Mode	Separation distance	SAR limit (1g avg)	Measured SAR value (1g avg)	Result
WLAN + 3-slot GPRS850	2.2cm	1.6 W/kg	1.05W/kg	PASSED
WLAN + 3-slot GPRS1900	2.2cm	1.6 W/kg	0.53W/kg	PASSED

1.2.3 Maximum Drift

Maximum drift during measurements	-0.38 dB
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1.2.4 Measurement Uncertainty

Extended Uncertainty (k=2) 95%	± 29.8 %
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2. DESCRIPTION OF THE DEVICE UNDER TEST

Device category	Portable
Exposure environment	General population / uncontrolled

Modes and Bands of Operation	GSM	GPRS	EGPRS	BT	WLAN
	850 / 1900	850 / 1900	850 / 1900		
Modulation Mode	GMSK	GMSK	8PSK	GFSK	
Duty Cycle	1/8	1/8, 2/8, 3/8	1/8, 2/8, 3/8		1
Transmitter Frequency Range (MHz)	824 – 849 1850 - 1910	824 – 849 1850 - 1910	824 – 849 1850 - 1910	2402-2480	2412–2462

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM900, GSM1800 and WCDMA2100, which are not part of this filing.

This device has Dual Transfer Mode capability for use at the ear. Therefore, SAR for multi-slot GPRS mode was evaluated against the head profile of the phantom.

2.1 Picture of the Device



2.2 Description of the Antenna

The device has an internal patch antenna.

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	22.0 to 22.4
Ambient humidity (RH %):	38 to 41

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester, except in the case of WLAN2450 for which command instructions were used. Communication between the device and the call tester was established by air link.

The device output power was set to maximum power level for all tests; a fully charged battery was used for every test sequence.

In all operating bands the measurements were performed on lowest, middle and highest channels.

The radiated output power of the device was measured by a separate test laboratory on the same units as used for SAR testing.

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

The measurements were performed using an automated near-field scanning system, DASY4 software version 4.6, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland. The SAR extrapolation algorithm used in all measurements on the device was the 'worst-case extrapolation' algorithm.

The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE V1	372	12 months	2006-08
E-field Probe ET3DV6	1395	12 months	2006-09
E-field Probe ET3DV6	1396	12 months	2006-01
Dipole Validation Kit, D835V2	462	24 months	2006-07
Dipole Validation Kit, D1900V2	5d026	24 months	2007-01
Dipole Validation Kit, D2450V2	749	24 months	2006-06

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SML03	101265	12 months	2006-07
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2006-07
Power Meter	NRVS	849305/028	12 months	2006-07
Power Sensor	NRV-Z32	839176/020	12 months	2006-07
Call Tester	CMU 200	101111	-	-
Call Tester	CMU 200	104983	-	-
Vector Network Analyzer	8753E	US38432928	12 months	2006-10
Dielectric Probe Kit	85070B	US33020420	-	-

4.1.1 Isotropic E-field Probes, type ET3DV6

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., butyl diglycol)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to 3 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic Range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

4.2 Phantoms

The phantom used for all tests i.e. for both system checking and device testing, was the twin-headed "SAM Phantom", manufactured by SPEAG. The phantom conforms to the requirements of IEEE 1528 - 2003.

System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles.

The SPEAG device holder (see Section 5.1) was used to position the device in all tests whilst a tripod was used to position the validation dipoles against the flat section of phantom.

4.3 Tissue Simulants

Recommended values for the dielectric parameters of the tissue simulants are given in IEEE 1528 - 2003 and FCC Supplement C to OET Bulletin 65. All tests were carried out using simulants

whose dielectric parameters were within $\pm 5\%$ of the recommended values. All tests were carried out within 24 hours of measuring the dielectric parameters.

The depth of the tissue simulant was 15.0 ± 0.5 cm measured from the ear reference point during system checking and device measurements.

4.3.1 Tissue Simulant Recipes

The following recipes were used for Head and Body tissue simulants:

800MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	51.50	50.65
Tween 20	47.35	-
Sugar	-	48.21
Preservative	-	0.20
Salt	1.15	0.94

1900MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	54.50	70.25
Tween 20	45.23	29.41
Salt	0.27	0.34

2450MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	56.0	70.2
Tween 20	44.0	29.62
Salt	-	0.18

4.3.2 System Checking

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system checking results (dielectric parameters and SAR values) are given in the table below.

System checking, head tissue simulant

<i>f</i> [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.45	41.8	0.92	
	± 10% window	2.21 – 2.69			
	2005-11-14	2.42	41.0	0.91	21.0
	2005-11-15	2.39	40.9	0.90	21.0
	2005-11-21	2.41	40.6	0.90	21.0
1900	Reference result	9.49	39.5	1.46	
	± 10% window	8.54 – 10.44			
	2005-11-08	9.42	38.3	1.41	21.0
	2005-11-09	10.7	38.1	1.41	21.0
	2005-11-14	10.1	38.3	1.42	21.0
2450	Reference result	13.5	38.5	1.86	
	± 10% window	12.2 – 14.8			
	2005-11-10	14.5	37.9	1.87	21.0
	2005-11-11	14.3	37.7	1.85	21.0

System checking, body tissue simulant

<i>f</i> [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
850	Reference result	2.45	54.6	0.99	
	± 10% window	2.21 – 2.69			
	2005-11-18	2.42	54.5	0.95	21.0
2450	Reference result	13.2	51.5	2.00	
	± 10% window	11.9 – 14.5			
	2005-11-22	14.2	52.1	2.03	21.0
	2005-11-23	14.0	52.0	2.03	21.0

Plots of the system checking scans are given in Appendix A.

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2005-11-14	40.9	0.91	21.0
	2005-11-15	40.9	0.91	21.0
	2005-11-21	40.6	0.91	21.0
1880	Recommended value	40.0	1.40	
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2005-11-08	38.4	1.40	21.0
	2005-11-09	38.2	1.39	21.0
	2005-11-14	38.4	1.41	21.0
2442	Recommended value	39.2	1.79	
	$\pm 5\%$ window	37.3 – 41.2	1.70 – 1.88	
	2005-11-10	38.0	1.86	21.0
	2005-11-11	37.7	1.84	21.0

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	55.2	0.97	
	$\pm 5\%$ window	52.4 – 58.0	0.92 – 1.02	
	2005-11-18	54.5	0.96	21.0
1880	Recommended value	53.3	1.52	
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2005-11-09	53.4	1.51	21.0
2442	Recommended value	52.7	1.94	
	$\pm 5\%$ window	50.1 – 55.3	1.85 – 2.04	
	2005-11-22	52.1	2.02	21.0
	2005-11-23	52.0	2.02	21.0

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the Dasy system.



Device holder supplied by SPEAG

A Nokia designed spacer (illustrated below) was used to position the device within the SPEAG holder. The spacer positions the device so that the holder has minimal effect on the test results but still holds the device securely. The spacer was removed before the tests.



Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2003 “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”.



Photo of the closed device in "cheek" position



Photo of the closed device in "tilt" position



Photo of the open device in "cheek" position



Photo of the open device in "tilt" position

5.2.2 Body Worn Configuration

The device was placed in the SPEAG holder using the Nokia spacer and placed below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance indicated in the photo below using a separate flat spacer that was removed before the start of the measurements. The device was oriented with its antenna facing the phantom since this orientation gives higher results.



Photo of the device positioned for Body SAR measurement.
The spacer was removed for the tests.

5.3 Scan Procedures

First, area scans were used for determination of the field distribution. Next, a zoom scan, a minimum of 5x5x7 points covering a volume of at least 30x30x30mm, was performed around the highest E-field value to determine the averaged SAR value. Drift was determined by measuring the same point at the start of the area scan and again at the end of the zoom scan.

5.4 SAR Averaging Methods

The maximum SAR value was averaged over a cube of tissue using interpolation and extrapolation.

The interpolation, extrapolation and maximum search routines within Dasy4 are all based on the modified Quadratic Shepard's method (Robert J. Renka, "Multivariate Interpolation Of Large Sets Of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988, pp. 139-148).

The interpolation scheme combines a least-square fitted function method with a weighted average method. A trivariate 3-D / bivariate 2-D quadratic function is computed for each measurement point and fitted to neighbouring points by a least-square method. For the zoom scan, inverse distance weighting is incorporated to fit distant points more accurately. The interpolating function is finally calculated as a weighted average of the quadratics.

In the zoom scan, the interpolation function is used to extrapolate the Peak SAR from the deepest measurement points to the inner surface of the phantom.

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

Uncertainty Component	Section in IEEE 1528	Tol. (%)	Prob Dist	Div	C_i	$C_i \cdot U_i$ (%)	V_i
Measurement System							
Probe Calibration	E2.1	±5.8	N	1	1	±5.8	∞
Axial Isotropy	E2.2	±4.7	R	√3	$(1-c_p)^{1/2}$	±1.9	∞
Hemispherical Isotropy	E2.2	±9.6	R	√3	$(c_p)^{1/2}$	±3.9	∞
Boundary Effect	E2.3	±8.3	R	√3	1	±4.8	∞
Linearity	E2.4	±4.7	R	√3	1	±2.7	∞
System Detection Limits	E2.5	±1.0	R	√3	1	±0.6	∞
Readout Electronics	E2.6	±1.0	N	1	1	±1.0	∞
Response Time	E2.7	±0.8	R	√3	1	±0.5	∞
Integration Time	E2.8	±2.6	R	√3	1	±1.5	∞
RF Ambient Conditions - Noise	E6.1	±3.0	R	√3	1	±1.7	∞
RF Ambient Conditions - Reflections	E6.1	±3.0	R	√3	1	±1.7	∞
Probe Positioner Mechanical Tolerance	E6.2	±0.4	R	√3	1	±0.2	∞
Probe Positioning with respect to Phantom Shell	E6.3	±2.9	R	√3	1	±1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E5.2	±3.9	R	√3	1	±2.3	∞
Test sample Related							
Test Sample Positioning	E4.2.1	±6.0	N	1	1	±6.0	11
Device Holder Uncertainty	E4.1.1	±5.0	N	1	1	±5.0	7
Output Power Variation - SAR drift measurement	6.6.3	±10.0	R	√3	1	±5.8	∞
Phantom and Tissue Parameters							
Phantom Uncertainty (shape and thickness tolerances)	E3.1	±4.0	R	√3	1	±2.3	∞
Conductivity Target - tolerance	E3.2	±5.0	R	√3	0.64	±1.8	∞
Conductivity - measurement uncertainty	E3.3	±5.5	N	1	0.64	±3.5	5
Permittivity Target - tolerance	E3.2	±5.0	R	√3	0.6	±1.7	∞
Permittivity - measurement uncertainty	E3.3	±2.9	N	1	0.6	±1.7	5
Combined Standard Uncertainty			RSS			±14.9	206
Coverage Factor for 95%			k=2				
Expanded Standard Uncertainty						±29.8	

7. RESULTS

The measured Head SAR values for the test device are tabulated below:

850MHz, Head SAR results

Slide	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Power		28.9 dBm	28.2 dBm	28.7 dBm
Closed	Left	Cheek	-	0.289	-
2-slot GPRS	Power		28.5 dBm	28.0 dBm	28.2 dBm
Closed	Left	Cheek	-	0.576	-
3-slot GPRS	Power		27.6 dBm	27.9 dBm	28.5 dBm
Closed	Left	Cheek	0.519	0.649	0.761
		Tilt	-	0.596	-
	Right	Cheek	0.569	0.634	0.807
		Tilt	-	0.561	-
3-slot GPRS	Power		26.8 dBm	26.1 dBm	26.4 dBm
Open	Left	Cheek	-	0.397	-
		Tilt	-	0.222	-
	Right	Cheek	0.371	0.436	0.556
		Tilt	-	0.229	-
Closed	Right cheek repeated with MU-card		-	-	0.771
Closed	Right cheek repeated with BT active		-	-	0.814
3-slot EGPRS	Power		23.8 dBm	22.0 dBm	20.3 dBm
Closed	Right cheek		-	-	0.147

1900MHz, Head SAR results

Slide	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM	Power		29.9 dBm	30.5 dBm	27.9 dBm
Closed	Left	Cheek	-	0.155	-
2-slot GPRS	Power		29.5 dBm	30.2 dBm	27.9 dBm
Closed	Left	Cheek	0.258	0.259	-
3-slot GPRS	Power		28.2 dBm	29.1 dBm	26.6 dBm
Closed	Left	Cheek	0.298	0.272	0.177
		Tilt	-	0.212	-
	Right	Cheek	-	0.197	-
		Tilt	-	0.127	-
3-slot GPRS	Power		28.6 dBm	29.4 dBm	27.7 dBm
Open	Left	Cheek	-	0.135	-
		Tilt	0.158	0.152	0.169
	Right	Cheek	-	0.073	-
		Tilt	-	0.076	-
Closed	Left cheek repeated with MU-card		0.301	-	-
Closed	Left cheek with MU-card repeated with BT active		0.286	-	-
3-slot EGPRS	Power		25.6 dBm	25.5 dBm	22.8 dBm
Closed	Left cheek repeated with MU-card		0.093	-	-

2450MHz, Head SAR results

Slide	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN	Power		16.6 dBm	17.5 dBm	17.2 dBm
Closed	Left	Cheek	0.048	0.078	0.057
		Tilt	-	0.033	-
	Right	Cheek	-	0.047	-
		Tilt	-	0.023	-
WLAN	Power		18.5 dBm	19.1 dBm	18.6 dBm
Open	Left	Cheek	-	0.049	-
		Tilt	-	0.051	-
	Right	Cheek	0.072	0.074	0.067
		Tilt	-	0.036	-
Closed	Left cheek repeated with MU-card		-	0.069	-
Open	Right cheek repeated with MU-card		-	0.073	-

The measured Body SAR values for the test device are tabulated below:

850MHz, Body SAR results

Slide	Test configuration With 2.2cm	SAR, averaged over 1g (W/kg)		
		Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
3-slot GPRS	Power	27.6 dBm	27.9 dBm	28.5 dBm
Closed	Without headset	0.666	0.847	1.03
	Headset HS-23	0.547	0.539	0.583
Closed	Without headset, with MU-card	-	-	1.03
Closed	Without headset, with BT active	-	-	1.03

1900MHz, Body SAR results

Slide	Test configuration With 2.2cm	SAR, averaged over 1g (W/kg)		
		Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
3-slot GPRS	Power	28.2 dBm	29.1 dBm	26.6 dBm
Closed	Without headset	0.362	0.441	0.410
	Headset HS-23	0.399	0.510	0.447
Closed	With HS-23 repeated with MU-card	-	0.481	-
Closed	With HS-23 repeated with BT active	-	0.461	-

2450MHz, Body SAR results

Slide	Test configuration With 2.2cm	SAR, averaged over 1g (W/kg)		
		Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
	Power	16.6 dBm	17.5 dBm	17.2 dBm
Closed	Without headset	0.015	0.015	0.020
	Headset HS-23	0.014	0.017	0.018
Closed	Without headset repeated with MU-card	-	-	0.021

Simultaneous transmissions: Combined SAR results

Slide	Test configuration	Max. 1g SAR results			Combined 1g SAR values	
		WLAN	850MHz band	1900MHz band	WLAN + 850MHz band	WLAN + 1900MHz band
Closed	Head: Left, Cheek	0.078	0.761	0.301	0.839	0.379
	Head: Left, Tilt	0.033	0.596	0.212	0.629	0.245
	Head: Right, Cheek	0.047	0.814	0.197	0.861	0.244
	Head: Right, Tilt	0.023	0.561	0.127	0.584	0.150
Open	Head: Left, Cheek	0.049	0.397	0.135	0.446	0.185
	Head: Left, Tilt	0.051	0.222	0.169	0.273	0.220
	Head: Right, Cheek	0.074	0.556	0.073	0.630	0.147
	Head: Right, Tilt	0.036	0.229	0.076	0.265	0.113
Closed	Body: With Headset	0.018	0.583	0.510	0.601	0.528
	Body: Without Headset	0.021	1.03	0.441	1.05	0.462

Combining the maximum SAR values of WLAN2450 and the cellular bands tends to overestimate the SAR value since their maxima do not necessarily occur in the same location.

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2005-11-14 21:08:54

Test Laboratory: TCC Nokia

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462, Program Name: System Check

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.906 \text{ mho/m}$; $\epsilon_r = 41$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=21.8 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.59 mW/g

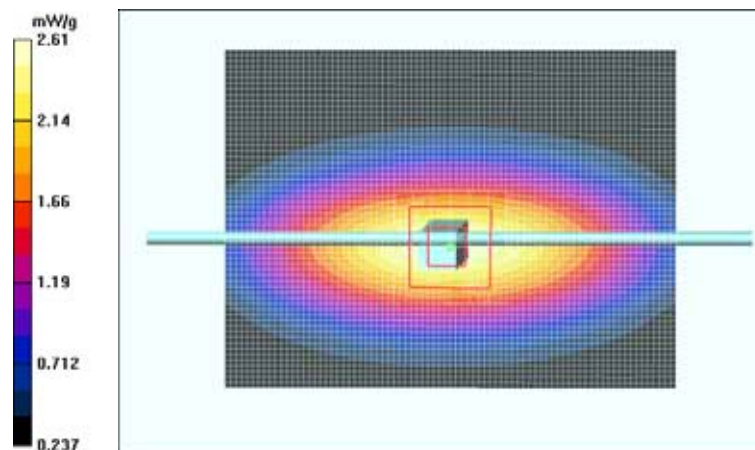
d=15mm, Pin=250mW, t=21.8 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.0 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.42 mW/g; SAR(10 g) = 1.58 mW/g

Maximum value of SAR (measured) = 2.61 mW/g



Date/Time: 2005-11-15 07:02:34

Test Laboratory: TCC Nokia

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462, Program Name: System Check

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.903 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=21.5 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.56 mW/g

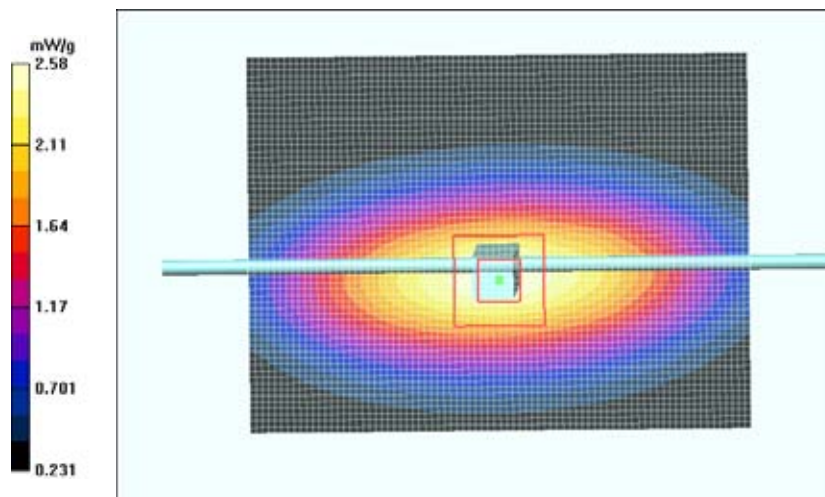
d=15mm, Pin=250mW, t=21.5 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.5 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.56 mW/g

Maximum value of SAR (measured) = 2.58 mW/g



Date/Time: 2005-11-21 08:38:13

Test Laboratory: TCC Nokia

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462, Program Name: System Check

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.903 \text{ mho/m}$; $\epsilon_r = 40.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=20.5 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.59 mW/g

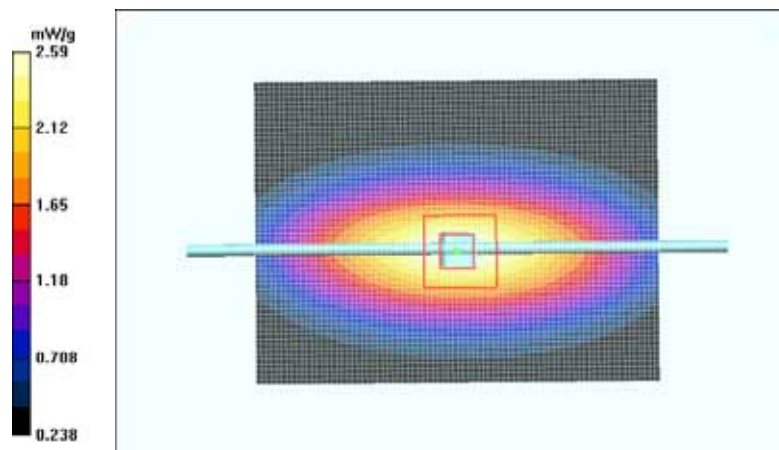
d=15mm, Pin=250mW, t=20.5 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.2 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 2.41 mW/g; SAR(10 g) = 1.57 mW/g

Maximum value of SAR (measured) = 2.59 mW/g



Date/Time: 2005-11-08 19:25:17

Test Laboratory: TCC Nokia

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d026, Program Name: System Check

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

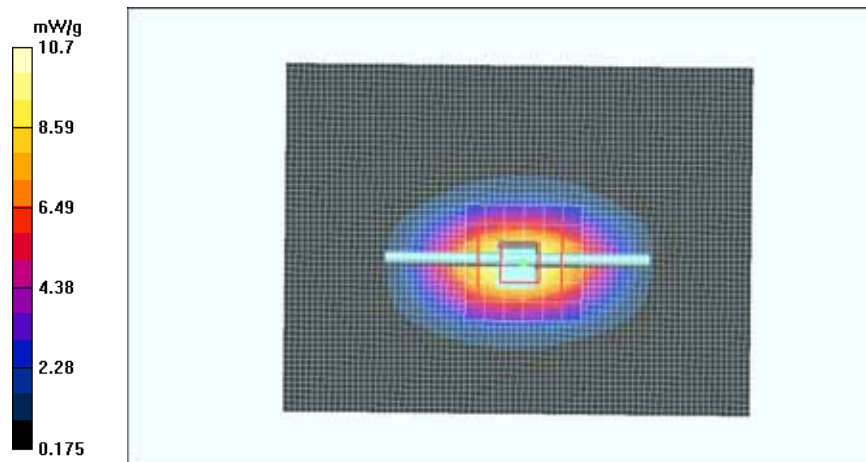
d=15mm, Pin=247mW, t=21.0 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 10.7 mW/g

d=15mm, Pin=247mW, t=21.0 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.0 V/m; Power Drift = 0.428 dB

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 9.42 mW/g; SAR(10 g) = 4.91 mW/g

Maximum value of SAR (measured) = 10.7 mW/g



Date/Time: 2005-11-09 07:51:49

Test Laboratory: TCC Nokia

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d026, Program Name: System Check

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=21.7 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.8 mW/g

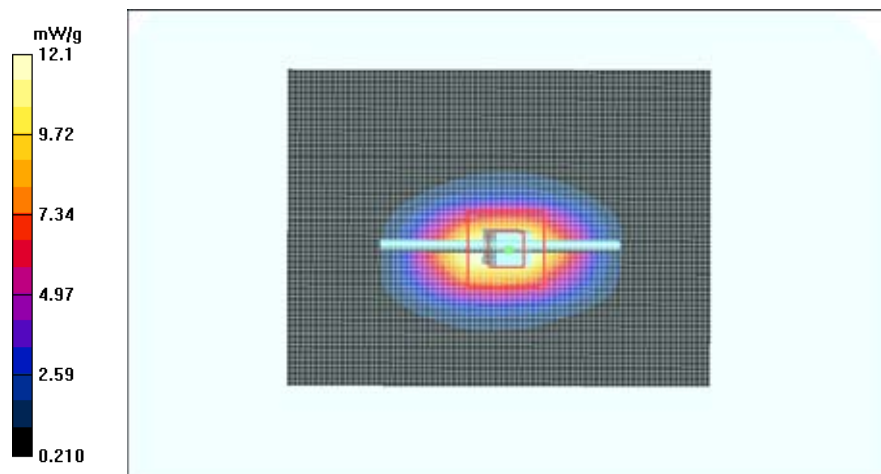
d=15mm, Pin=250mW, t=21.7 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.6 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 18.6 W/kg

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.6 mW/g

Maximum value of SAR (measured) = 12.1 mW/g



Date/Time: 2005-11-14 12:49:35

Test Laboratory: TCC Nokia

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d026, Program Name: System Check

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(5.25, 5.25, 5.25); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=21.1 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.4 mW/g

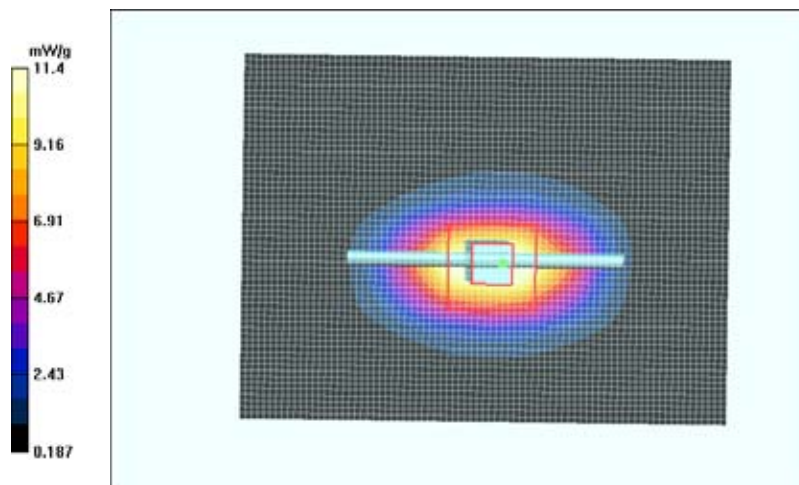
d=15mm, Pin=250mW, t=21.1 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.4 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.36 mW/g

Maximum value of SAR (measured) = 11.4 mW/g



Date/Time: 2005-11-10 12:37:30

Test Laboratory: TCC Nokia

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749, Program Name: System Check

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 37.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

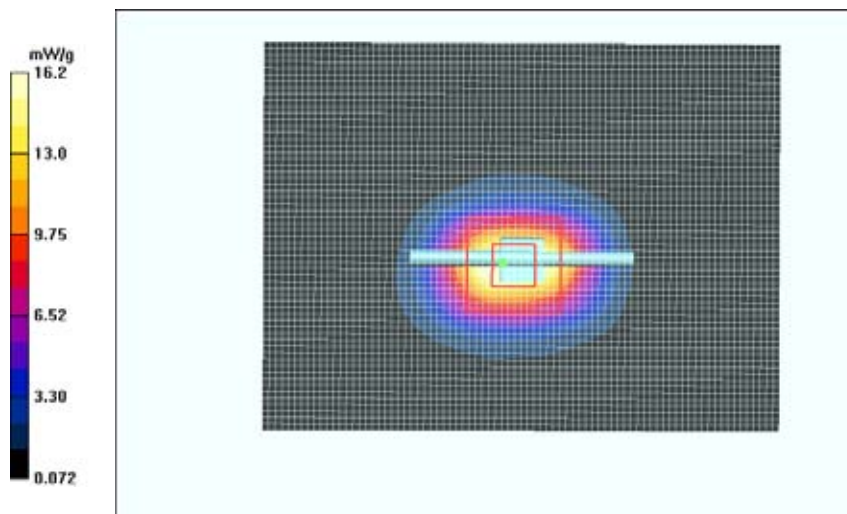
d=15mm, Pin=250mW, t=21.2 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 17.5 mW/g

d=15mm, Pin=250mW, t=21.2 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.5 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 32.2 W/kg

SAR(1 g) = 14.5 mW/g; SAR(10 g) = 6.58 mW/g

Maximum value of SAR (measured) = 16.2 mW/g



Date/Time: 2005-11-11 07:27:24

Test Laboratory: TCC Nokia

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749

Program Name: System Check

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.85$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW, t=21.2 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 17.2 mW/g

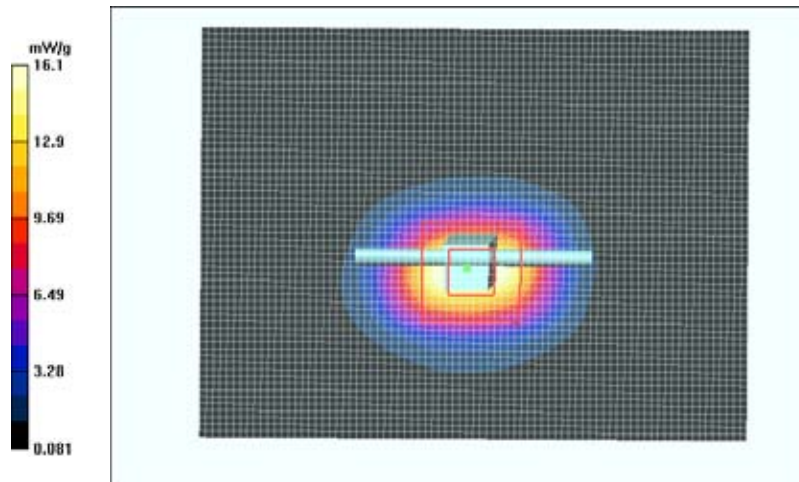
d=15mm, Pin=250mW, t=21.2 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.8 V/m; Power Drift = 0.066 dB

Peak SAR (extrapolated) = 30.6 W/kg

SAR(1 g) = 14.3 mW/g; SAR(10 g) = 6.59 mW/g

Maximum value of SAR (measured) = 16.1 mW/g



Date/Time: 2005-11-18 11:04:09

Test Laboratory: TCC Nokia

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462, Program Name: System Check

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.954 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.62, 6.62, 6.62); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

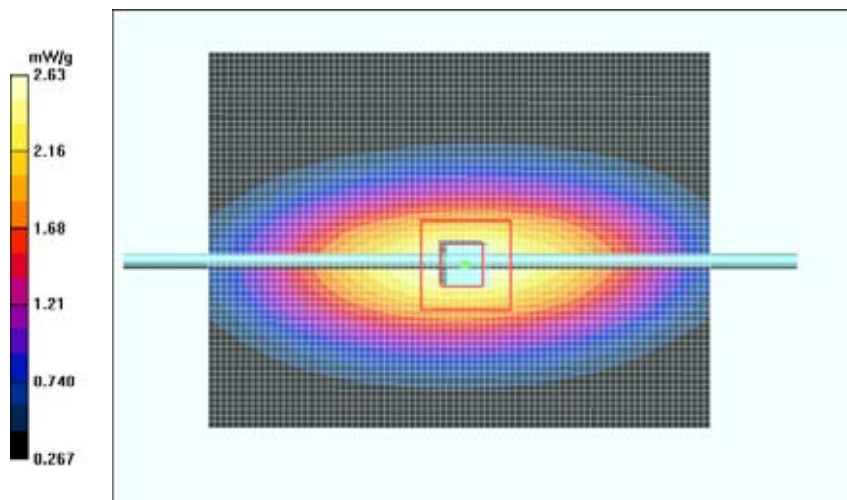
d=15mm, Pin=250mW, t=21.8 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.59 mW/g

d=15mm, Pin=250mW, t=21.8 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.2 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 3.49 W/kg

SAR(1 g) = 2.42 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.63 mW/g



Date/Time: 2005-11-22 15:13:02

Test Laboratory: TCC Nokia

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749, Program Name: System Check

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.18, 4.18, 4.18); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=252mW, t=21.0 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 16.4 mW/g

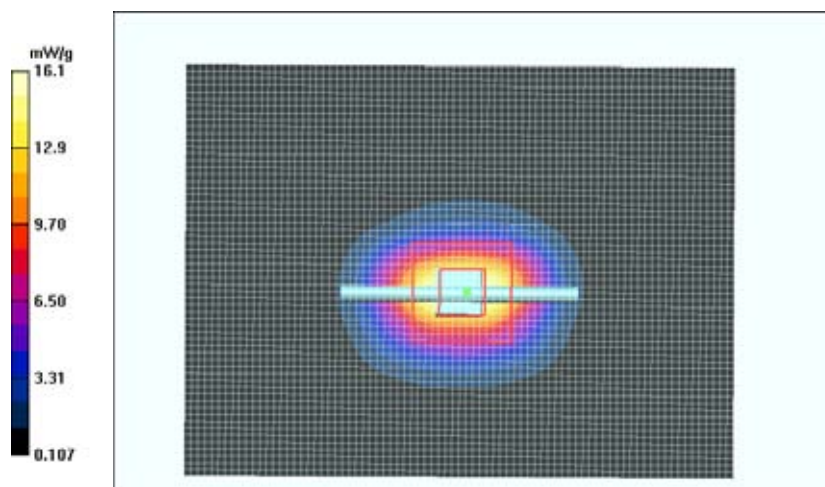
d=15mm, Pin=252mW, t=21.0 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.9 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 31.3 W/kg

SAR(1 g) = 14.2 mW/g; SAR(10 g) = 6.53 mW/g

Maximum value of SAR (measured) = 16.1 mW/g



Date/Time: 2005-11-23 07:47:50

Test Laboratory: TCC Nokia

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749, Program Name: System Check

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 52$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.18, 4.18, 4.18); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=252mW, t=21.5 C/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 16.4 mW/g

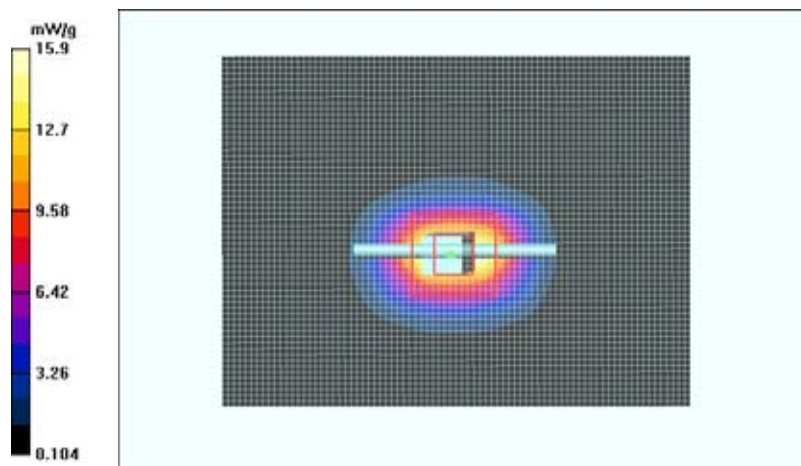
d=15mm, Pin=252mW, t=21.5 C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.9 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 14 mW/g; SAR(10 g) = 6.45 mW/g

Maximum value of SAR (measured) = 15.9 mW/g



APPENDIX B: MEASUREMENT SCANS

Date/Time: 2005-11-14 22:03:15

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.8 C, Slide closed

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 837$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.316 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

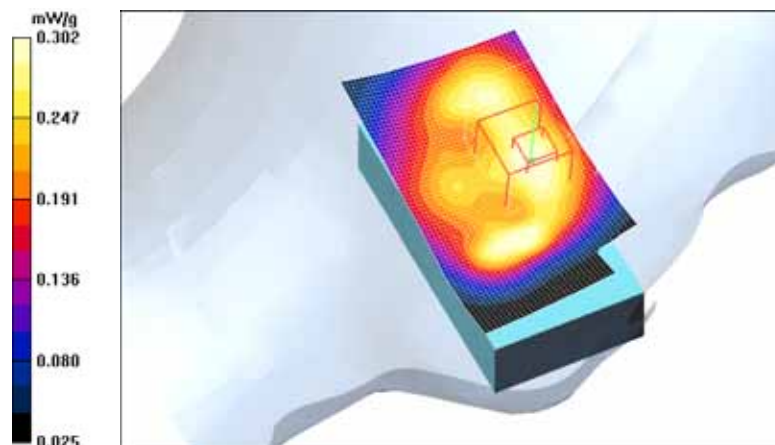
Reference Value = 16.8 V/m; Power Drift = -0.096 dB

Peak SAR (extrapolated) = 0.545 W/kg

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.191 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

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



Date/Time: 2005-11-14 22:28:24

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.7 C, Slide closed

Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 837$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.618 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.7 V/m; Power Drift = -0.294 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.576 mW/g; SAR(10 g) = 0.346 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.672 mW/g

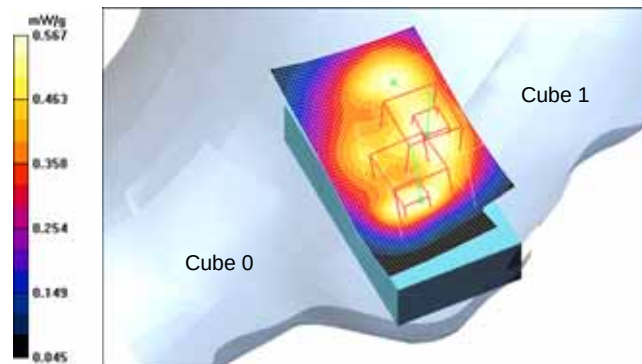
Cheek position/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.7 V/m; Power Drift = -0.294 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.541 mW/g; SAR(10 g) = 0.354 mW/g

Maximum value of SAR (measured) = 0.567 mW/g



Date/Time: 2005-11-15 14:00:11

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.0 C, Slide closed

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 25.0 V/m; Power Drift = -0.329 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.761 mW/g; SAR(10 g) = 0.443 mW/g

Maximum value of SAR (measured) = 0.921 mW/g

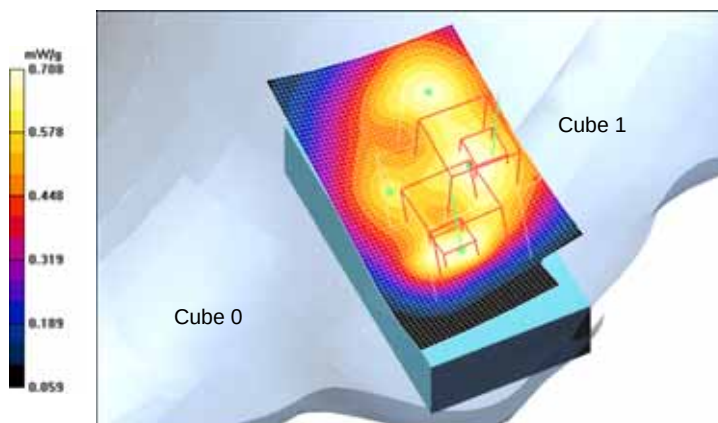
Cheek position/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 25.0 V/m; Power Drift = -0.329 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.666 mW/g; SAR(10 g) = 0.436 mW/g

Maximum value of SAR (measured) = 0.708 mW/g



Date/Time: 2005-11-15 07:34:50

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.6 C, Slide closed

Communication System: 3-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 837$ MHz; $\sigma = 0.906$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.664 mW/g

Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

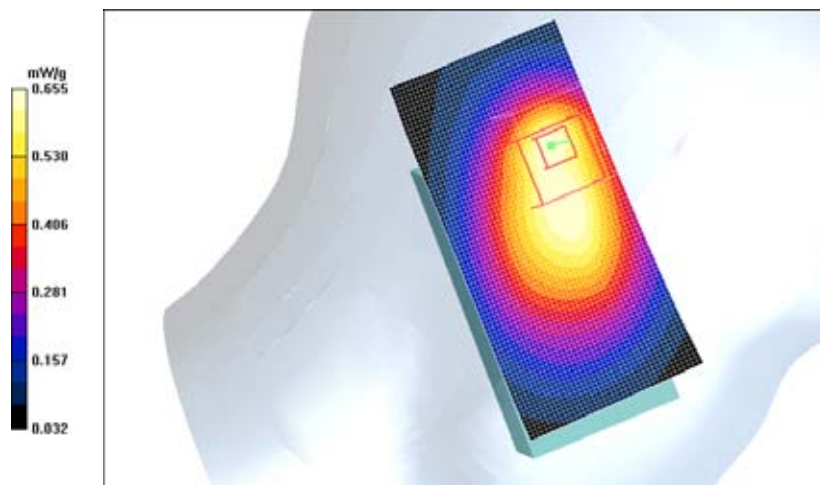
Reference Value = 23.9 V/m; Power Drift = -0.107 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.596 mW/g; SAR(10 g) = 0.387 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.655 mW/g



Date/Time: 2005-11-15 12:47:41

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.0 C, Slide closed

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.903 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.2 V/m; Power Drift = -0.239 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.807 mW/g; SAR(10 g) = 0.536 mW/g

Maximum value of SAR (measured) = 0.820 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

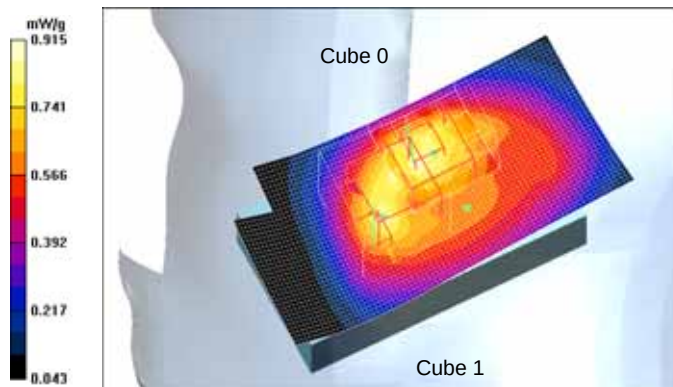
Reference Value = 26.2 V/m; Power Drift = -0.239 dB

Peak SAR (extrapolated) = 1.99 W/kg

SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.478 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.915 mW/g



Date/Time: 2005-11-15 10:07:10

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.6 C, Slide closed

Communication System: 3-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 837$ MHz; $\sigma = 0.906$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.605 mW/g

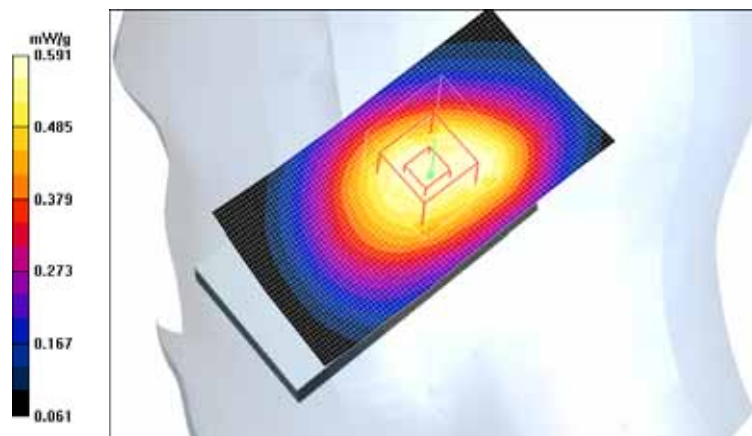
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 24.9 V/m; Power Drift = -0.280 dB

Peak SAR (extrapolated) = 0.786 W/kg

SAR(1 g) = 0.561 mW/g; SAR(10 g) = 0.403 mW/g

Maximum value of SAR (measured) = 0.591 mW/g



Date/Time: 2005-11-15 07:57:20

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=21.0 C, Slide open

Communication System: 3-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 837$ MHz; $\sigma = 0.906$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.426 mW/g

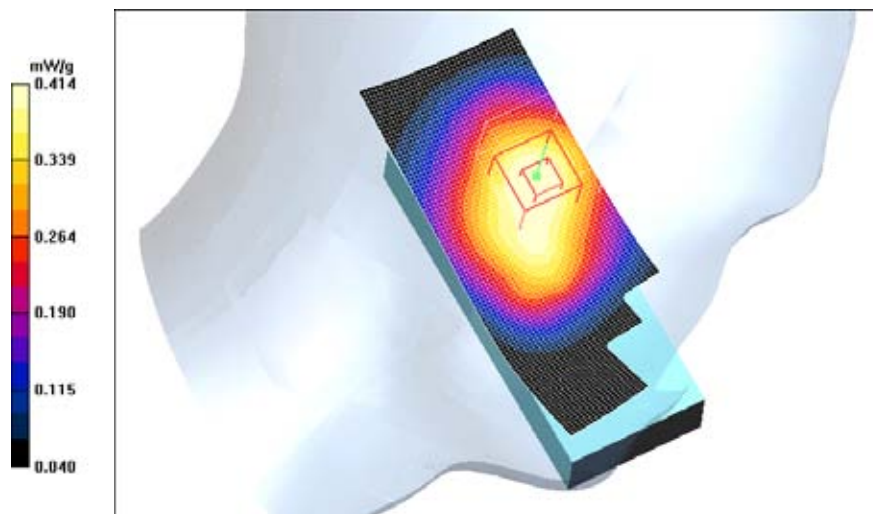
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 16.0 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.672 W/kg

SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.284 mW/g

Maximum value of SAR (measured) = 0.414 mW/g



Date/Time: 2005-11-15 08:44:23

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.9 C, Slide open

Communication System: 3-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 837$ MHz; $\sigma = 0.906$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.239 mW/g

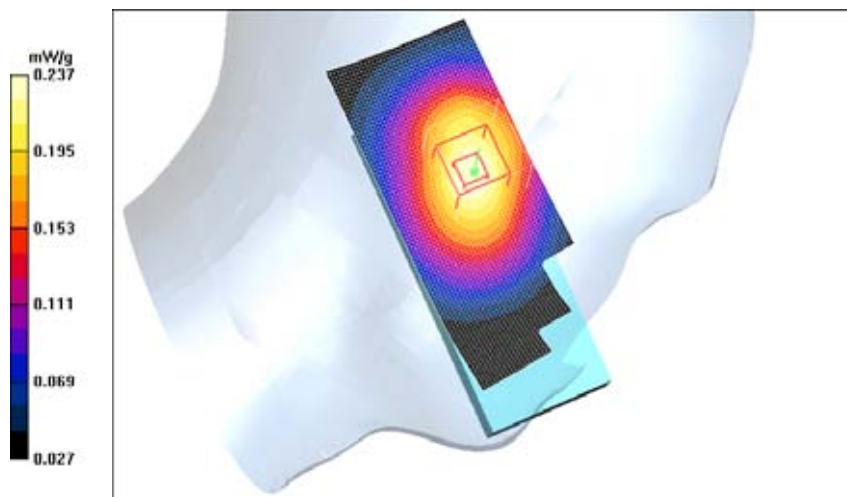
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.195 dB

Peak SAR (extrapolated) = 0.322 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.156 mW/g

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



Date/Time: 2005-11-15 11:56:16

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.5 C, Slide open

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.587 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

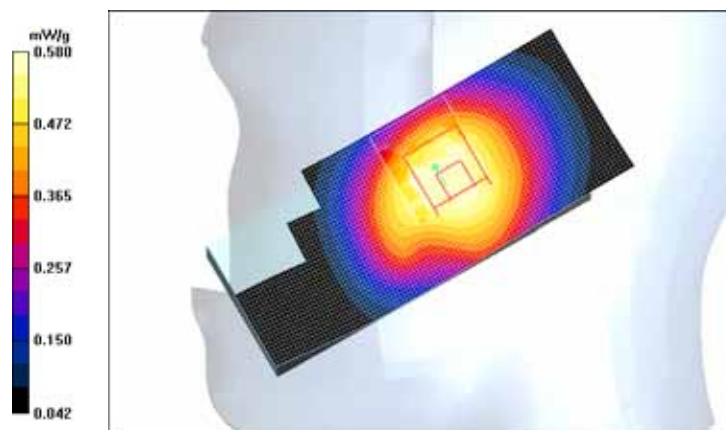
Reference Value = 17.6 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 0.830 W/kg

SAR(1 g) = 0.556 mW/g; SAR(10 g) = 0.406 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.580 mW/g



Date/Time: 2005-11-15 10:55:08

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.3 C, Slide open

Communication System: 3-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 837$ MHz; $\sigma = 0.906$ mho/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.243 mW/g

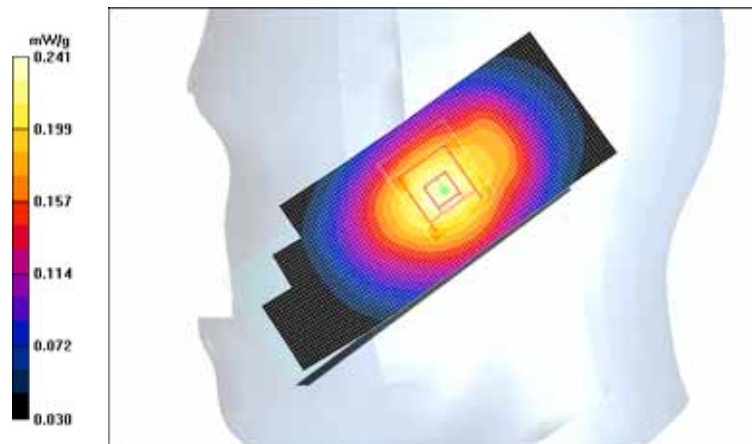
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.7 V/m; Power Drift = -0.139 dB

Peak SAR (extrapolated) = 0.329 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.241 mW/g



Date/Time: 2005-11-15 14:31:04

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=19.9 C, Slide closed, with MU-card

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.847 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.0 V/m; Power Drift = -0.380 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.771 mW/g; SAR(10 g) = 0.511 mW/g

Maximum value of SAR (measured) = 0.783 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

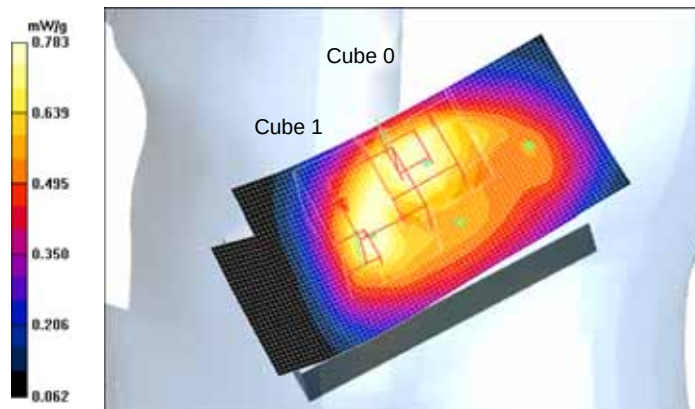
Reference Value = 26.0 V/m; Power Drift = -0.380 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 0.759 mW/g; SAR(10 g) = 0.456 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

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



Date/Time: 2005-11-15 15:29:58

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=19.9 C, Slide closed, BT

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.918 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.6 V/m; Power Drift = -0.303 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 0.814 mW/g; SAR(10 g) = 0.543 mW/g

Maximum value of SAR (measured) = 0.829 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

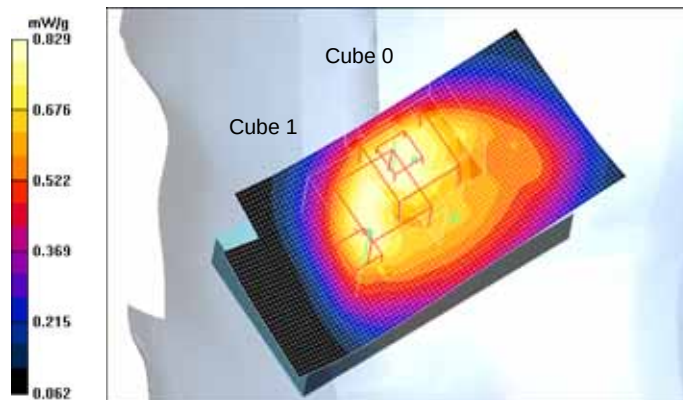
Reference Value = 26.6 V/m; Power Drift = -0.303 dB

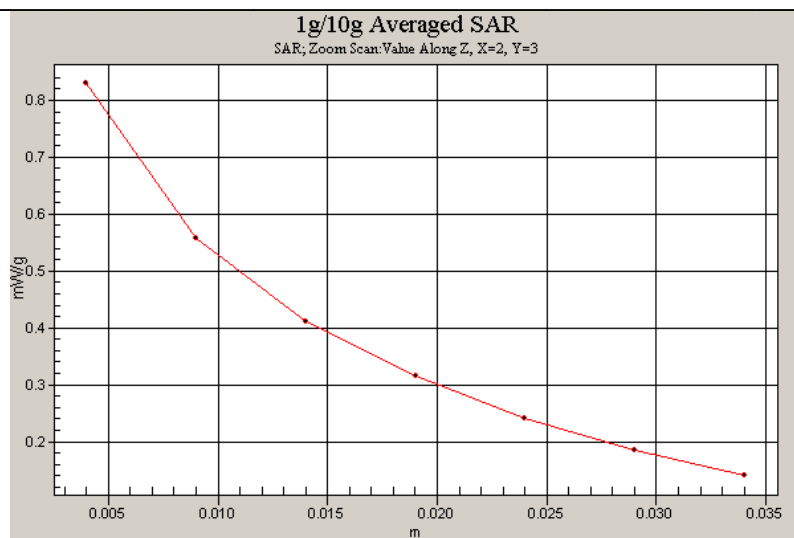
Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 0.778 mW/g; SAR(10 g) = 0.483 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

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





Date/Time: 2005-11-21 12:55:29

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=21.0 C, Slide closed

Communication System: 3-slot EGPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.912$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.87, 6.87, 6.87); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.160 mW/g

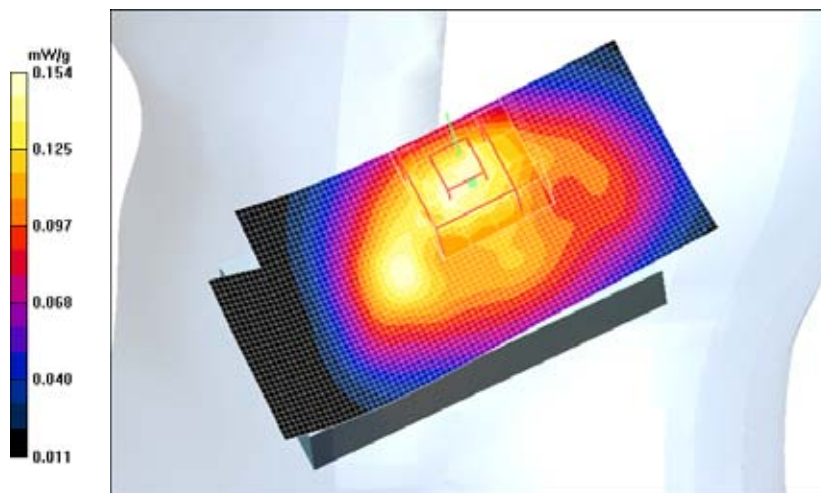
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.247 dB

Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.154 mW/g



Date/Time: 2005-11-08 20:05:46

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.9 C, Slide closed

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

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

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

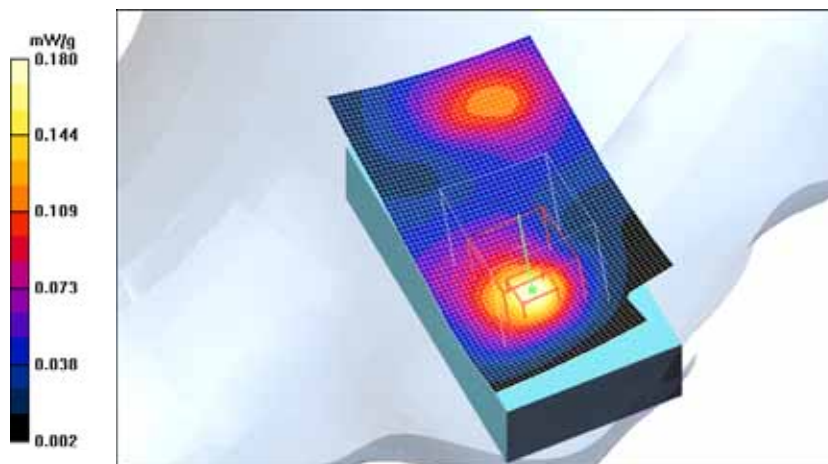
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.27 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.290 W/kg

SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.080 mW/g

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



Date/Time: 2005-11-08 20:24:28

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.8 C, Slide closed

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.317 mW/g

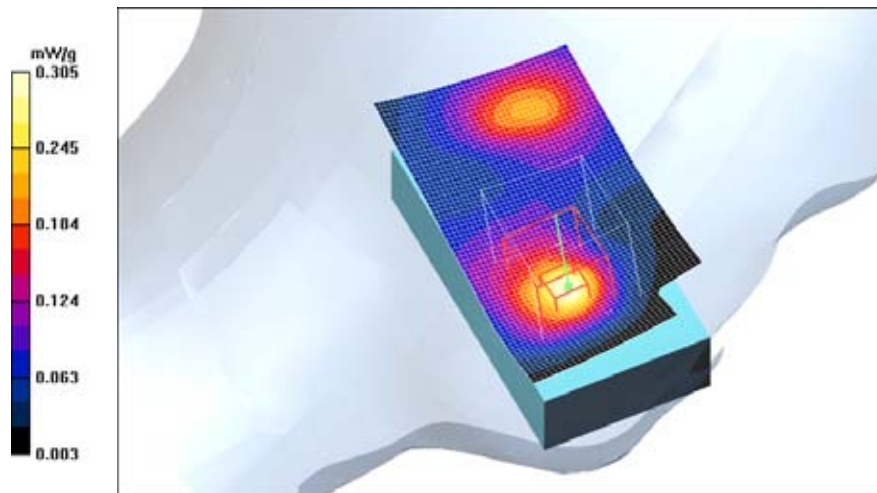
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.4 V/m; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.134 mW/g

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



Date/Time: 2005-11-09 11:48:46

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=21.0 C, Slide closed

Communication System: 3-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.8

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

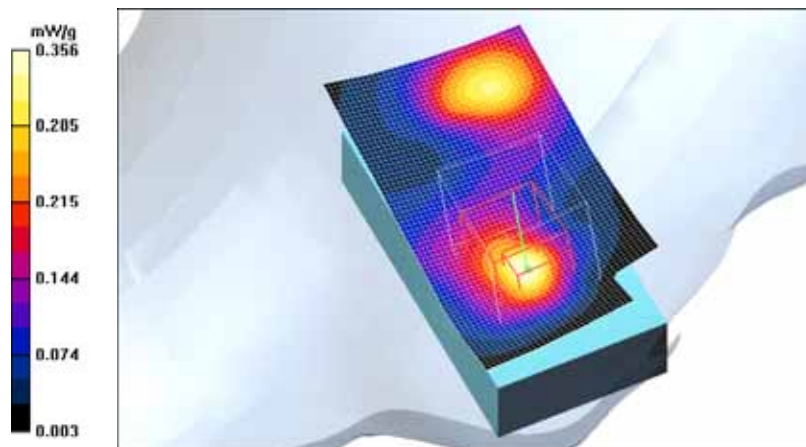
Reference Value = 12.9 V/m; Power Drift = -0.179 dB

Peak SAR (extrapolated) = 0.561 W/kg

SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.157 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



Date/Time: 2005-11-09 08:57:24

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=21.1 C, Slide closed

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.234 mW/g

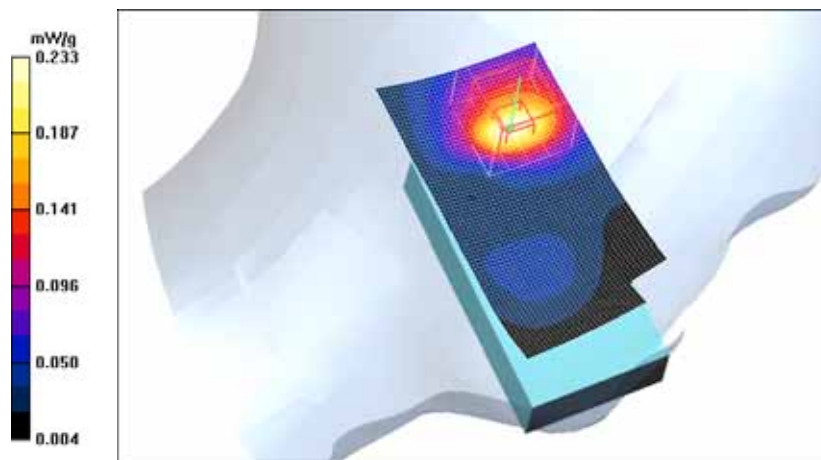
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.260 dB

Peak SAR (extrapolated) = 0.407 W/kg

SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.233 mW/g



Date/Time: 2005-11-09 10:05:42

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.8 C, Slide closed

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.198 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

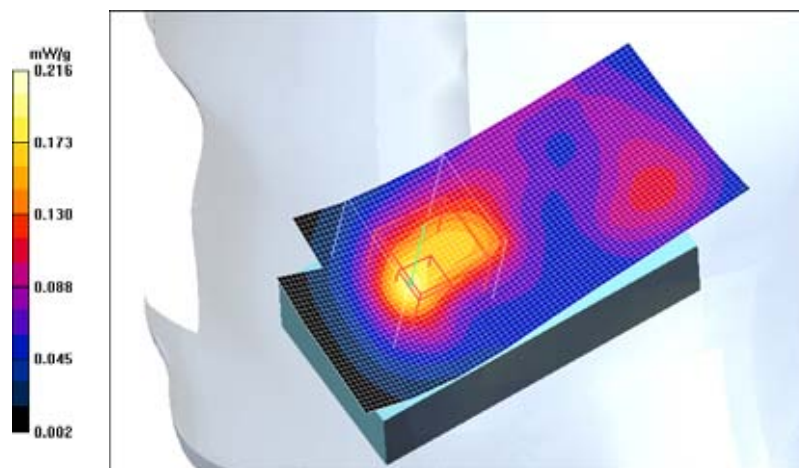
Reference Value = 9.04 V/m; Power Drift = -0.361 dB

Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.116 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.216 mW/g



Date/Time: 2005-11-09 10:25:50

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.9 C, Slide closed

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.143 mW/g

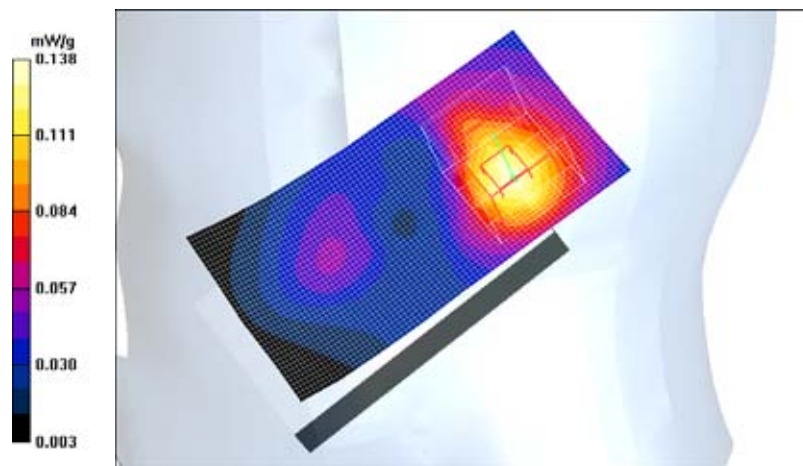
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.35 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.076 mW/g

Maximum value of SAR (measured) = 0.138 mW/g



Date/Time: 2005-11-09 09:20:20

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=21.1 C, Slide open

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.39 \text{ mho/m}$; $\epsilon_r = 38.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.128 mW/g

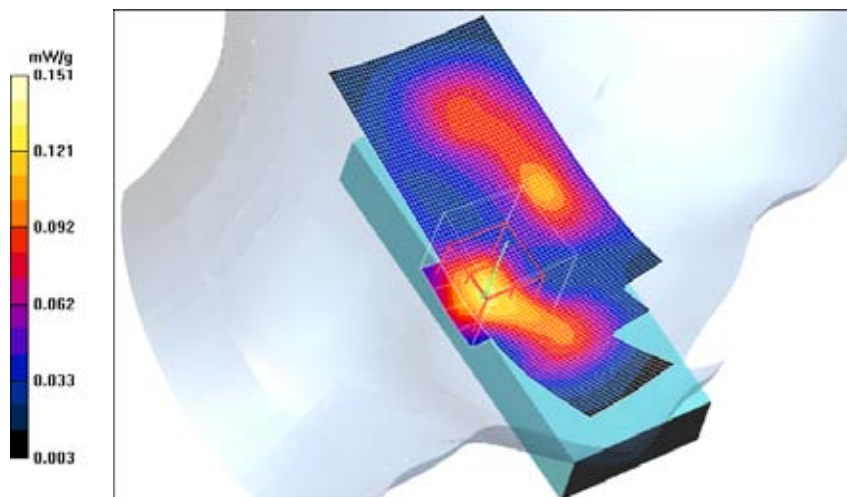
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.02 V/m; Power Drift = -0.245 dB

Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.071 mW/g

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



Date/Time: 2005-11-09 12:35:15

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.3 C, Slide open

Communication System: 3-slot GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.200 mW/g

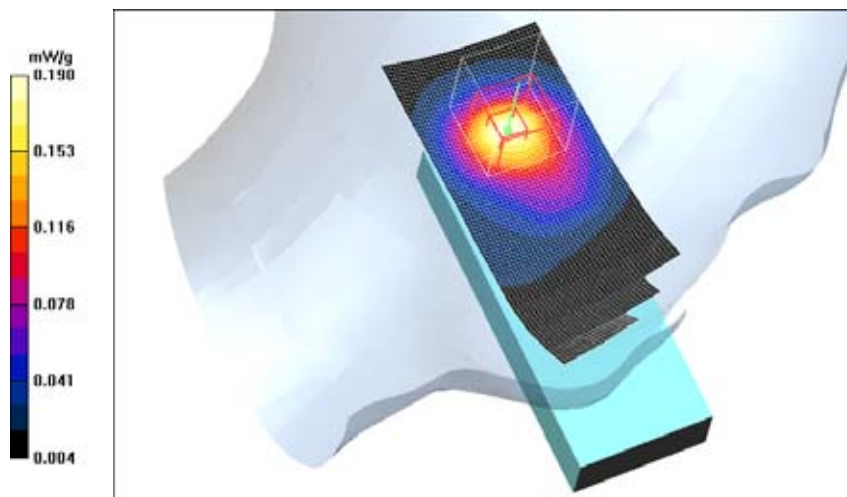
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.6 V/m; Power Drift = -0.345 dB

Peak SAR (extrapolated) = 0.259 W/kg

SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.190 mW/g



Date/Time: 2005-11-09 10:46:19

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.8 C, Slide open

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.079 mW/g

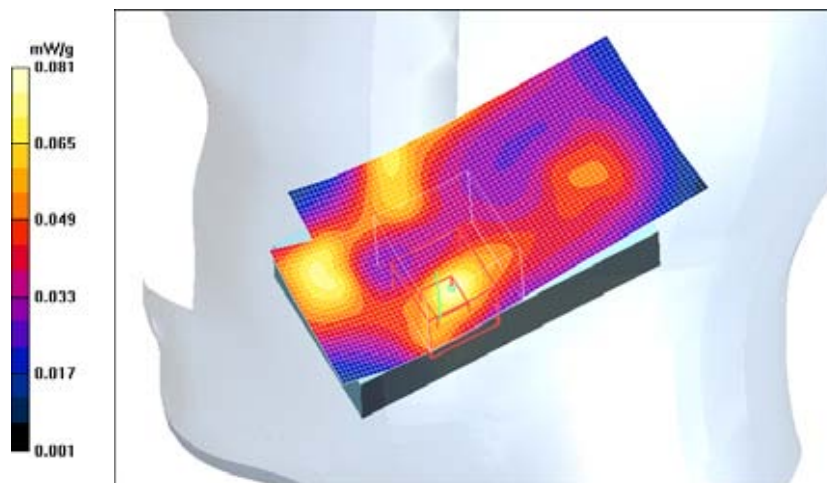
Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.72 V/m; Power Drift = -0.216 dB

Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.081 mW/g



Date/Time: 2005-11-09 10:59:38

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.7 C, Slide open

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.085 mW/g

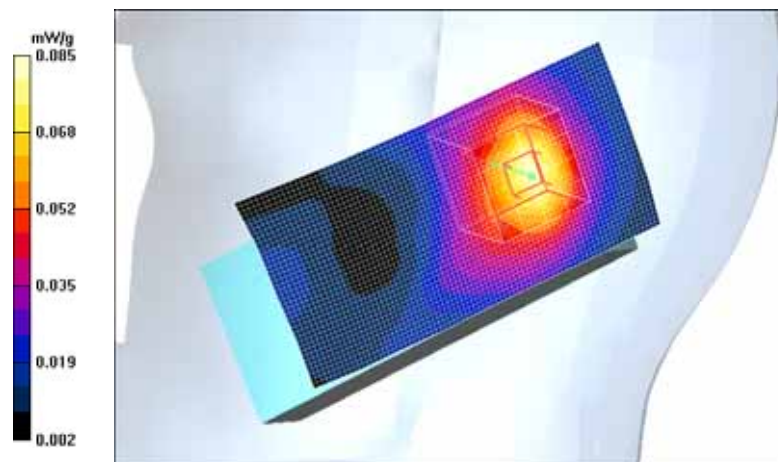
Tilt position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.53 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.118 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.085 mW/g



Date/Time: 2005-11-09 13:18:20

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.2 C, Slide closed, with MU-card

Communication System: 3-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.8

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.378 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

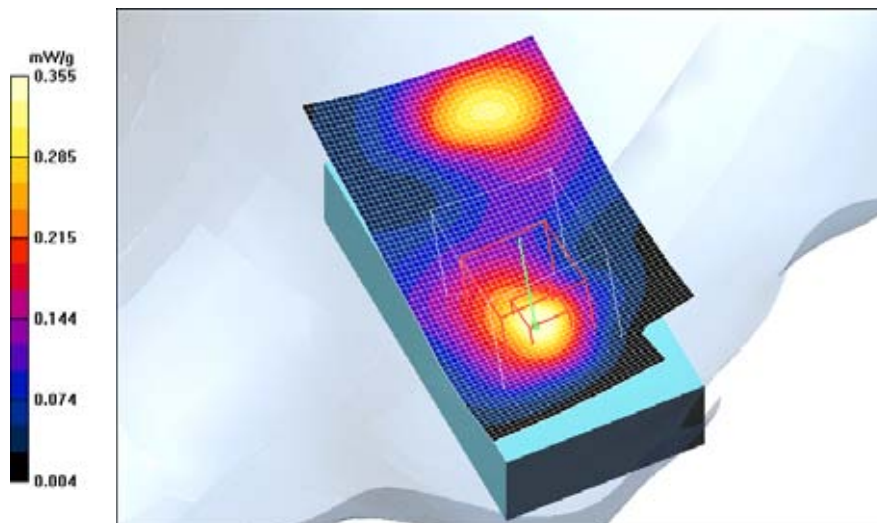
Reference Value = 13.6 V/m; Power Drift = 0.036 dB

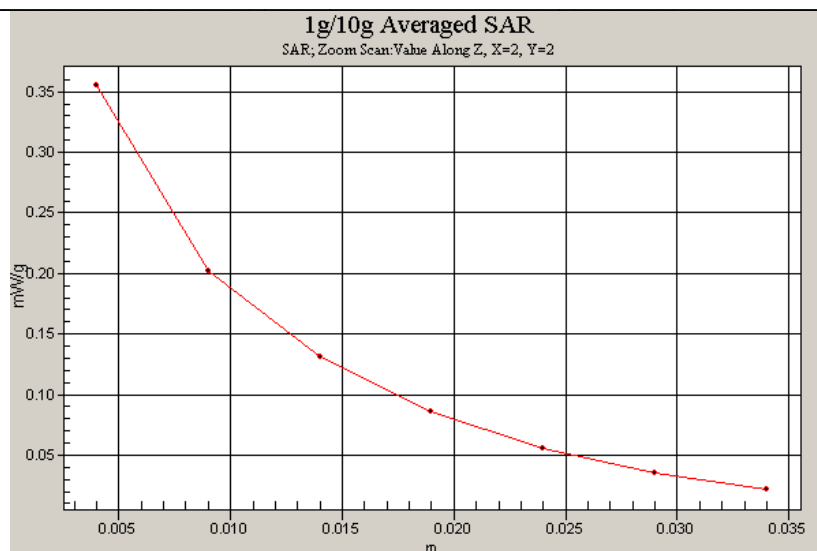
Peak SAR (extrapolated) = 0.567 W/kg

SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.160 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.355 mW/g





Date/Time: 2005-11-09 13:39:18

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.2 C, Slide closed, with MU-card, BT

Communication System: 3-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.8

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.73, 4.73, 4.73); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

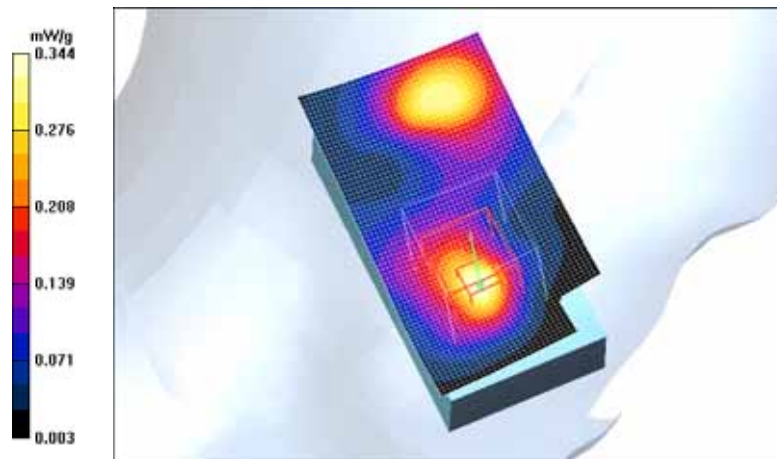
Reference Value = 13.7 V/m; Power Drift = -0.144 dB

Peak SAR (extrapolated) = 0.529 W/kg

SAR(1 g) = 0.286 mW/g; SAR(10 g) = 0.152 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.344 mW/g



Date/Time: 2005-11-14 13:22:11

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.6 C, Slide closed, with MU-card

Communication System: 3-slot EGPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.8

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(5.25, 5.25, 5.25); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.117 mW/g

Cheek position/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

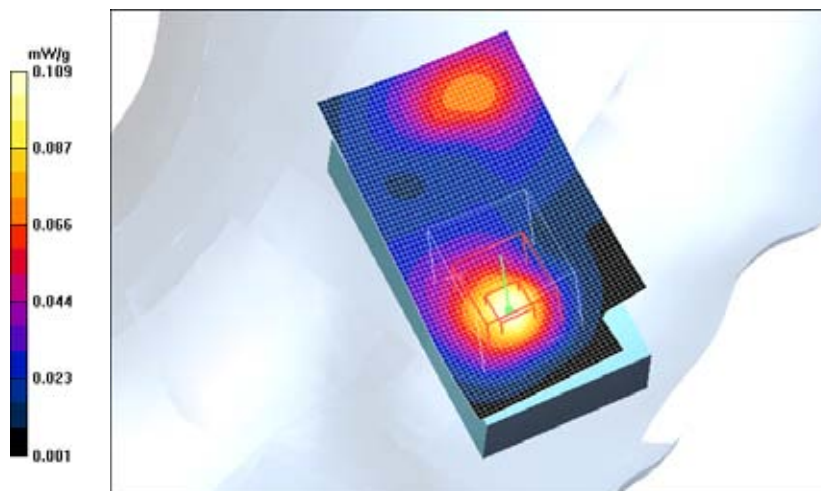
Reference Value = 6.62 V/m; Power Drift = -0.101 dB

Peak SAR (extrapolated) = 0.163 W/kg

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.049 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.109 mW/g



Date/Time: 2005-11-10 15:13:14

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.3 C, Slide closed

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.070 mW/g

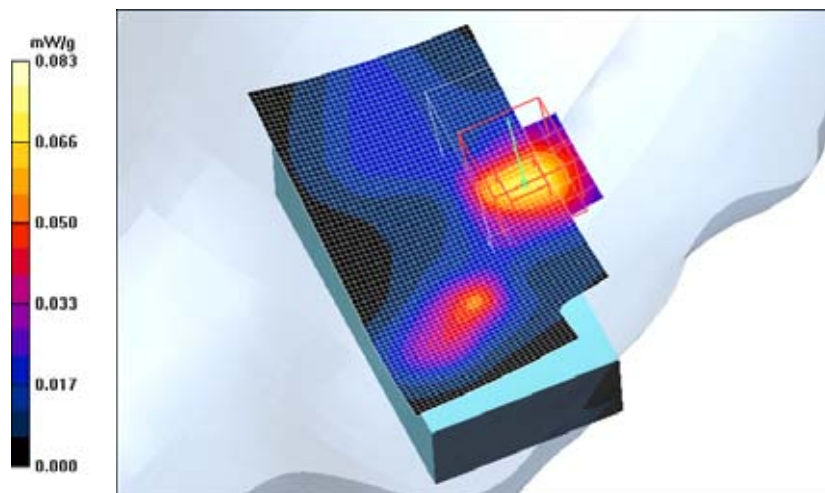
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

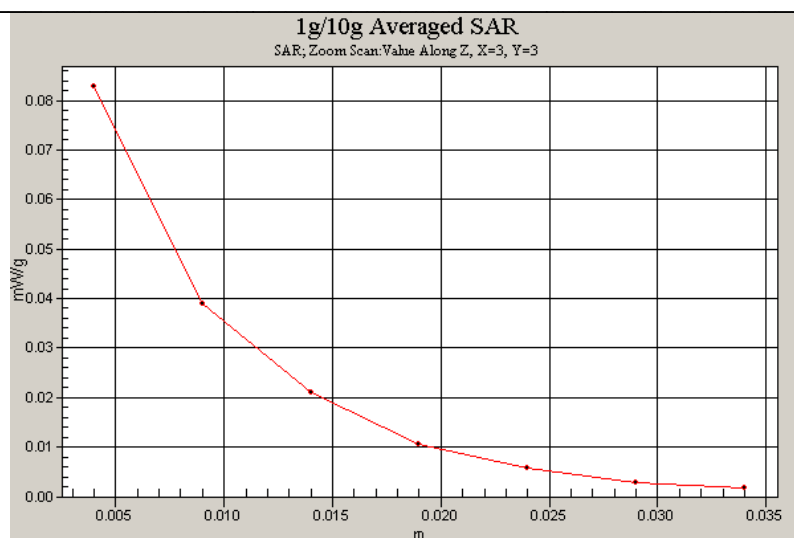
Reference Value = 3.22 V/m; Power Drift = 0.234 dB

Peak SAR (extrapolated) = 0.191 W/kg

SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.083 mW/g





Date/Time: 2005-11-10 17:11:29

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.2 C, Slide closed

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.038 mW/g

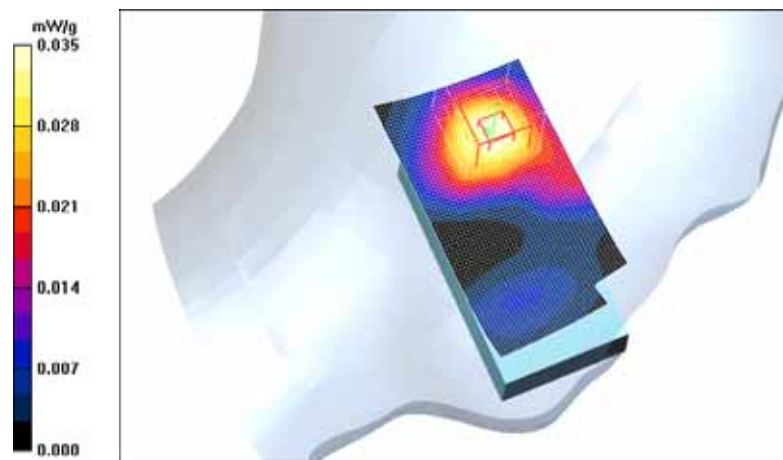
Tilt position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.10 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.074 W/kg

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.035 mW/g



Date/Time: 2005-11-10 19:00:38

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.0 C, Slide closed

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.047 mW/g

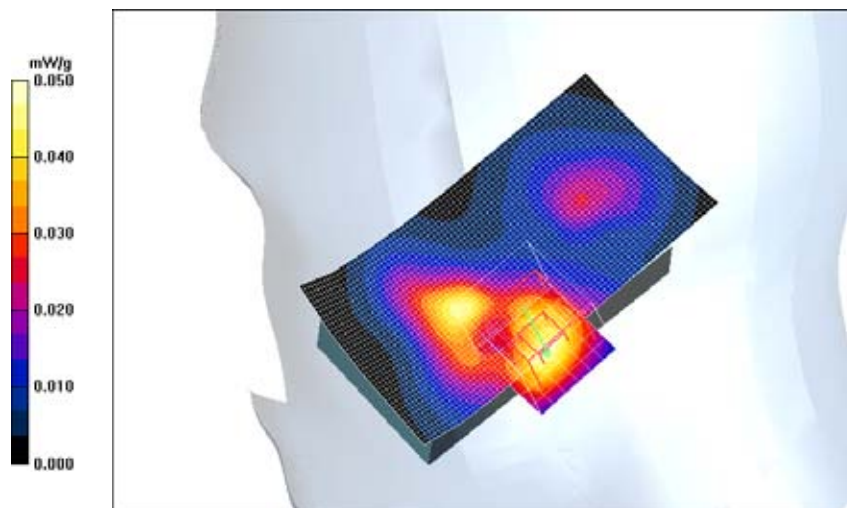
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.57 V/m; Power Drift = -0.235 dB

Peak SAR (extrapolated) = 0.107 W/kg

SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.050 mW/g



Date/Time: 2005-11-10 19:39:05

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.0 C, Slide closed

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.026 mW/g

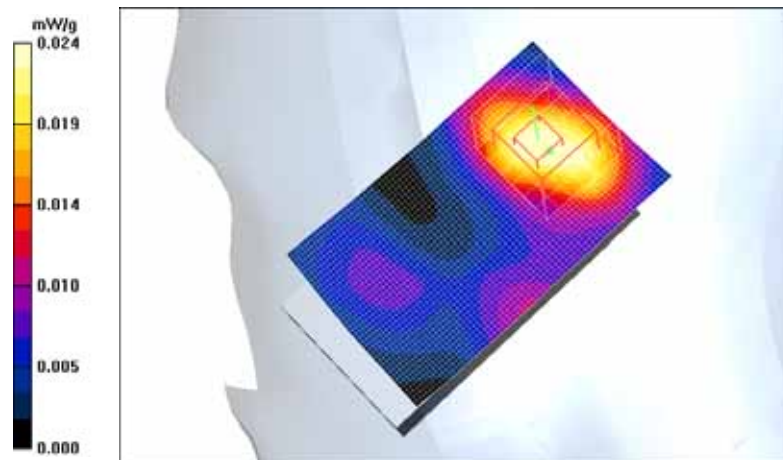
Tilt position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.66 V/m; Power Drift = -0.167 dB

Peak SAR (extrapolated) = 0.050 W/kg

SAR(1 g) = 0.023 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.024 mW/g



Date/Time: 2005-11-10 18:17:38

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.1 C, Slide open

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.061 mW/g

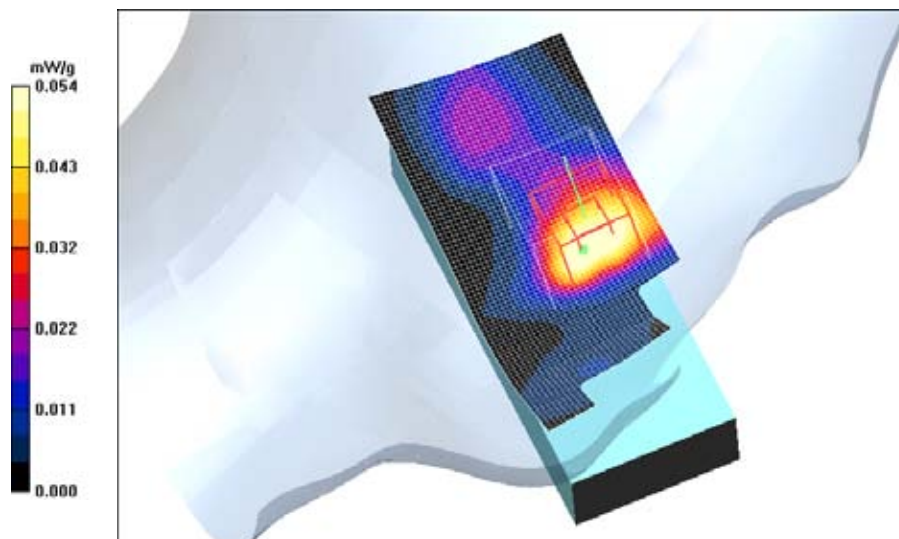
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.28 V/m; Power Drift = 0.319 dB

Peak SAR (extrapolated) = 0.108 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.054 mW/g



Date/Time: 2005-11-10 17:42:53

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=20.1 C, Slide open

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.060 mW/g

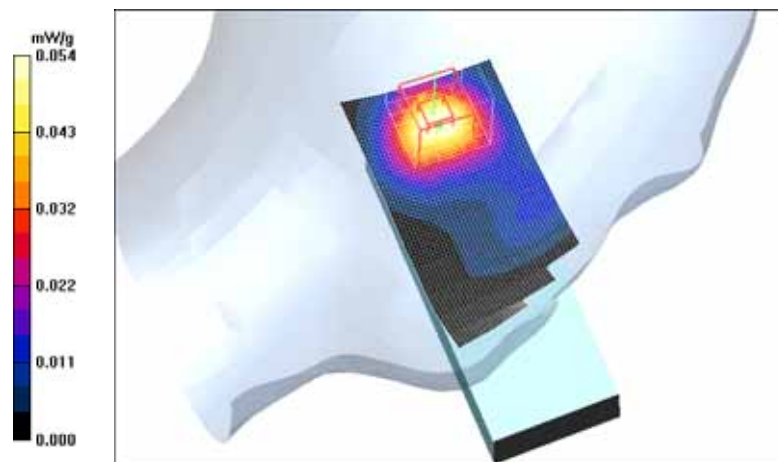
Tilt position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.38 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.112 W/kg

SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.054 mW/g



Date/Time: 2005-11-10 20:11:18

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=20.0 C, Slide open

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.094 mW/g

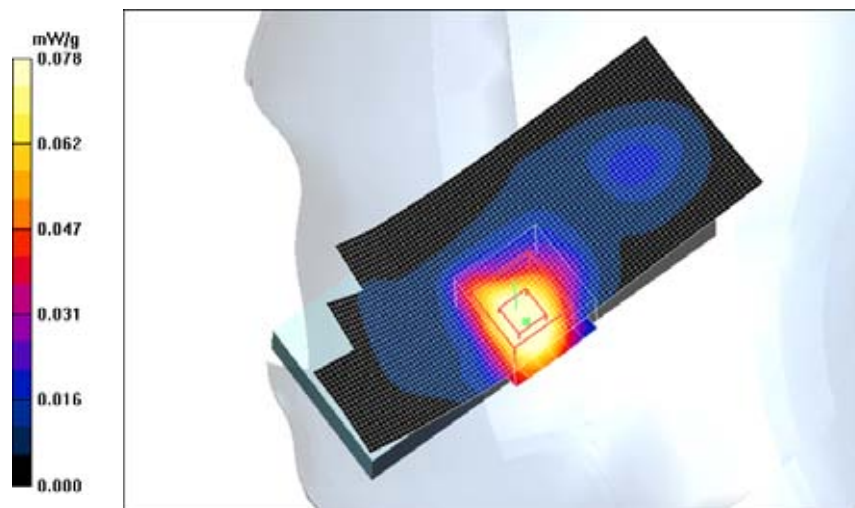
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.90 V/m; Power Drift = -0.092 dB

Peak SAR (extrapolated) = 0.183 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.078 mW/g



Date/Time: 2005-11-10 20:44:57

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=19.9 C, Slide open

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilt position/Area Scan (41x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.044 mW/g

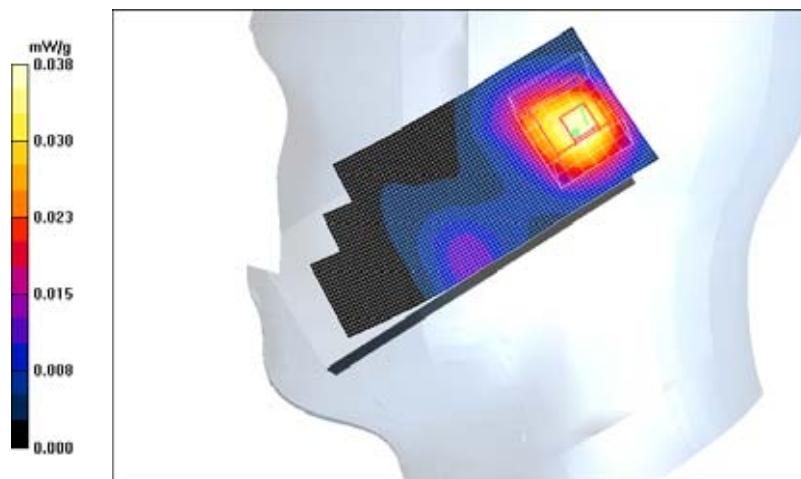
Tilt position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.48 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 0.081 W/kg

SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.038 mW/g



Date/Time: 2005-11-11 14:05:28

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Left, Worst Case Extrapolation, t=19.9 C, Slide closed, with MU-card

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.071 mW/g

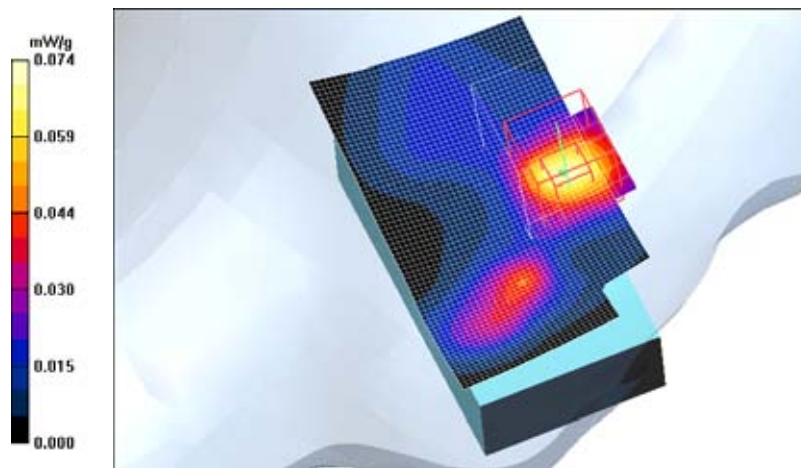
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.16 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.031 mW/g

Maximum value of SAR (measured) = 0.074 mW/g



Date/Time: 2005-11-11 14:35:48

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Head Measurement - Right, Worst Case Extrapolation, t=19.8 C, Slide open, with MU-card

Communication System: WLAN 2450; Frequency: 2442 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek position/Area Scan (41x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.086 mW/g

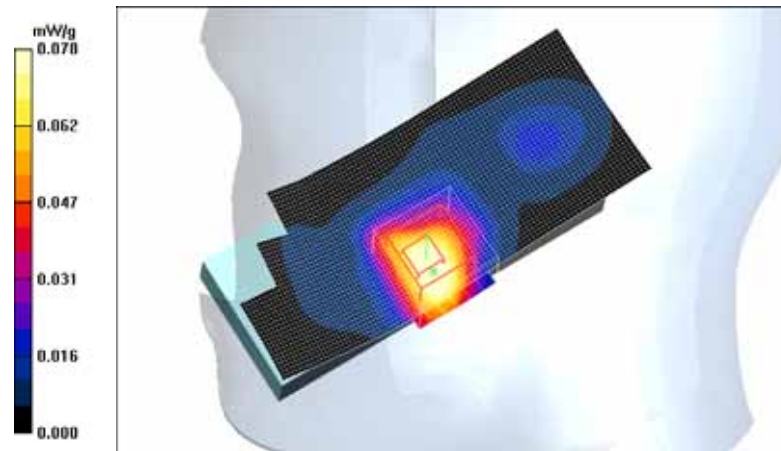
Cheek position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.02 V/m; Power Drift = -0.217 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.078 mW/g



Date/Time: 2005-11-18 12:31:41

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=21.5 C, Slide closed, no HS

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.968$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.62, 6.62, 6.62); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.09 mW/g

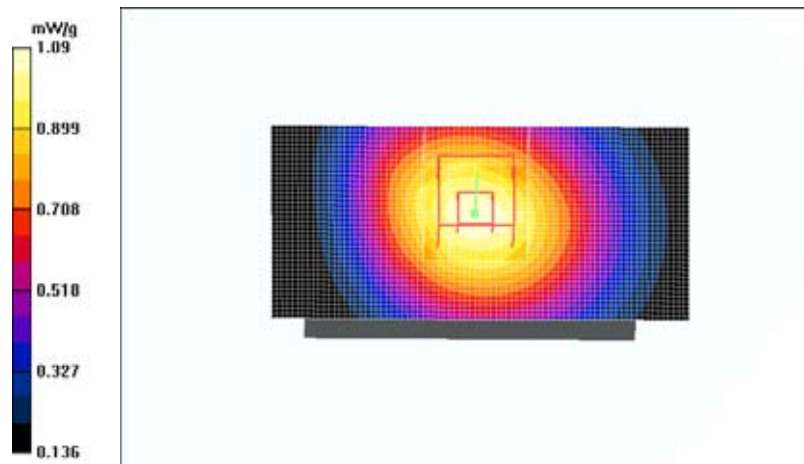
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 18.7 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.723 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



Date/Time: 2005-11-18 14:57:29

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=21.4 C, Slide closed, HS-23

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.968$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.62, 6.62, 6.62); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement /Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.622 mW/g

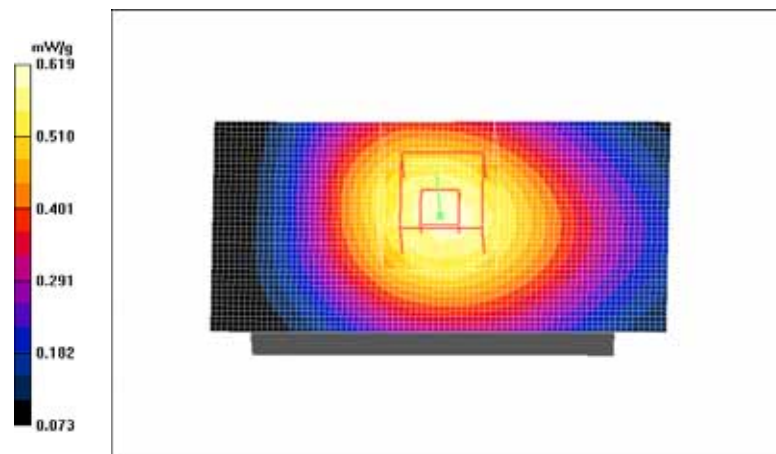
Body Measurement 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = -0.206 dB

Peak SAR (extrapolated) = 0.872 W/kg

SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.408 mW/g

Maximum value of SAR (measured) = 0.619 mW/g



Date/Time: 2005-11-18 14:16:24

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=21.2 C, Slide closed, no HS, no MU, BT

Communication System: 3-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 849$ MHz; $\sigma = 0.968$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(6.62, 6.62, 6.62); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.11 mW/g

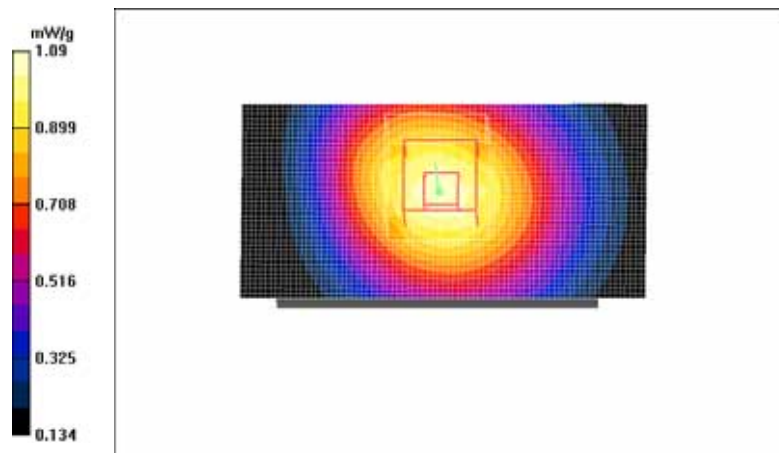
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

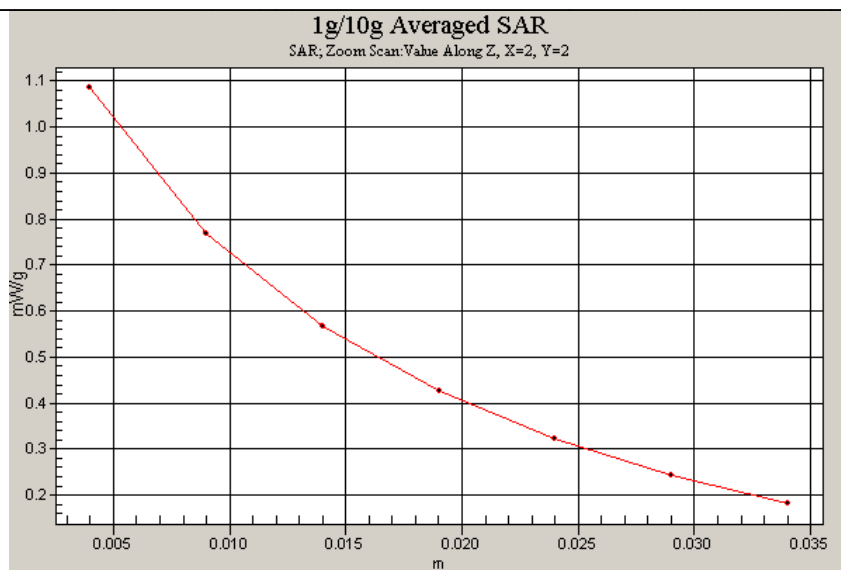
Reference Value = 18.4 V/m; Power Drift = -0.195 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.724 mW/g

Maximum value of SAR (measured) = 1.09 mW/g





Date/Time: 2005-11-09 15:32:59

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=21.6 C, Slide closed, no HS

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.19, 4.19, 4.19); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.482 mW/g

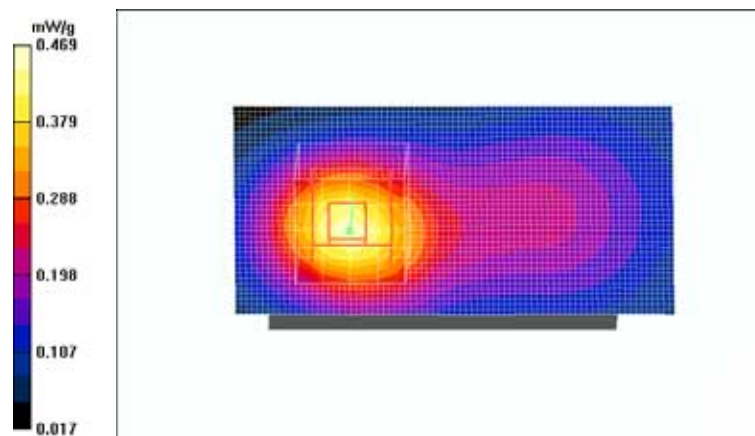
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.9 V/m; Power Drift = -0.382 dB

Peak SAR (extrapolated) = 0.863 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.259 mW/g

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



Date/Time: 2005-11-09 17:22:40

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=21.1 C, Slide closed, HS-23

Communication System: 3-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1395; ConvF(4.19, 4.19, 4.19); Calibrated: 03.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

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

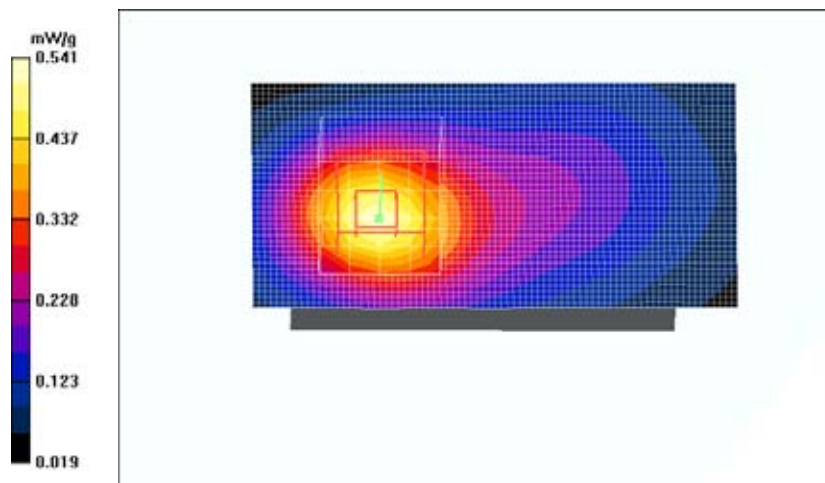
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

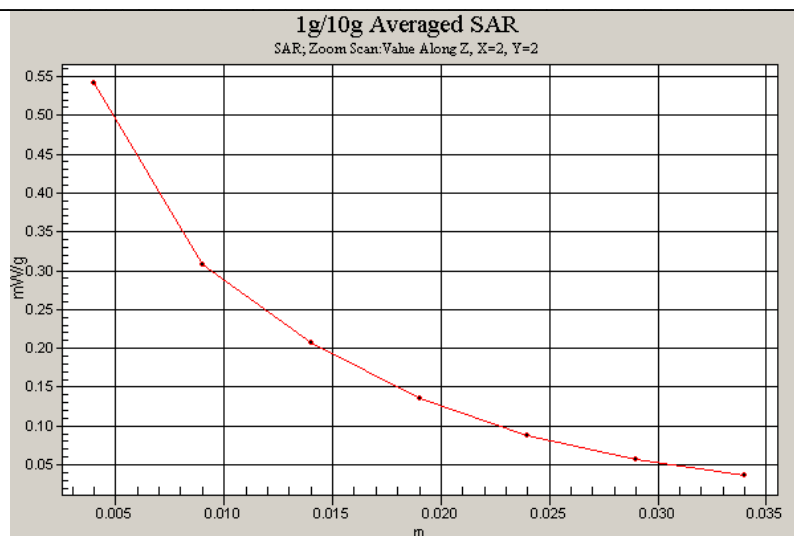
Reference Value = 16.8 V/m; Power Drift = -0.221 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.510 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.541 mW/g





Date/Time: 2005-11-22 19:17:06

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=20.5 C, Slide closed, no HS

Communication System: WLAN 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.18, 4.18, 4.18); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.021 mW/g

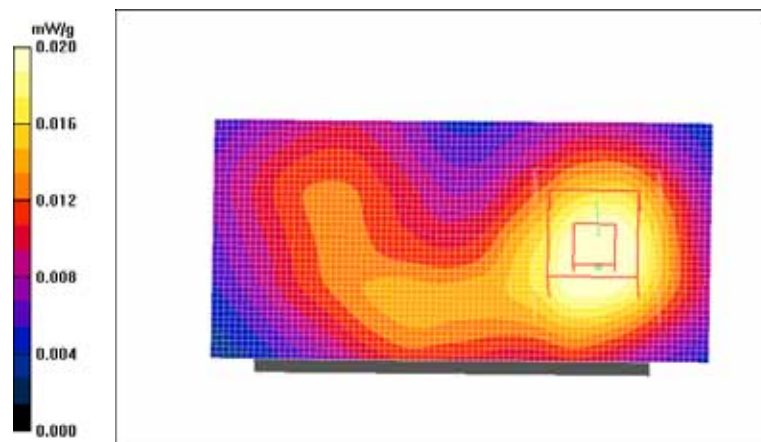
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 2.34 V/m; Power Drift = 0.233 dB

Peak SAR (extrapolated) = 0.052 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.020 mW/g



Date/Time: 2005-11-22 18:47:49

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=20.5 C, Slide closed, HS-23

Communication System: WLAN 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.18, 4.18, 4.18); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.018 mW/g

Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

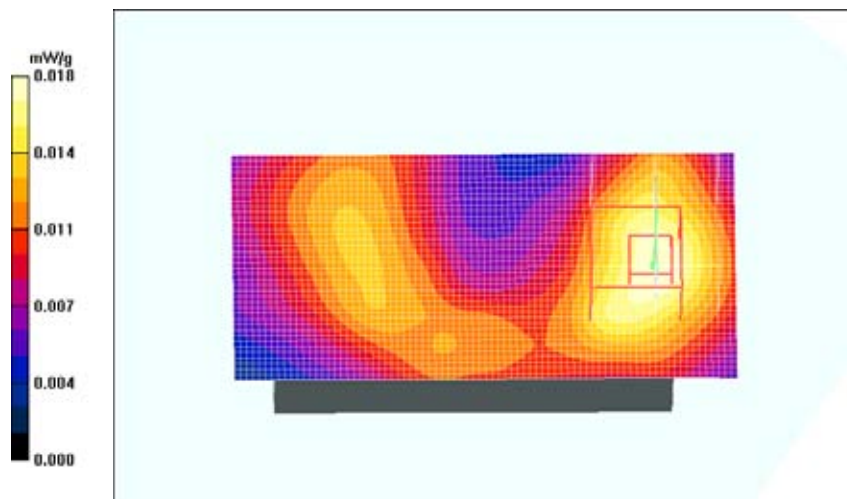
Reference Value = 2.36 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.042 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00963 mW/g

Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR.

Maximum value of SAR (measured) = 0.018 mW/g



Date/Time 2005-11-22 19:41:40

Test Laboratory: TCC Nokia

Type: RM-92; Program Name: Body measurement, Worst Case Extrapolation, t=20.5 C, Slide closed, no HS, with MU-card

Communication System: WLAN 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; ConvF(4.18, 4.18, 4.18); Calibrated: 20.01.2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn372; Calibrated: 18.08.2005
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body Measurement/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.020 mW/g

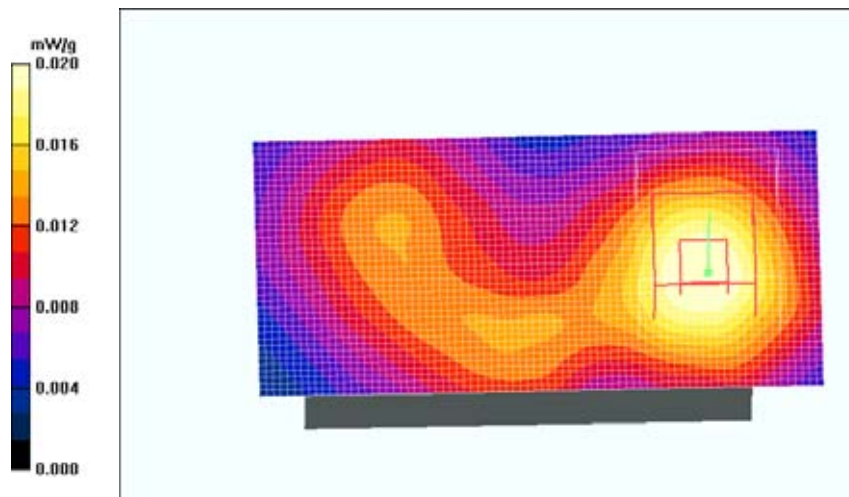
Body Measurement/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

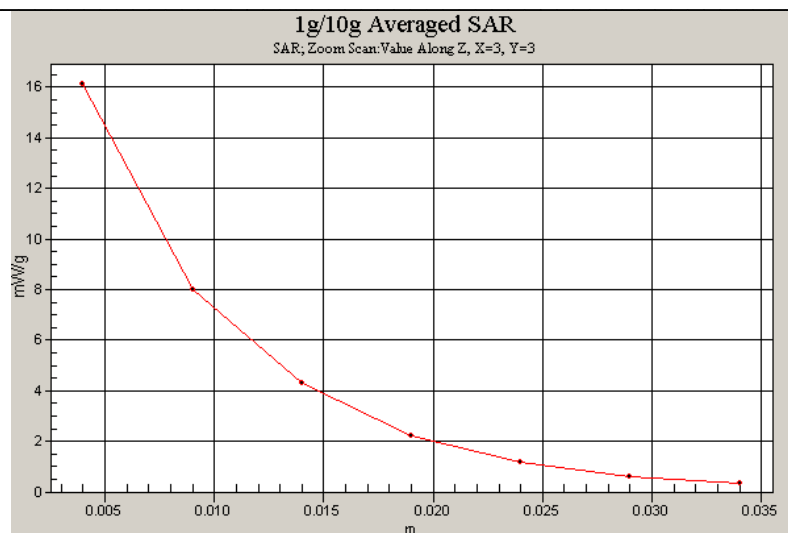
Reference Value = 2.42 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.059 W/kg

SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.020 mW/g





APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)

E-field probes SN: 1395 and SN:1396
See the next six pages.

APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)

835MHz dipole, SN: 462
1900MHz dipole, SN: 5d026
2450MHz dipole, SN: 749

See the next nine pages.