

SAR Compliance Test Report

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Testing laboratory:	TCC Nokia Salo Laboratory P.O.Box 86 Joensuunkatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220	Client:	Nokia Corporation Lise Meitner Strasse 10 89081 ULM GERMANY Tel. +49 731 1754 0 Fax. +49 731 1754 6800
Responsible test engineer:	Virpi Tuominen	Product contact person:	Thomas Reitmayer
Measurements made by:	Virpi Tuominen		
Tested device:	RM-147		
FCC ID:	PPIRM-147	IC:	661U-RM147
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:			

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2006-07-12 to 2006-07-13
SN, HW and SW numbers of tested device	SN: 004400/91/160557/2, HW: 0419, SW: cs 3.07, DUT: 11357
Batteries used in testing	BL-5B, DUT: 11327, 11331
Headsets used in testing	HS-47, DUT: 11330
Other accessories used in testing	Memory Card, Type: MU-27, DUT: 11329
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	Ch / f (MHz)	Radiated power	Position	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
GSM850	190 / 836.6	31.6 dBm ERP	Right, Cheek	0.803 W/kg	0.90 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900	661 / 1880.0	27.8 dBm EIRP	Left, Cheek	0.692 W/kg	0.78 W/kg	1.6 W/kg	PASSED

1.2.2 Body Worn Configuration

Mode	Ch / f (MHz)	Radiated power	Separation distance	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
GSM850	190 / 836.6	31.6 dBm ERP	2.2 cm	0.452 W/kg	0.51 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900	512 / 1850.2	27.0 dBm EIRP	2.2 cm	0.131 W/kg	0.15 W/kg	1.6 W/kg	PASSED

*SAR values are scaled up by 12% to cover measurement drift.

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.14 dB

1.2.4 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	± 25.8%
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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
	850 / 1900	850 / 1900	850 / 1900	
Modulation Mode	GMSK	GMSK	GMSK / 8PSK	GFSK
Duty Cycle	1/8	1/8 to 2/8	1/8 to 2/8	
Transmitter Frequency Range (MHz)	824 - 849 1850 - 1910	824 - 849 1850 - 1910	824 - 849 1850 - 1910	2402-2480

Outside of USA and Canada, the transmitter of the device is capable of operating also in 1800 MHz band, which is not part of this filing.

This device has Push to Talk capability for use at the ear. Therefore, SAR for multi slot GPRS mode was evaluated against the head profile of the phantom.

2.1 Description of the Antenna

The device has a internal antenna.

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	21.5 to 23.0
Ambient humidity (RH %):	50 to 60

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester. 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 unit(s) 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, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland. The SAR extrapolation algorithm used in all measurements was the 'advanced extrapolation' algorithm.

The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE 4	555	12 months	2007-02
E-field Probe ET3DV6	1396	12 months	2007-01
Dipole Validation Kit, D835V2	480	24 months	2007-02
Dipole Validation Kit, D1900V2	5d030	24 months	2007-02
DASY4 software	Version 4.6	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SML03	101265	12 months	2007-07
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2007-07
Power Meter	NRVS	849305/028	12 months	2007-07
Power Sensor	NRV-Z32	839176/020	12 months	2007-07
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 Probe 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
Application	Distance from probe tip to dipole centers: 2.7 mm 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 checks 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	69.25
Tween 20	47.35	30.00
Salt	1.15	0.75

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

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	2.25	42.2	0.91	
	$\pm 10\%$ window	2.02 – 2.48			
	2006-07-13	2.45	41.1	0.92	20.9
1900	Reference result	9.76	39.5	1.46	
	$\pm 10\%$ window	8.78 – 10.74			
	2006-07-12	9.58	39.1	1.41	22.2

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	22.0
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2006-07-13	41.0	0.92	
1880	Recommended value	40.0	1.40	22.0
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2006-07-12	39.2	1.40	

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	55.2	0.97	22.0
	$\pm 5\%$ window	52.4 – 58.0	0.92 – 1.02	
	2006-07-13	55.5	1.00	
1880	Recommended value	53.3	1.52	22.0
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2006-07-12	53.9	1.50	

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".

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.

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	±5.9	N	1	1	±5.9	∞
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	±1.0	R	√3	1	±0.6	∞
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	±3.9	R	√3	1	±2.3	∞
Test sample Related							
Test Sample Positioning	E4.2	±6.0	N	1	1	±6.0	11
Device Holder Uncertainty	E4.1	±5.0	N	1	1	±5.0	7
Output Power Variation - SAR drift measurement	6.6.3	±0.0	R	√3	1	±0.0	∞
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			±12.9	116
Coverage Factor for 95%			k=2				
Expanded Uncertainty						±25.8	

7. RESULTS

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

850MHz Head SAR results

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS	Power		28.3 dBm	28.1 dBm	30.4 dBm
Slide closed Without MC	Left Cheek		-	0.578	-
GSM	Power		31.8 dBm	31.6 dBm	31.1 dBm
Slide closed Without MC	Left	Cheek	-	0.684	-
		Tilt	-	0.454	-
	Right	Cheek	0.649	0.803	0.722
		Tilt	-	0.416	-
GSM	Power		30.5 dBm	31.7 dBm	33.1 dBm
Slide open Without MC	Left	Cheek	0.587	0.678	0.729
		Tilt	-	0.378	-
	Right	Cheek	-	0.665	-
		Tilt	-	0.386	-
2-slot EGPRS	Power		26.2 dBm	26.5 dBm	28.9 dBm
Slide closed Without MC	Right Cheek		-	0.332	-
GSM	Power		30.5 dBm	31.7 dBm	33.1 dBm
Slide closed With MC	Right Cheek		-	0.752	-
GSM	Power		30.5 dBm	31.7 dBm	33.1 dBm
Slide closed Without MC	Right Cheek, BT active		-	0.715	-

1900MHz Head SAR results

Option used	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		30.0 dBm	30.9 dBm	29.0 dBm
Slide closed Without MC	Left Cheek		-	0.595	-
2-slot GPRS	Power		27.0 dBm	27.8 dBm	26.1 dBm
Slide closed Without MC	Left	Cheek	0.675	0.692	0.675
		Tilt	-	0.274	-
	Right	Cheek	-	0.578	-
		Tilt	-	0.287	-
2-slot GPRS	Power		27.4 dBm	28.0 dBm	26.6 dBm
Slide open Without MC	Left	Cheek	-	0.361	-
		Tilt	-	0.303	-
	Right	Cheek	0.461	0.431	0.433
		Tilt	-	0.246	-
2-slot EGPRS	Power		26.9 dBm	27.3 dBm	22.0 dBm
Slide closed Without MC	Left Cheek		-	0.508	-
2-slot GPRS Slide closed With MC	Left Cheek		-	0.617	-
2-slot GPRS Slide closed Without MC	Left Cheek, BT active		-	0.649	-

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

850MHz Body SAR results

Option used	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	31.8 dBm	31.6 dBm	31.1 dBm
Slide closed	Without headset	0.365	0.436	0.433
Without MC	Headset HS-47	0.305	0.356	0.395
GSM Slide closed With MC	Without headset	-	0.452	-
GSM Slide closed With MC	Without headset, BT active	-	0.448	-

1900MHz Body SAR results

Option used	Test configuration	SAR, averaged over 1g (W/kg)		
		Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
2-slot GPRS	Power	27.0 dBm	27.8 dBm	26.1 dBm
Slide closed	Without headset	0.123	0.119	0.109
Without MC	Headset HS-47	0.131	0.124	0.112
2-slot GPRS Slide closed With MC	Headset HS-47	0.129	-	-
2-slot GPRS Slide closed Without MC	Headset HS-47, with BT active	0.129	-	-

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2006-07-13 12:58:23

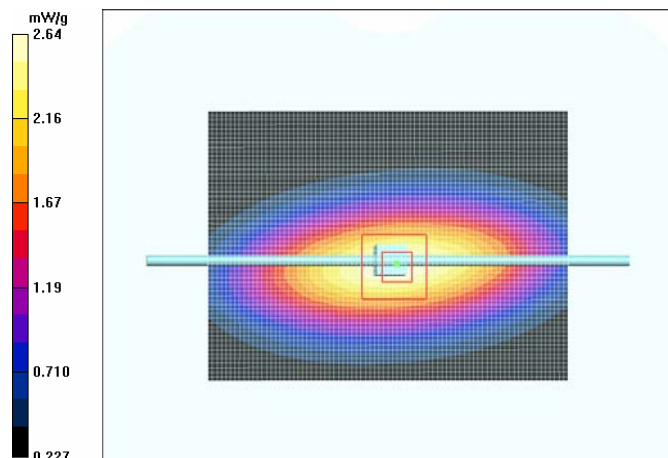
Test Laboratory: TCC Nokia Salo Laboratory
Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL835; Medium Notes: t=20.9C
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 41.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

d=15mm, Pin=250mW 2/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.63 mW/g

d=15mm, Pin=250mW 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.0 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 3.69 W/kg
SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.59 mW/g
Maximum value of SAR (measured) = 2.64 mW/g



Date/Time: 2006-07-12 10:25:13

Test Laboratory: TCC Nokia Salo Laboratory

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 22.2 C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 11.6 mW/g

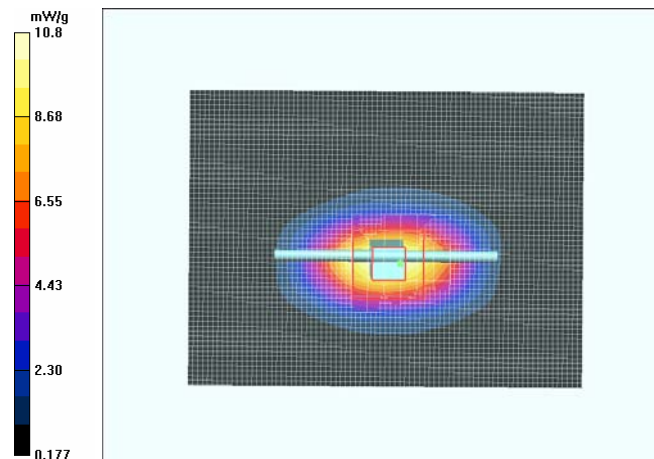
d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.2 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 9.58 mW/g; SAR(10 g) = 5.06 mW/g

Maximum value of SAR (measured) = 10.8 mW/g



APPENDIX B: MEASUREMENT SCANS

Date/Time: 2006-07-13 14:26:34

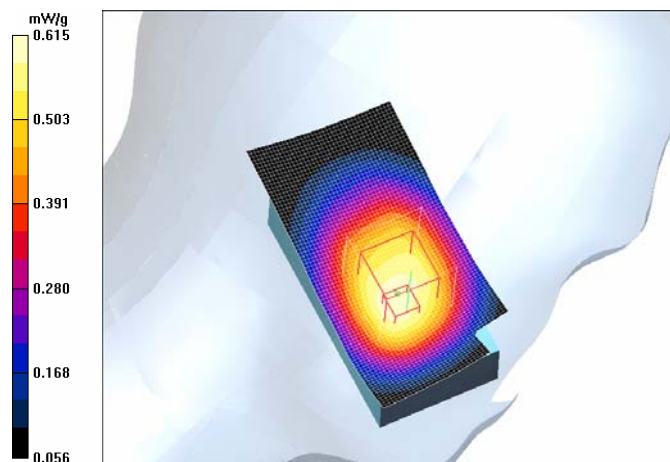
Test Laboratory: TCC Nokia Salo Laboratory
Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: HSL835; Medium Notes: t=20.9
Medium parameters used: $f = 837$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

Cheek position, Middle, Closed/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.602 mW/g

Cheek position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 0.794 W/kg
SAR(1 g) = 0.578 mW/g; SAR(10 g) = 0.429 mW/g
Maximum value of SAR (measured) = 0.615 mW/g



Date/Time: 2006-07-13 13:58:58

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835; Medium Notes: $t=20.9$

Medium parameters used: $f = 837$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.715 mW/g

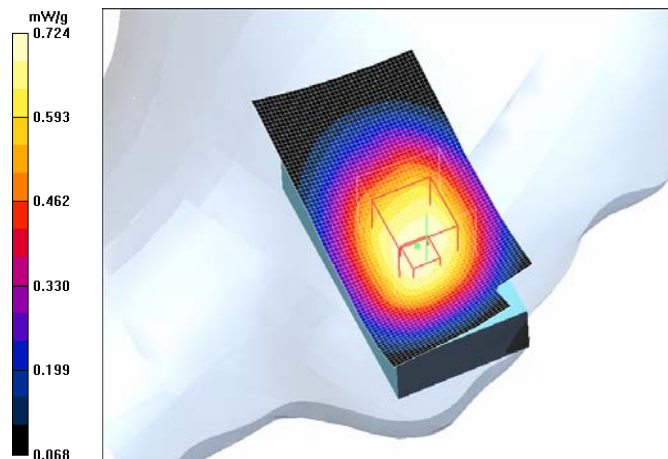
Cheek position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 14.3 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.904 W/kg

SAR(1 g) = 0.684 mW/g; SAR(10 g) = 0.513 mW/g

Maximum value of SAR (measured) = 0.724 mW/g



Date/Time: 2006-07-13 14:54:20

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835; Medium Notes: $t=20.9$

Medium parameters used: $f = 837$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.478 mW/g

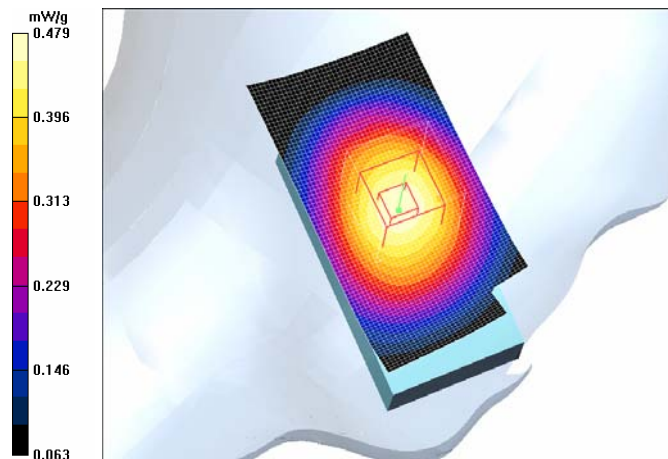
Tilt position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 17.5 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 0.578 W/kg

SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.333 mW/g

Maximum value of SAR (measured) = 0.479 mW/g



Date/Time: 2006-07-13 15:28:51

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835; Medium Notes: $t=21.2$

Medium parameters used: $f = 837$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.880 mW/g

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

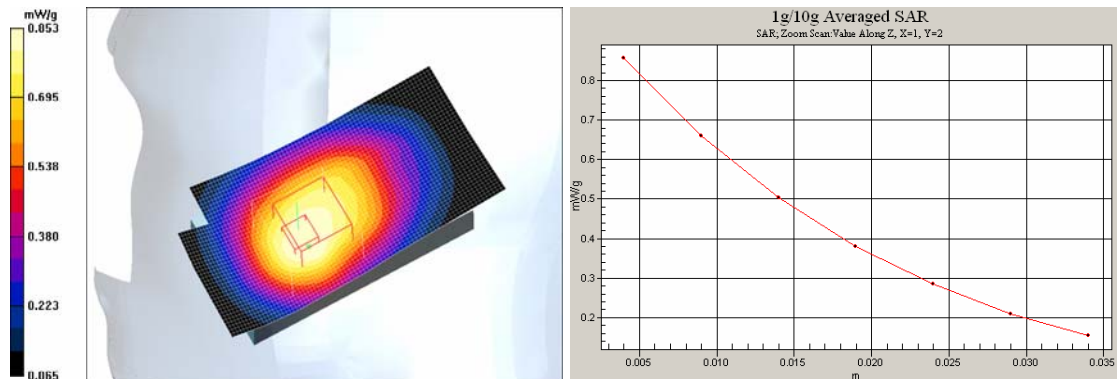
Reference Value = 16.8 V/m; Power Drift = -0.141 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.803 mW/g; SAR(10 g) = 0.591 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.

Maximum value of SAR (measured) = 0.853 mW/g



Date/Time: 2006-07-13 15:49:03

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL835; Medium Notes: $t=21.2$ C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.431 mW/g

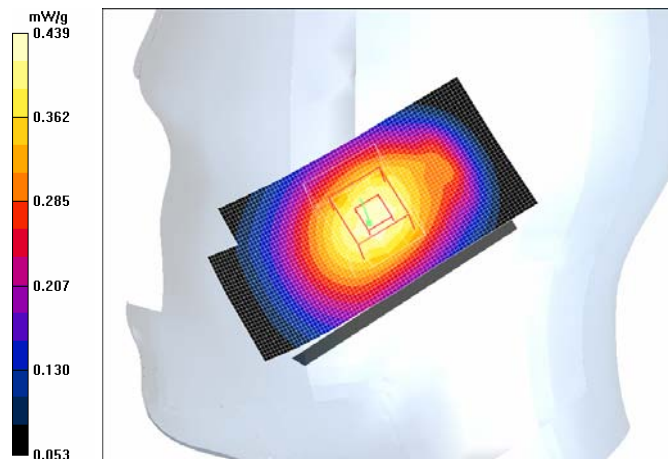
Tilt position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 17.4 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.527 W/kg

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 0.439 mW/g



Date/Time: 2006-07-13 19:45:52

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot EGPRS850

Frequency: 836 MHz; Duty Cycle: 1:4.2

Medium: HSL835; Medium Notes: t=21.5 C

Medium parameters used: f = 836 MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.79, 6.79, 6.79); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

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

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

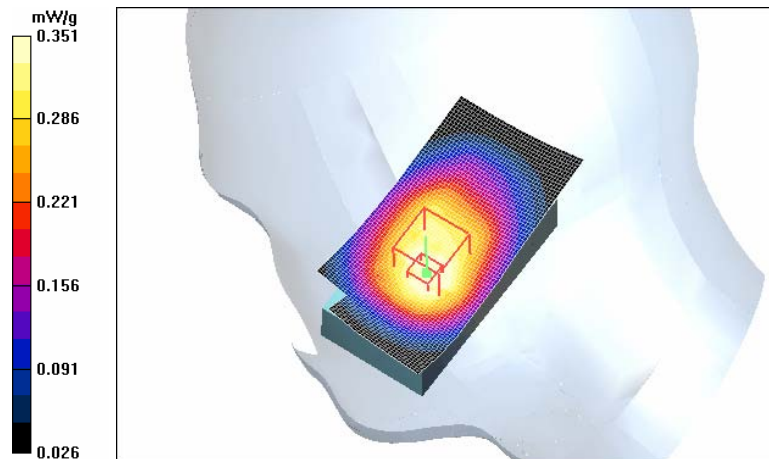
Reference Value = 11.3 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.447 W/kg

SAR(1 g) = 0.332 mW/g; SAR(10 g) = 0.248 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.

Maximum value of SAR (measured) = 0.351 mW/g



Date/Time: 2006-07-12 10:56:21

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 21.9 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.706 mW/g

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

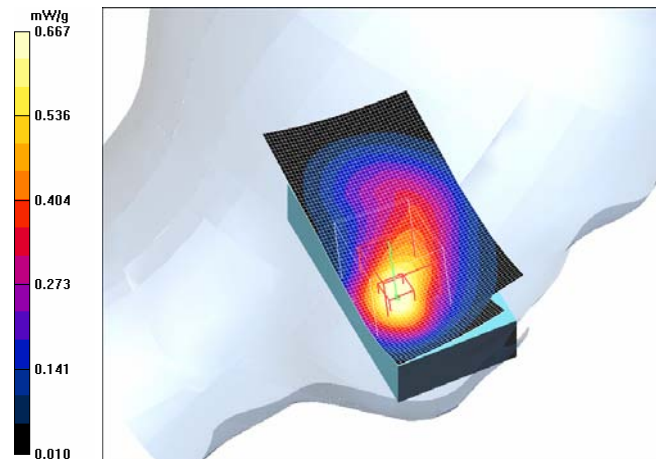
Reference Value = 11.2 V/m; Power Drift = 0.045 dB

Peak SAR (extrapolated) = 0.993 W/kg

SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.347 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.

Maximum value of SAR (measured) = 0.667 mW/g



Date/Time: 2006-07-12 11:16:07

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 21.9 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.791 mW/g

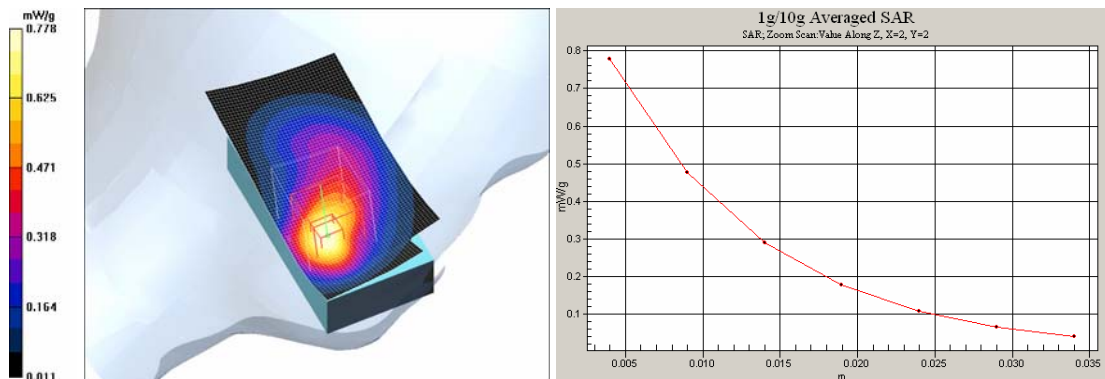
Cheek position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.692 mW/g; SAR(10 g) = 0.393 mW/g

Maximum value of SAR (measured) = 0.778 mW/g



Date/Time: 2006-07-12 12:03:33

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 21.7 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.649 mW/g

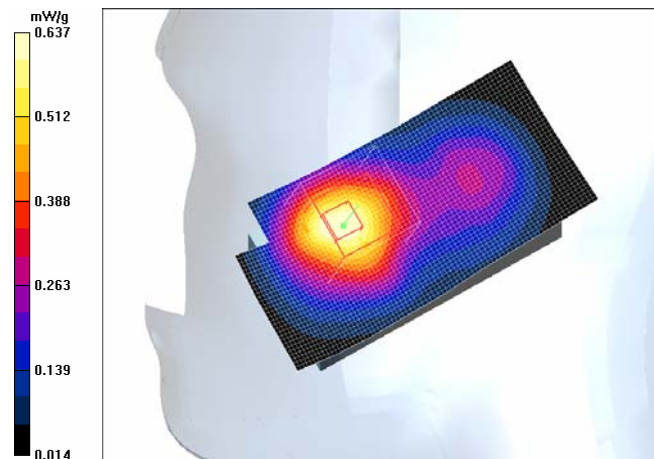
Cheek position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.877 W/kg

SAR(1 g) = 0.578 mW/g; SAR(10 g) = 0.351 mW/g

Maximum value of SAR (measured) = 0.637 mW/g



Date/Time: 2006-07-12 12:20:13

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 21.7 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.332 mW/g

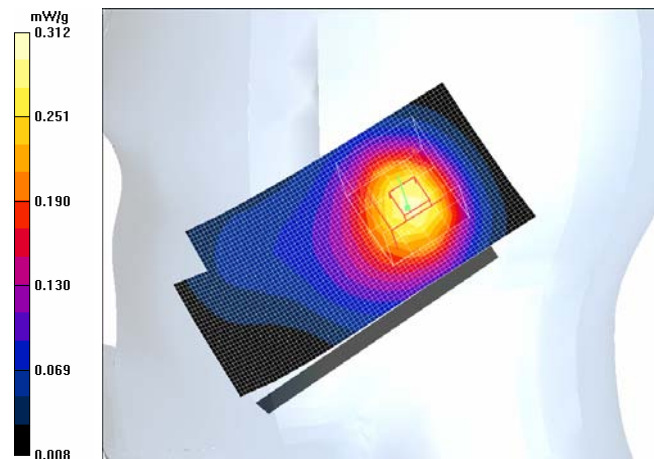
Tilt position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.3 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 0.404 W/kg

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.312 mW/g



Date/Time: 2006-07-12 14:18:40

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 21.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.383 mW/g

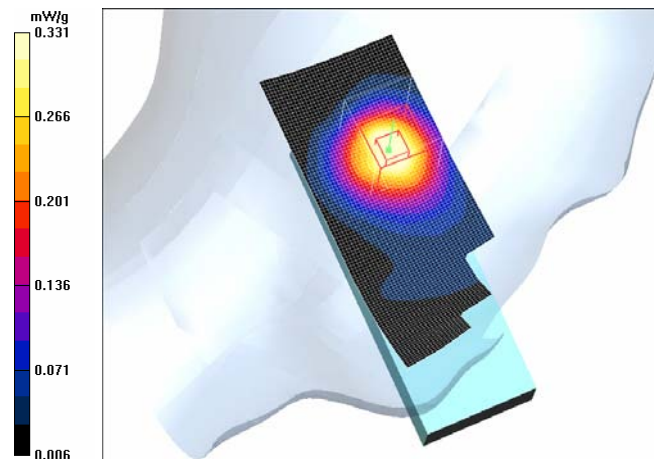
Tilt position, Middle, Open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.4 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.331 mW/g



Date/Time: 2006-07-12 18:25:50

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-146; Serial: 004400/91/160557/2

Communication System: 2-slot EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 21.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(5.37, 5.37, 5.37); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

Maximum value of SAR (interpolated) = 0.569 mW/g

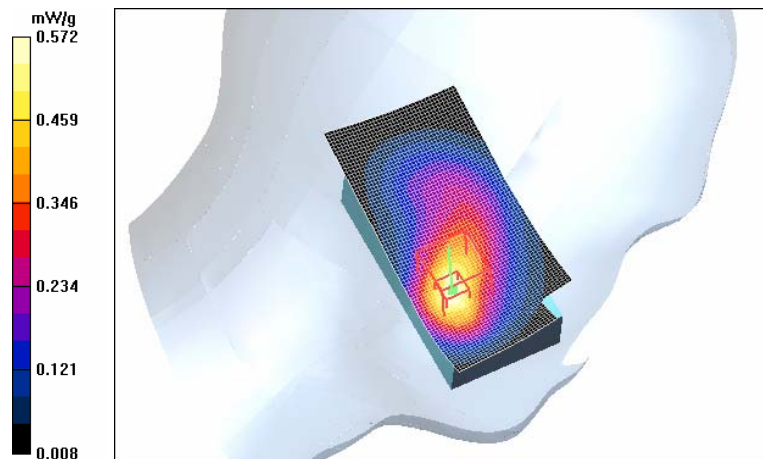
Cheek position, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.77 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.822 W/kg

SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.292 mW/g

Maximum value of SAR (measured) = 0.572 mW/g



Date/Time: 2006-07-13 20:12:01

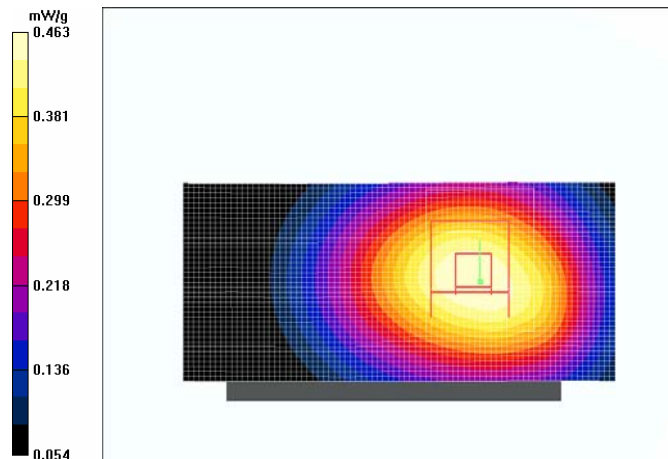
Test Laboratory: TCC Nokia Salo Laboratory
Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850
Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: M850; Medium Notes: t=22.7 C
Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.41, 6.41, 6.41); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

Body Measurement, Middle, Closed/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.467 mW/g

Body Measurement, Middle, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.29 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 0.578 W/kg
SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.313 mW/g
Maximum value of SAR (measured) = 0.463 mW/g



Date/Time: 2006-07-13 21:27:56

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: M850; Medium Notes: $t=22.7$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.41, 6.41, 6.41); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

Body Measurement, High, Closed, HS-47/Area Scan (41x81x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

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

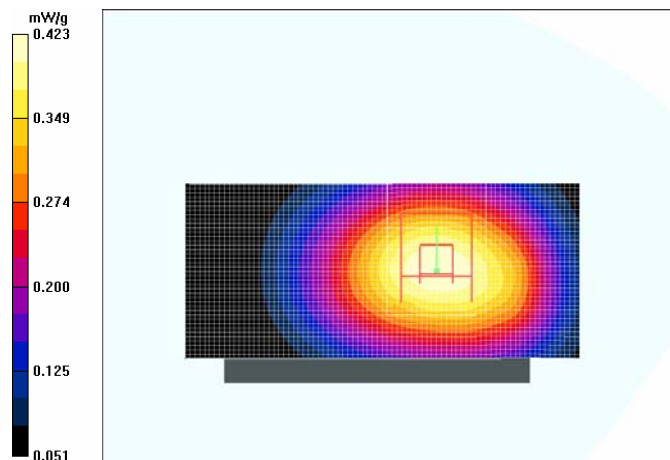
Body Measurement, High, Closed, HS-47/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.34 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 0.527 W/kg

SAR(1 g) = 0.395 mW/g; SAR(10 g) = 0.282 mW/g

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



Date/Time: 2006-07-13 21:45:10

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: M850; Medium Notes: t=22.7 C

Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(6.41, 6.41, 6.41); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

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

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

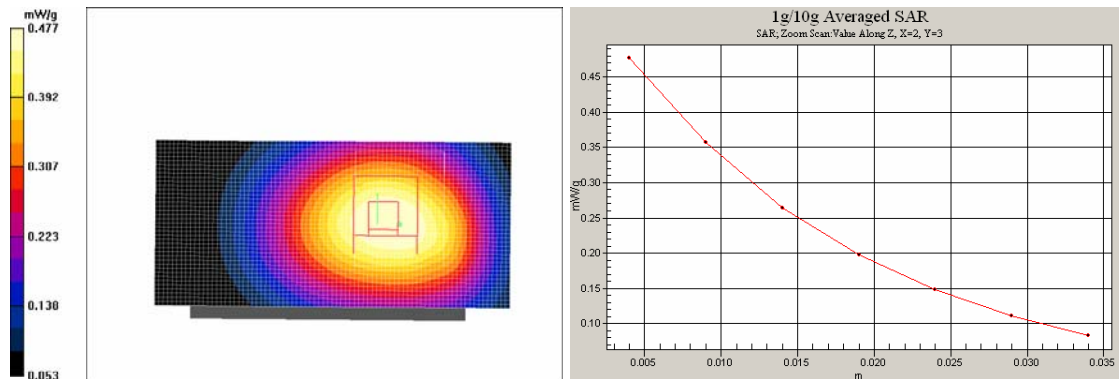
Reference Value = 9.09 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.592 W/kg

SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.325 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.

Maximum value of SAR (measured) = 0.477 mW/g



Date/Time: 2006-07-12 19:57:14

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.2

Medium: M1900; Medium Notes: t=23.0 C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(4.58, 4.58, 4.58); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

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

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

Maximum value of SAR (interpolated) = 0.130 mW/g

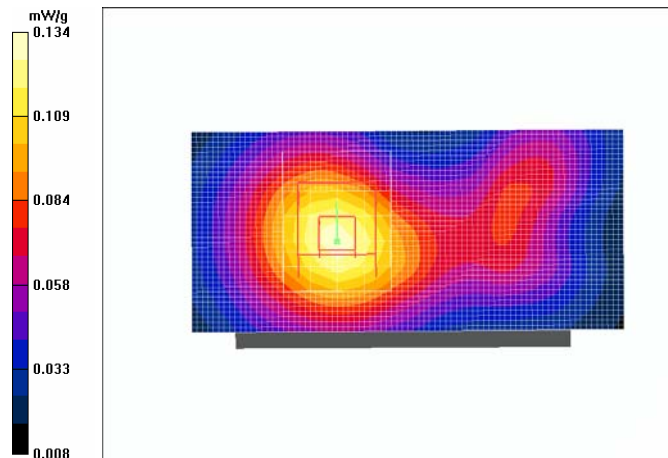
Body Measurement, Low, Closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.10 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.081 mW/g

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



Date/Time: 2006-07-12 19:42:39

Test Laboratory: TCC Nokia Salo Laboratory

Type: RM-147; Serial: 004400/91/160557/2

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.2

Medium: M1900; Medium Notes: t=23.0 C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396; Probe Notes: Advanced extrapolation
- ConvF(4.58, 4.58, 4.58); Calibrated: 2006-01-24
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2006-02-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 161

Body Measurement, Low, Closed, HS-47/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.140 mW/g

Body Measurement, Low, Closed, HS-47/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.39 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.087 mW/g

Maximum value of SAR (measured) = 0.140 mW/g

