

SAR Compliance Test Report

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Tested device:	RM-414		
FCC ID:	QTKRM-414	IC:	661AD-RM414
Supplement reports:	Cph_SAR_0828_05		
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 Technique		
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:			

CONTENTS

1. SUMMARY OF SAR TEST REPORT.....	3
1.1 TEST DETAILS.....	3
1.2 MAXIMUM RESULTS.....	3
1.2.1 Head Configuration.....	3
1.2.2 Body Worn Configuration	3
1.2.3 Maximum Drift	4
1.2.4 Measurement Uncertainty	4
2. DESCRIPTION OF THE DEVICE UNDER TEST	4
2.1 DESCRIPTION OF THE ANTENNA	4
3. TEST CONDITIONS	5
3.1 TEMPERATURE AND HUMIDITY	5
3.2 TEST SIGNAL, FREQUENCIES AND OUTPUT POWER	5
4. DESCRIPTION OF THE TEST EQUIPMENT	6
4.1 MEASUREMENT SYSTEM AND COMPONENTS	6
4.1.1 Isotropic E-field Probe Type ES3DV3	7
4.2 PHANTOMS	7
4.3 TISSUE SIMULANTS	8
4.3.1 Tissue Simulant Recipes	8
4.3.2 System Checking	9
4.3.3 Tissue Simulants used in the Measurements.....	10
5. DESCRIPTION OF THE TEST PROCEDURE	11
5.1 DEVICE HOLDER.....	11
5.2 TEST POSITIONS.....	11
5.2.1 Against Phantom Head.....	11
5.2.2 Body Worn Configuration	12
5.3 SCAN PROCEDURES.....	12
5.4 SAR AVERAGING METHODS.....	12
6. MEASUREMENT UNCERTAINTY	13
7. RESULTS	14
APPENDIX A: SYSTEM CHECKING SCANS.....	18
APPENDIX B: MEASUREMENT SCANS.....	23
APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)	70
APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)	71

1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2008-06-26 to 2008-07-11
SN, HW and SW numbers of tested device	SN: 004401/10/135153/0, HW: 0300A, SW: Vp vs4.47, DUT: 27476
Batteries used in testing	BL-4U, DUT: 27468, 27473, 27474, 27475
Headsets used in testing	HS-83 + AD-83, DUT: 27663, 27472
Other accessories used in testing	-
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
3-slot GPRS 850	128 / 824.2	26.7 dBm ERP	Right, Cheek	0.545 W/kg	0.61 W/kg	1.6 W/kg	PASSED
WCDMA 850	4175 / 835.0	19.9 dBm ERP	Right, Cheek	0.357 W/kg	0.40 W/kg	1.6 W/kg	PASSED
3-slot GPRS 1900	810 / 1909.8	24.0 dBm EIRP	Right, Cheek	0.481 W/kg	0.54 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
3-slot GPRS 850	128 / 824.2	26.7 dBm ERP	1.5 cm	0.392 W/kg	0.44 W/kg	1.6 W/kg	PASSED
WCDMA 850	4132 / 826.4	19.7 dBm ERP	1.5 cm	0.238 W/kg	0.27 W/kg	1.6 W/kg	PASSED
3-slot GPRS 1900	810 / 1909.8	24.0 dBm EIRP	1.5 cm	0.196 W/kg	0.22 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	0.42 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 of Operation	Bands	Modulation Mode	Duty Cycle	Transmitter Frequency Range (MHz)
GSM	850 1900	GMSK	1/8	824 – 849 1850 – 1910
GPRS	850 1900	GMSK	1/8 to 3/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 3/8	824 – 849 1850 – 1910
WCDMA	850 (Band V)		1	826 – 847
BT	2450	GFSK	1	2402 – 2480

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900, GSM/GPRS/EGPRS1800 and WCDMA2100 bands 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 Description of the Antenna

The device has an internal antenna.

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	20.5 to 22.5
Ambient humidity (RH %):	35 to 55

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.

The transmission mode of the device in all WCDMA tests was configured to 12.2kbps RMC with all TPC bits set as “1”.

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
DAE3	501	12 months	2009-03
E-field Probe ES3DV3	3117	12 months	2008-08
E-field Probe ES3DV3	3118	12 months	2008-10
Dipole Validation Kit, D835V2	4d042	24 months	2008-09
Dipole Validation Kit, D1900V2	5d026	24 months	2010-03
DASY4 software	Version 4.7	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SME06	848650/011	36 months	2008-07
Amplifier	2100-BBS3Q8CCJ	1003	-	-
Power Meter	NRP	100293	24 months	2009-07
Power Sensor	NRP-Z51	100830	24 months	2009-07
Call Tester	CMU200	105900	-	-
Call Tester	CMU200	110735	-	-
BT Tester	CBT	100263	-	-
Vector Network Analyzer	AT8753ES	MY40001091	12 months	2008-08
Dielectric Probe Kit	HP85070B	US33020403	-	-

4.1.1 Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors 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 4 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 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: 20 mm Body diameter: 12 mm Tip diameter: 3.9 mm
Application	Distance from probe tip to dipole centers: 2.0 mm General dosimetry up to 4 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 recipe(s) were used for Head and Body tissue simulant(s):

800MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	39.74	55.97
HEC	0.25	1.21
Sugar	58.31	41.76
Preservative	0.15	0.27
Salt	1.55	0.79

1900MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	54.88	69.02
Butyl Diglycol	44.91	30.76
Salt	0.21	0.22

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	2.33	42.2	0.90	
	± 10% window	2.10 - 2.56			
	2008-06-26	2.53	42.3	0.92	21.9
1900	Reference result	10.3	40.2	1.47	
	± 10% window	9.3 - 11.3			
	2008-07-04	10.3	38.9	1.45	22.3

System checking, body 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	53.8	0.98	
	± 10% window	2.20 - 2.70			
	2008-06-30	2.40	53.9	0.96	21.9
1900	Reference result	10.5	51.7	1.57	
	± 10% window	9.4 - 11.6			
	2008-07-11	9.74	52.8	1.51	21.9

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	21.9
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2008-06-26	42.3	0.92	
1880	Recommended value	40.0	1.40	22.3
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2008-07-04	38.9	1.43	

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	55.2	0.97	21.9
	$\pm 5\%$ window	52.4 – 58.0	0.92 – 1.02	
	2008-06-30	53.8	0.96	
1880	Recommended value	53.3	1.52	21.9
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2008-07-11	52.8	1.48	

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 Section 1.2.2 using a separate flat spacer that was removed before the start of the measurements. The device was oriented with both sides facing the phantom to find the highest 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:

850 MHz Head SAR results

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch190 836.6 MHz	Ch 251 848.8 MHz
GSM	Power		30.0 dBm	29.9 dBm	28.4 dBm
Slide closed	Left	Cheek	-	0.407	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Power		28.2 dBm	27.9 dBm	25.8 dBm
Slide closed	Left	Cheek	-	0.496	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power		26.7 dBm	26.3 dBm	24.1 dBm
Slide closed	Left	Cheek	-	0.505	-
		Tilt	-	0.300	-
	Right	Cheek	0.545	0.525	0.417
		Tilt	-	0.247	-
3-slot GPRS	Power		27.6 dBm	27.2 dBm	25.5 dBm
Slide open	Left	Cheek	-	0.375	-
		Tilt	-	0.324	-
	Right	Cheek	-	0.383	-
		Tilt	-	0.258	-
3-slot 8PSK EGPRS	Power		21.9 dBm	21.8 dBm	19.3 dBm
Slide closed	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	0.123	-	-
		Tilt	-	-	-

850 MHz Head SAR results - continued

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Power		20.5 dBm	19.9 dBm	19.0 dBm
Slide closed	Left	Cheek	-	0.348	-
		Tilt	-	0.172	-
	Right	Cheek	0.356	0.357	0.307
		Tilt	-	0.177	-
WCDMA	Power		19.7 dBm	19.0 dBm	17.7 dBm
Slide open	Left	Cheek	-	0.259	-
		Tilt	-	0.197	-
	Right	Cheek	-	0.266	-
		Tilt	-	0.218	-
3-slot GPRS Slide closed	Right cheek, BT active		0.538	-	-

1900 MHz 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		27.6 dBm	28.0 dBm	28.0 dBm
Slide closed	Left	Cheek	-	0.325	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Power		24.8 dBm	25.3 dBm	25.5 dBm
Slide closed	Left	Cheek	-	0.342	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power		23.4 dBm	23.7 dBm	24.0 dBm
Slide closed	Left	Cheek	-	0.449	-
		Tilt	-	0.294	-
	Right	Cheek	0.445	0.462	0.481
		Tilt	-	0.311	-
3-slot GPRS	Power		23.2 dBm	23.9 dBm	24.1 dBm
Slide open	Left	Cheek	-	0.342	-
		Tilt	-	0.265	-
	Right	Cheek	-	0.396	-
		Tilt	-	0.257	-
3-slot 8PSK EGPRS	Power		20.0 dBm	20.8 dBm	20.7 dBm
Slide closed	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.144
		Tilt	-	-	-
3-slot GPRS Slide closed	Right cheek, BT active		-	-	0.452

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

850MHz Body SAR results

Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch190 836.6 MHz	Ch 251 848.8 MHz
3-slot GPRS	Power		26.7 dBm	26.3 dBm	24.1 dBm
Slide closed	Display facing phantom	Without headset	-	0.238	-
		Headset HS-83+AD-83	-	0.190	-
	Back facing phantom	Without headset	0.392	0.375	0.311
		Headset HS-83+AD-83	0.343	0.318	0.239
Option used	Device orientation	Test configuration	Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Power		19.7 dBm	19.0 dBm	17.7 dBm
Slide closed	Display facing phantom	Without headset	-	0.158	-
		Headset HS-83+AD-83	-	0.136	-
	Back facing phantom	Without headset	0.238	0.237	0.211
		Headset HS-83+AD-83	0.213	0.203	0.187
3-slot GPRS Slide closed	Back facing phantom	Without headset, BT active	0.390	-	-

1900MHz Body SAR results

Option used	Device orientation	Test configuration	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		23.4 dBm	23.7 dBm	24.0 dBm
Slide closed	Display facing phantom	Without headset	-	0.108	-
		Headset HS-83+AD-83	-	0.084	-
	Back facing phantom	Without headset	0.162	0.179	0.196
		Headset HS-83+AD-83	0.142	0.148	0.177
3-slot GPRS Slide closed	Back facing phantom	Without headset, BT active	-	-	0.180

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

See the following pages

Date/Time: 2008-06-26 10:24:03

Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

Maximum value of SAR (interpolated) = 2.70 mW/g

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

Reference Value = 54.9 V/m

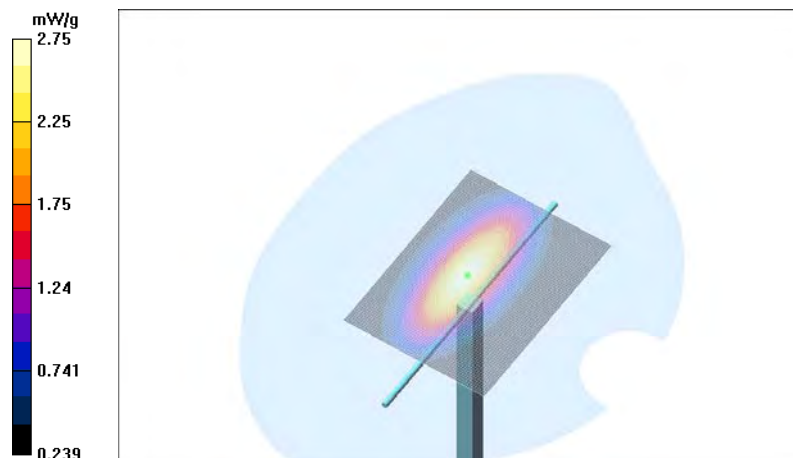
Peak SAR (extrapolated) = 3.83 W/kg

SAR(1 g) = 2.53 mW/g

SAR(10 g) = 1.63 mW/g

Power Drift = -0.004 dB

Maximum value of SAR (measured) = 2.75 mW/g



Date/Time: 2008-07-04 10:29:09

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, Pin=250mW/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 11.7 mW/g

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

Reference Value = 90.3 V/m

Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 10.3 mW/g

SAR(10 g) = 5.33 mW/g

Power Drift = 0.063 dB

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



Date/Time: 2008-06-30 09:51:29

Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

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

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

Reference Value = 52.5 V/m

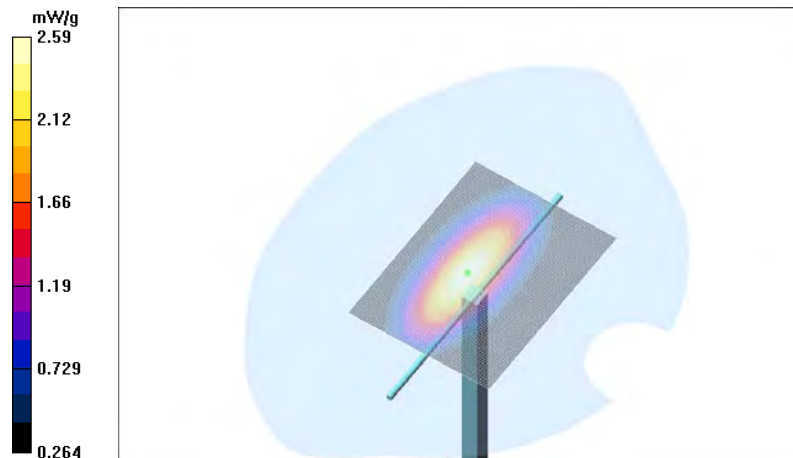
Peak SAR (extrapolated) = 3.46 W/kg

SAR(1 g) = 2.4 mW/g

SAR(10 g) = 1.59 mW/g

Power Drift = 0.004 dB

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



Date/Time: 2008-07-11 11:38:20

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d026

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, Pin=250mW/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 11.3 mW/g

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

Reference Value = 73.2 V/m

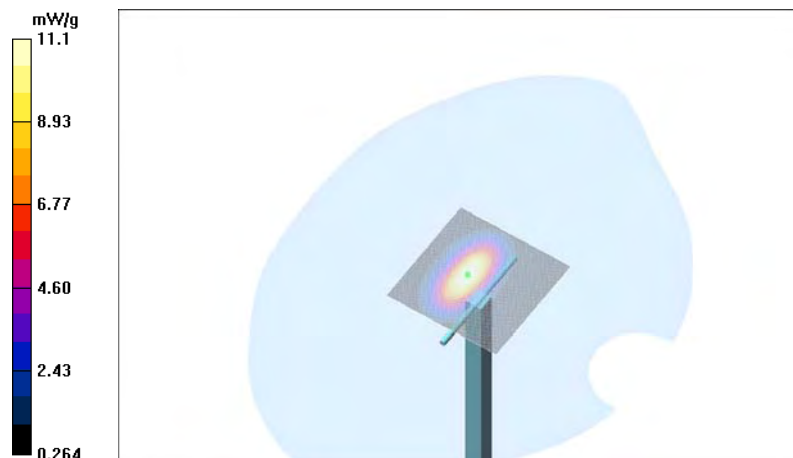
Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 9.74 mW/g

SAR(10 g) = 5.12 mW/g

Power Drift = 0.160 dB

Maximum value of SAR (measured) = 11.1 mW/g



APPENDIX B: MEASUREMENT SCANS

See the following pages

Date/Time: 2008-06-26 14:58:31

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 9.50 V/m

Peak SAR (extrapolated) = 0.640 W/kg

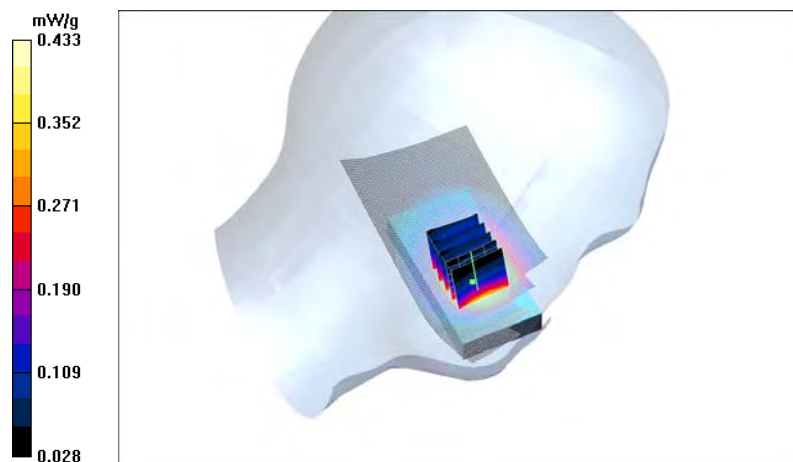
SAR(1 g) = 0.407 mW/g

SAR(10 g) = 0.277 mW/g

Power Drift = -0.057 dB

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) = 0.433 mW/g



Date/Time: 2008-06-26 15:23:35

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.522 mW/g

Cheek position - Middle - Slide Closed/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.3 V/m

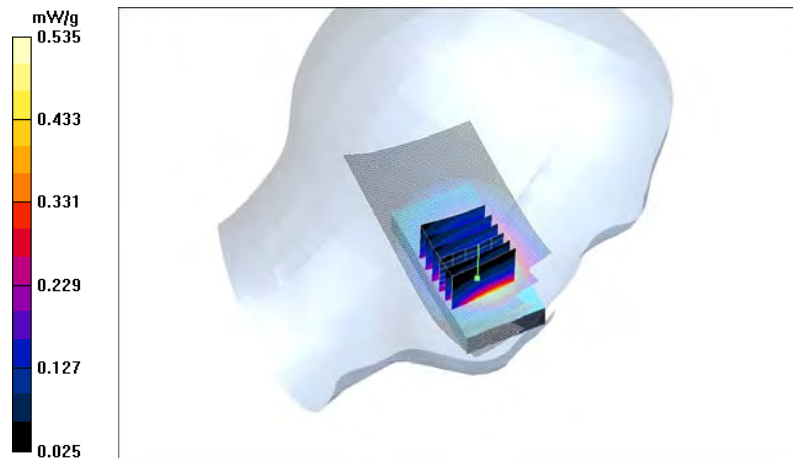
Peak SAR (extrapolated) = 0.755 W/kg

SAR(1 g) = 0.496 mW/g

SAR(10 g) = 0.336 mW/g

Power Drift = 0.004 dB

Maximum value of SAR (measured) = 0.535 mW/g



Date/Time: 2008-06-26 15:43:59

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.538 mW/g

Cheek position - Middle - Slide Closed/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.5 V/m

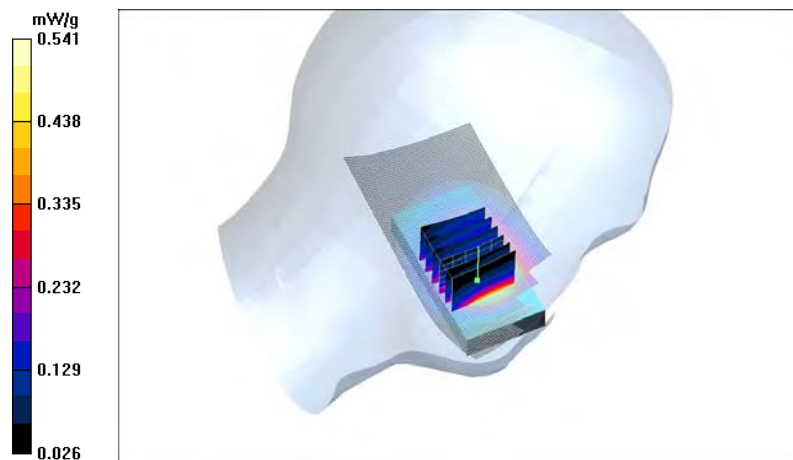
Peak SAR (extrapolated) = 0.768 W/kg

SAR(1 g) = 0.505 mW/g

SAR(10 g) = 0.345 mW/g

Power Drift = -0.046 dB

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



Date/Time: 2008-06-26 16:02:11

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

Tilt position - Middle - Slide Closed/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.8 V/m

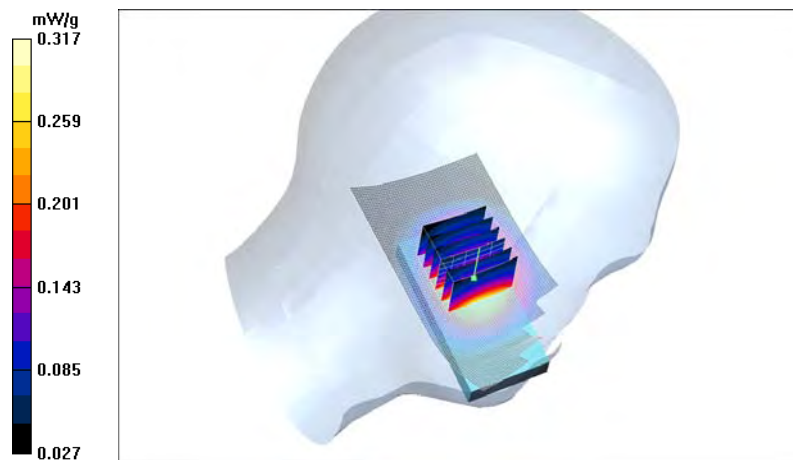
Peak SAR (extrapolated) = 0.382 W/kg

SAR(1 g) = 0.300 mW/g

SAR(10 g) = 0.220 mW/g

Power Drift = 0.029 dB

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



Date/Time: 2008-06-26 18:33:13

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Low - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.590 mW/g

Cheek position - Low - Slide Closed/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.55 V/m

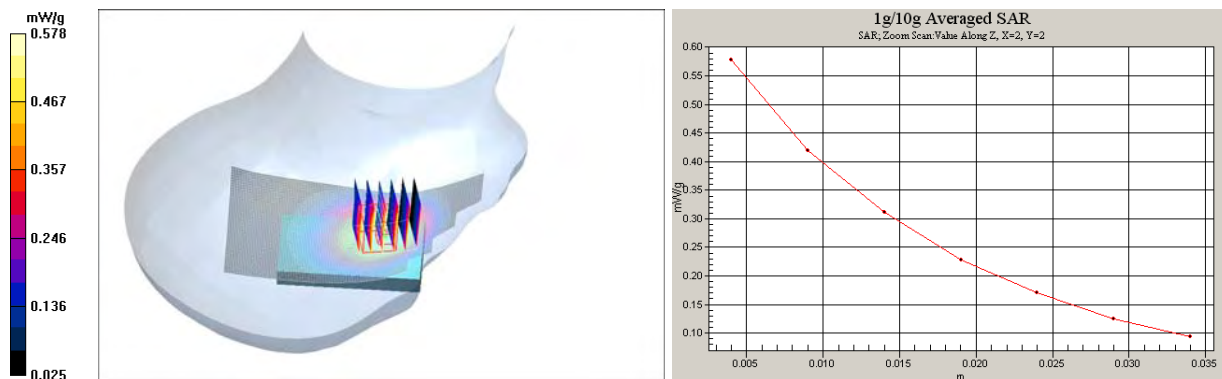
Peak SAR (extrapolated) = 0.790 W/kg

SAR(1 g) = 0.545 mW/g

SAR(10 g) = 0.391 mW/g

Power Drift = -0.079 dB

Maximum value of SAR (measured) = 0.578 mW/g



Date/Time: 2008-06-26 17:39:37

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 12.3 V/m

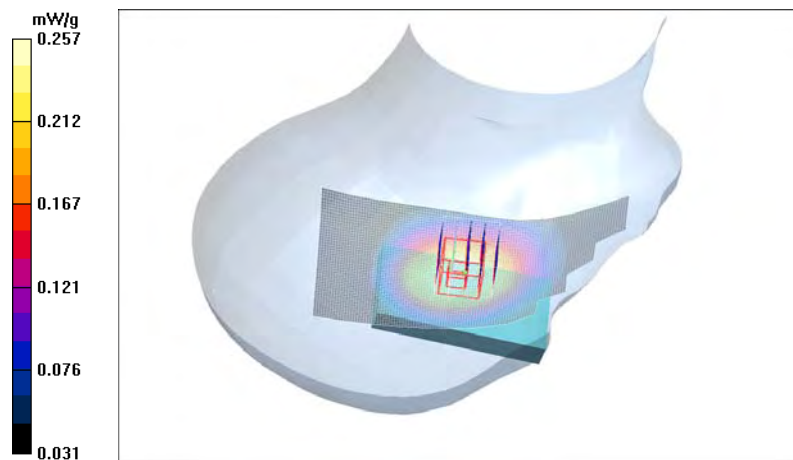
Peak SAR (extrapolated) = 0.314 W/kg

SAR(1 g) = 0.247 mW/g

SAR(10 g) = 0.183 mW/g

Power Drift = 0.062 dB

Maximum value of SAR (measured) = 0.257 mW/g



Date/Time: 2008-06-26 16:22:06

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek position - Middle - Slide Open/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.12 V/m

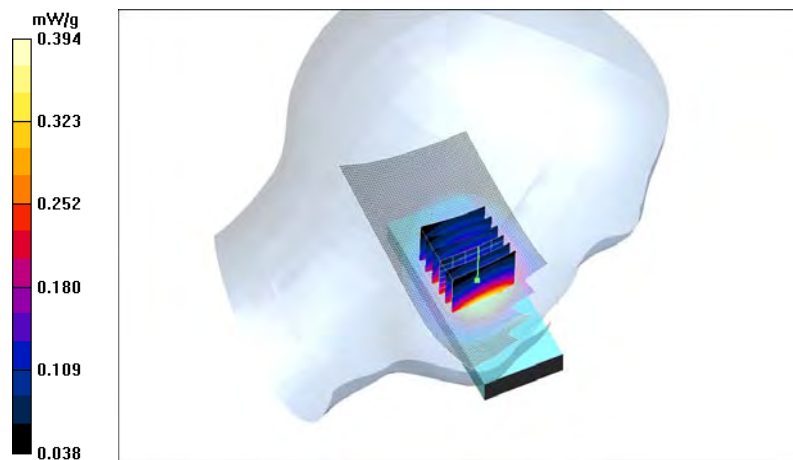
Peak SAR (extrapolated) = 0.485 W/kg

SAR(1 g) = 0.375 mW/g

SAR(10 g) = 0.276 mW/g

Power Drift = 0.142 dB

Maximum value of SAR (measured) = 0.394 mW/g



Date/Time: 2008-06-26 16:39:16

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.339 mW/g

Tilt position - Middle - Slide Open/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.0 V/m

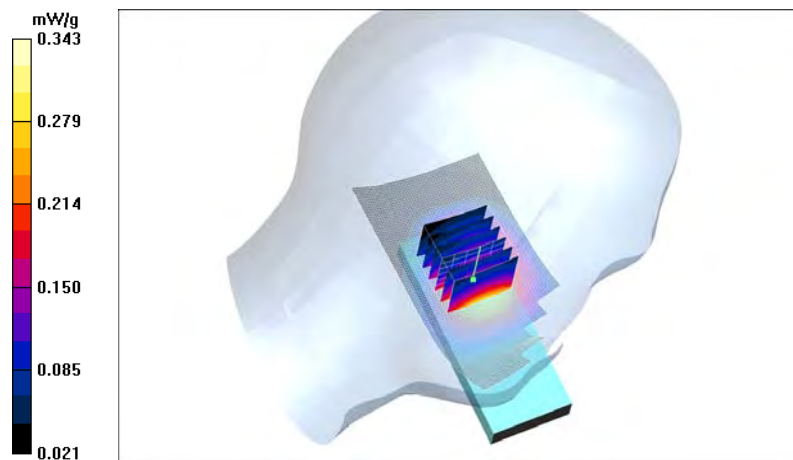
Peak SAR (extrapolated) = 0.416 W/kg

SAR(1 g) = 0.324 mW/g

SAR(10 g) = 0.236 mW/g

Power Drift = 0.011 dB

Maximum value of SAR (measured) = 0.343 mW/g



Date/Time: 2008-06-26 17:53:48

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.407 mW/g

Cheek position - Middle - Slide Open/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.2 V/m

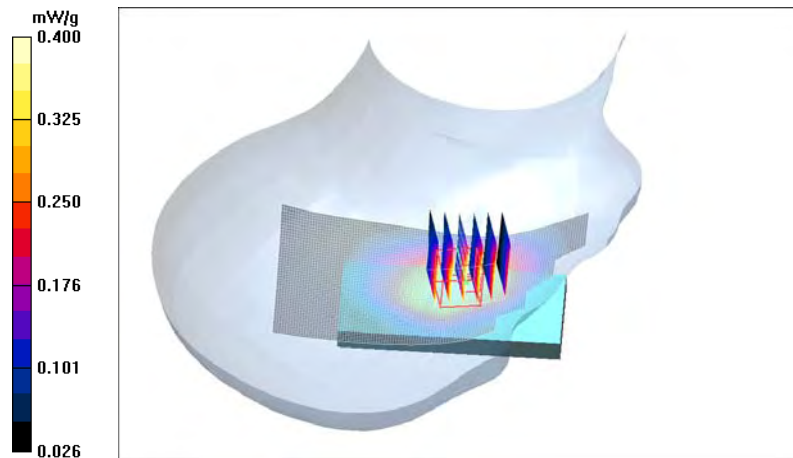
Peak SAR (extrapolated) = 0.505 W/kg

SAR(1 g) = 0.383 mW/g

SAR(10 g) = 0.282 mW/g

Power Drift = -0.021 dB

Maximum value of SAR (measured) = 0.400 mW/g



Date/Time: 2008-06-26 18:08:02

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 13.4 V/m

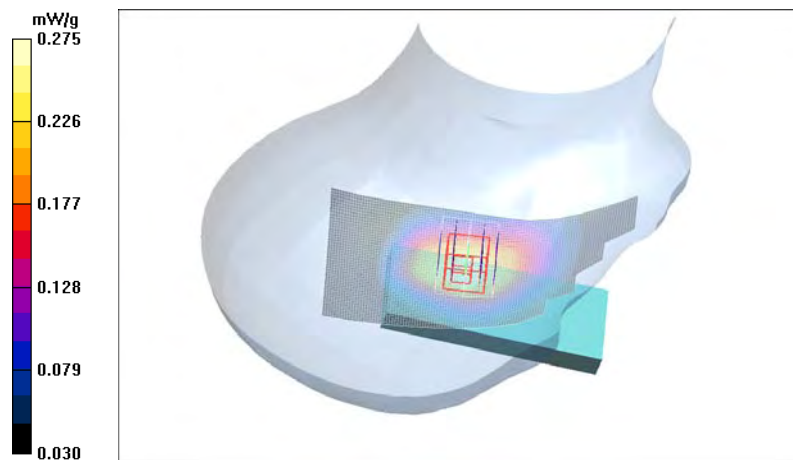
Peak SAR (extrapolated) = 0.337 W/kg

SAR(1 g) = 0.258 mW/g

SAR(10 g) = 0.187 mW/g

Power Drift = -0.043 dB

Maximum value of SAR (measured) = 0.275 mW/g



Date/Time: 2008-06-26 19:27:08

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot 8PSK EGPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Low - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.132 mW/g

Cheek position - Low - Slide Closed/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.47 V/m

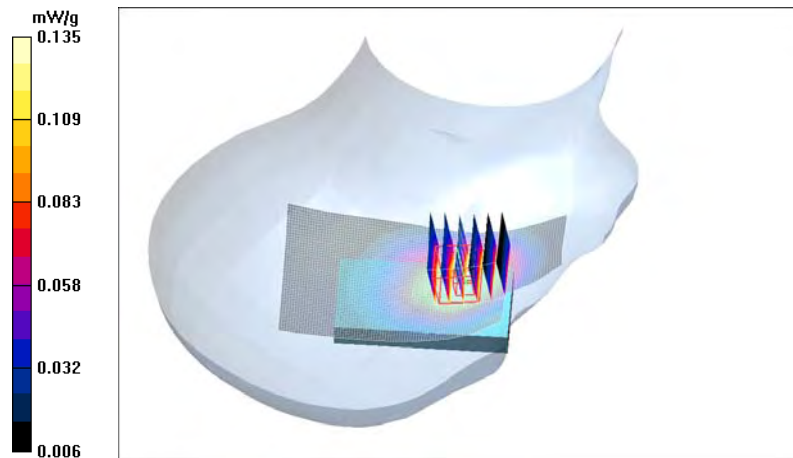
Peak SAR (extrapolated) = 0.181 W/kg

SAR(1 g) = 0.123 mW/g

SAR(10 g) = 0.085 mW/g

Power Drift = -0.327 dB

Maximum value of SAR (measured) = 0.135 mW/g



Date/Time: 2008-06-26 11:27:30

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.393 mW/g

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

Reference Value = 8.62 V/m

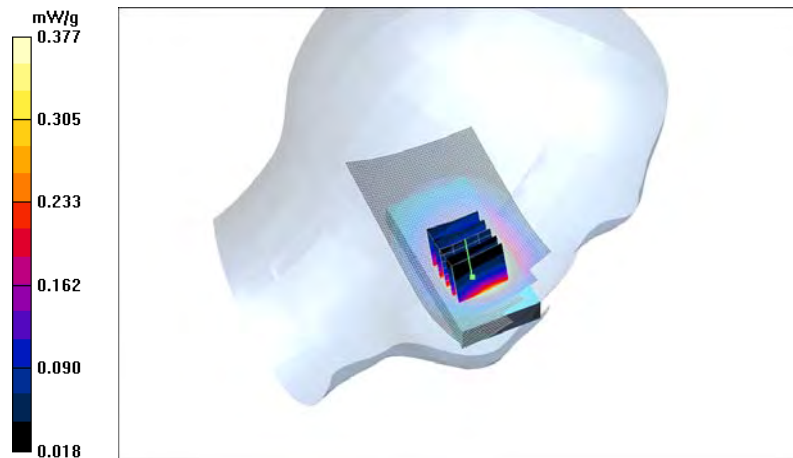
Peak SAR (extrapolated) = 0.544 W/kg

SAR(1 g) = 0.348 mW/g

SAR(10 g) = 0.231 mW/g

Power Drift = -0.321 dB

Maximum value of SAR (measured) = 0.377 mW/g



Date/Time: 2008-06-26 11:41:11

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.181 mW/g

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

Reference Value = 10.5 V/m

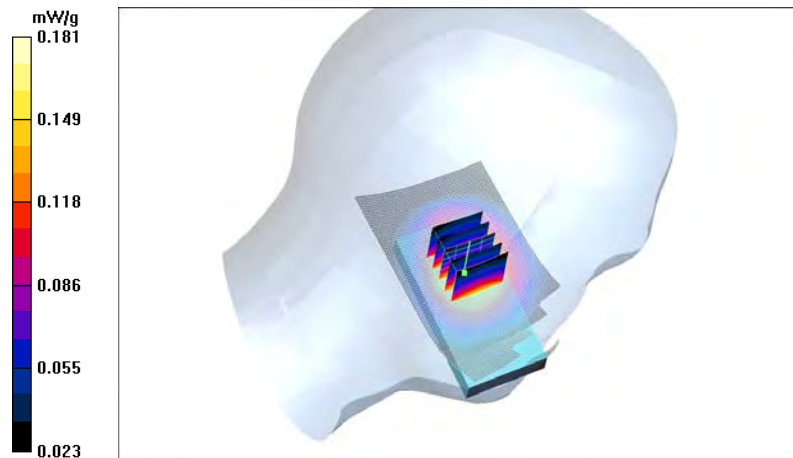
Peak SAR (extrapolated) = 0.219 W/kg

SAR(1 g) = 0.172 mW/g

SAR(10 g) = 0.126 mW/g

Power Drift = 0.052 dB

Maximum value of SAR (measured) = 0.181 mW/g



Date/Time: 2008-06-26 12:33:49

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 9.24 V/m

Peak SAR (extrapolated) = 0.551 W/kg

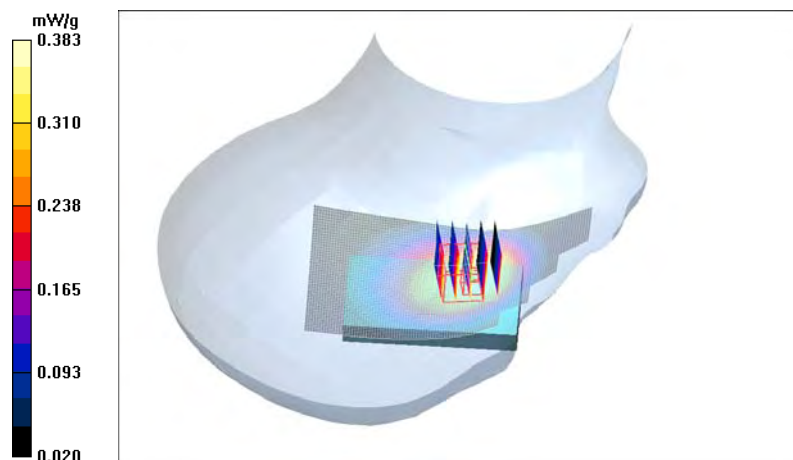
SAR(1 g) = 0.357 mW/g

SAR(10 g) = 0.251 mW/g

Power Drift = -0.198 dB

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) = 0.383 mW/g



Date/Time: 2008-06-26 12:49:01

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 11.0 V/m

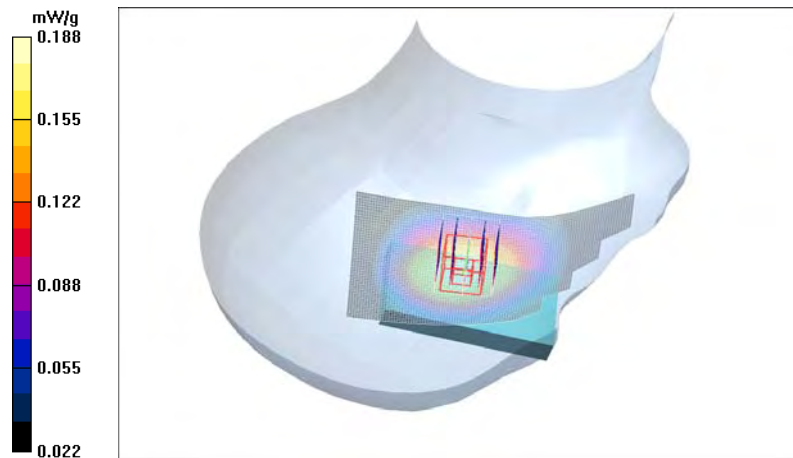
Peak SAR (extrapolated) = 0.227 W/kg

SAR(1 g) = 0.177 mW/g

SAR(10 g) = 0.131 mW/g

Power Drift = 0.096 dB

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



Date/Time: 2008-06-26 11:53:32

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.275 mW/g

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

Reference Value = 7.44 V/m

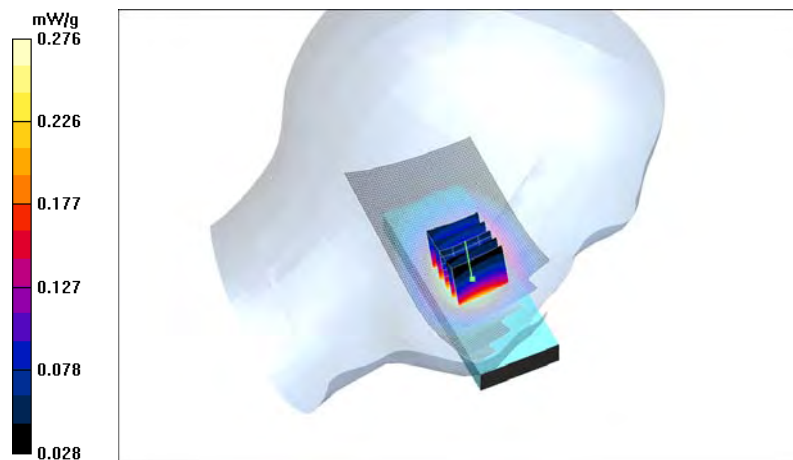
Peak SAR (extrapolated) = 0.336 W/kg

SAR(1 g) = 0.259 mW/g

SAR(10 g) = 0.191 mW/g

Power Drift = 0.125 dB

Maximum value of SAR (measured) = 0.276 mW/g



Date/Time: 2008-06-26 12:09:50

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 11.3 V/m

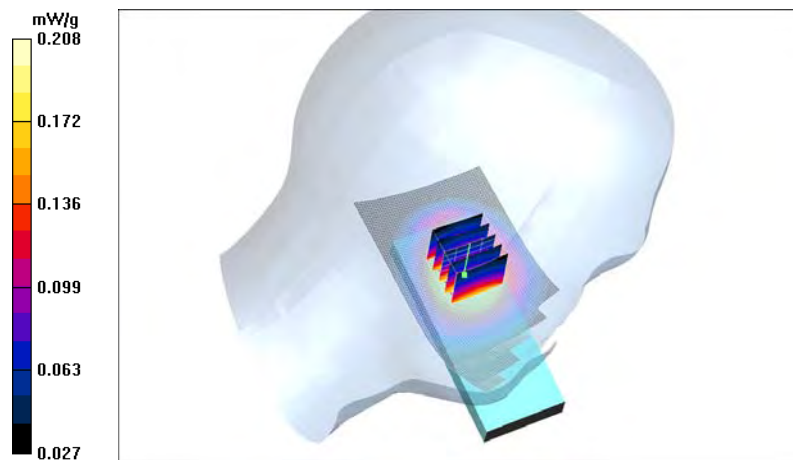
Peak SAR (extrapolated) = 0.248 W/kg

SAR(1 g) = 0.197 mW/g

SAR(10 g) = 0.146 mW/g

Power Drift = -0.010 dB

Maximum value of SAR (measured) = 0.208 mW/g



Date/Time: 2008-06-26 13:06:44

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.283 mW/g

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

Reference Value = 7.51 V/m

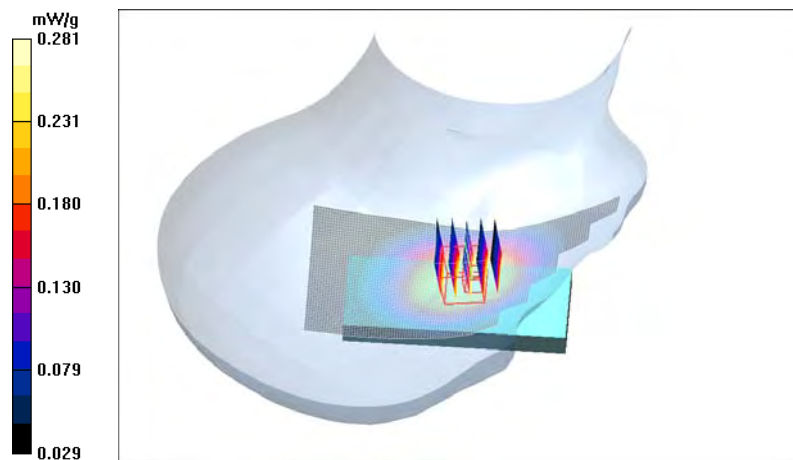
Peak SAR (extrapolated) = 0.340 W/kg

SAR(1 g) = 0.266 mW/g

SAR(10 g) = 0.199 mW/g

Power Drift = 0.148 dB

Maximum value of SAR (measured) = 0.281 mW/g



Date/Time: 2008-06-26 13:21:04

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ mho/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.232 mW/g

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

Reference Value = 10.5 V/m

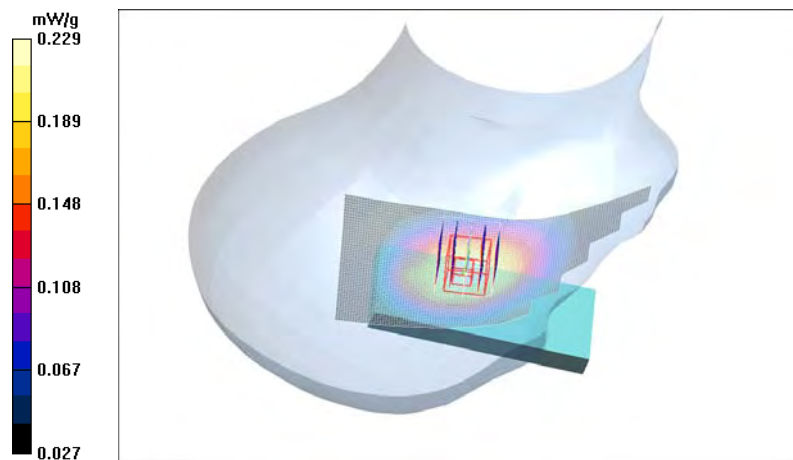
Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.218 mW/g

SAR(10 g) = 0.164 mW/g

Power Drift = 0.045 dB

Maximum value of SAR (measured) = 0.229 mW/g



Date/Time: 2008-06-26 19:05:50

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r = 42.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(6.01, 6.01, 6.01); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Low - Slide Closed - BT active/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek position - Low - Slide Closed - BT active/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.35 V/m

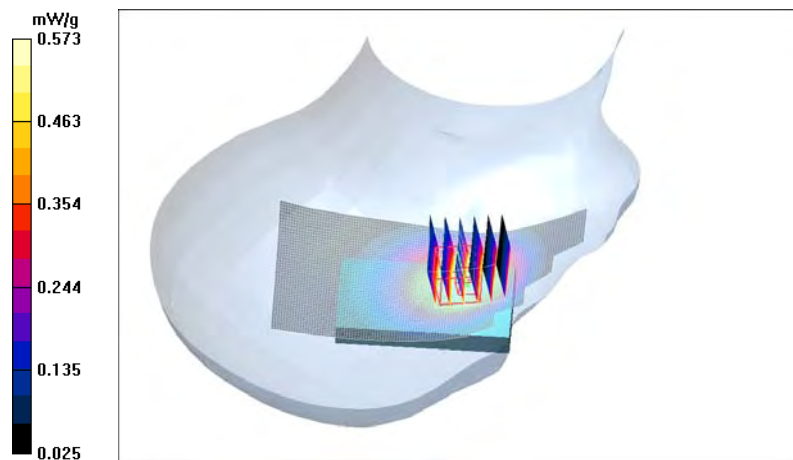
Peak SAR (extrapolated) = 0.785 W/kg

SAR(1 g) = 0.538 mW/g

SAR(10 g) = 0.385 mW/g

Power Drift = 0.019 dB

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



Date/Time: 2008-07-04 11:46:51

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.400 mW/g

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

Reference Value = 8.76 V/m

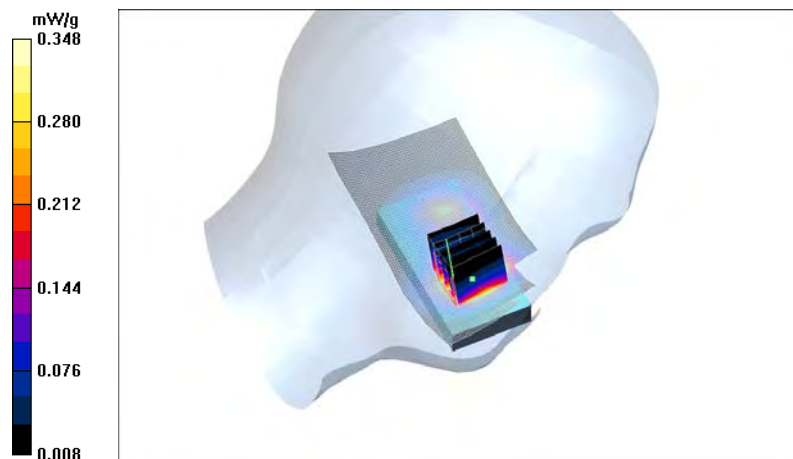
Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.325 mW/g

SAR(10 g) = 0.199 mW/g

Power Drift = -0.199 dB

Maximum value of SAR (measured) = 0.348 mW/g



Date/Time: 2008-07-04 12:08:25

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.415 mW/g

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

Reference Value = 8.79 V/m

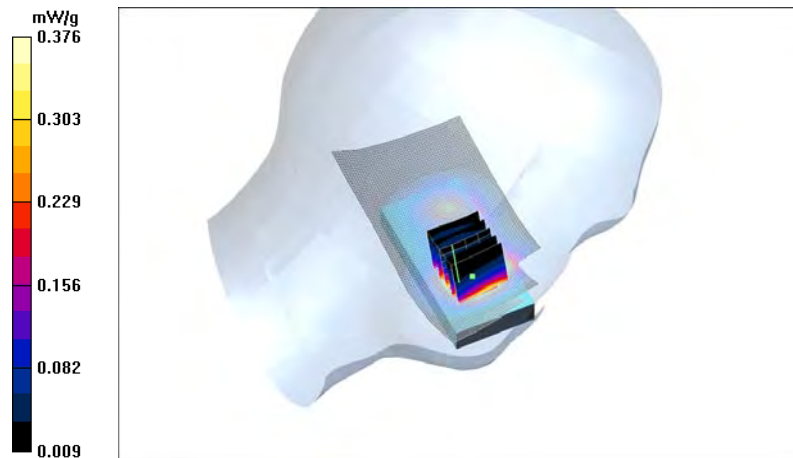
Peak SAR (extrapolated) = 0.574 W/kg

SAR(1 g) = 0.342 mW/g

SAR(10 g) = 0.209 mW/g

Power Drift = -0.010 dB

Maximum value of SAR (measured) = 0.376 mW/g



Date/Time: 2008-07-04 12:26:46

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.553 mW/g

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

Reference Value = 8.75 V/m

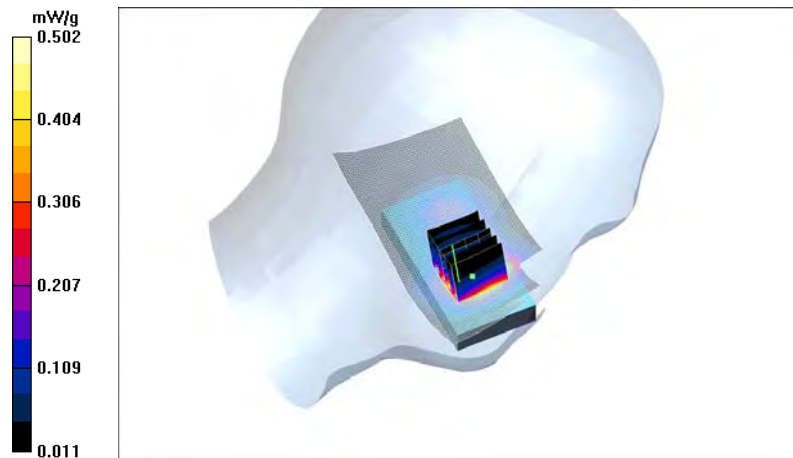
Peak SAR (extrapolated) = 0.761 W/kg

SAR(1 g) = 0.449 mW/g

SAR(10 g) = 0.270 mW/g

Power Drift = -0.095 dB

Maximum value of SAR (measured) = 0.502 mW/g



Date/Time: 2008-07-04 12:44:25

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.369 mW/g

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

Reference Value = 12.7 V/m

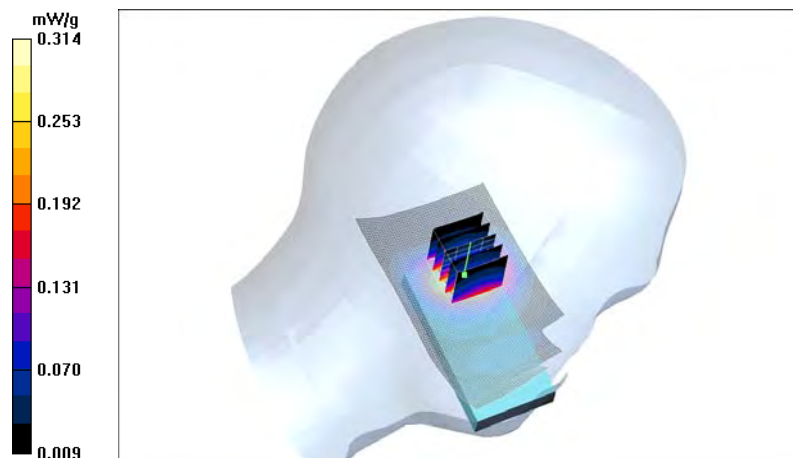
Peak SAR (extrapolated) = 0.431 W/kg

SAR(1 g) = 0.294 mW/g

SAR(10 g) = 0.182 mW/g

Power Drift = -0.253 dB

Maximum value of SAR (measured) = 0.314 mW/g



Date/Time: 2008-07-04 14:28:55

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - High - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.653 mW/g

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

Reference Value = 7.72 V/m

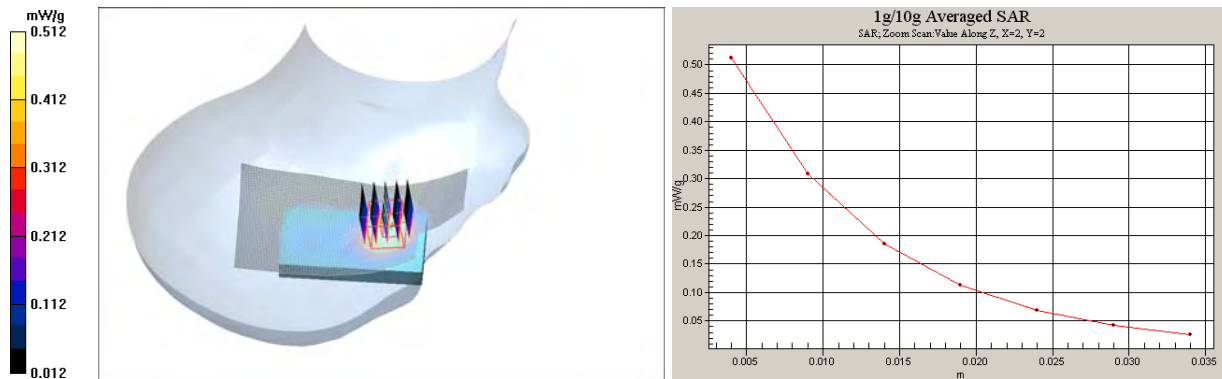
Peak SAR (extrapolated) = 0.798 W/kg

SAR(1 g) = 0.481 mW/g

SAR(10 g) = 0.279 mW/g

Power Drift = 0.123 dB

Maximum value of SAR (measured) = 0.512 mW/g



Date/Time: 2008-07-04 14:51:09

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.379 mW/g

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

Reference Value = 13.2 V/m

Peak SAR (extrapolated) = 0.463 W/kg

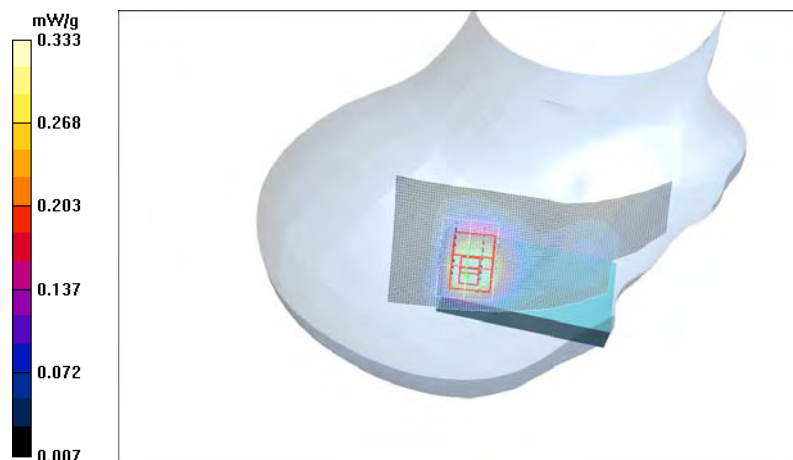
SAR(1 g) = 0.311 mW/g

SAR(10 g) = 0.191 mW/g

Power Drift = -0.065 dB

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) = 0.333 mW/g



Date/Time: 2008-07-04 13:01:04

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 7.48 V/m

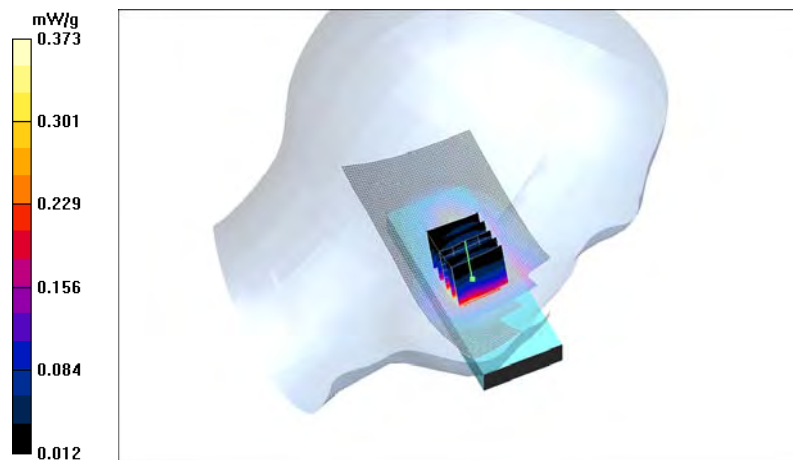
Peak SAR (extrapolated) = 0.516 W/kg

SAR(1 g) = 0.342 mW/g

SAR(10 g) = 0.211 mW/g

Power Drift = 0.004 dB

Maximum value of SAR (measured) = 0.373 mW/g



Date/Time: 2008-07-04 13:17:01

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 10.9 V/m

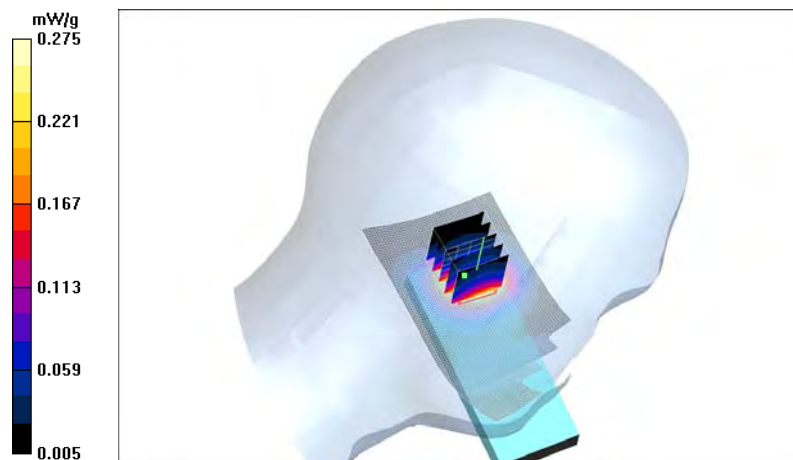
Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.265 mW/g

SAR(10 g) = 0.164 mW/g

Power Drift = -0.028 dB

Maximum value of SAR (measured) = 0.275 mW/g



Date/Time: 2008-07-04 15:05:40

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 6.57 V/m

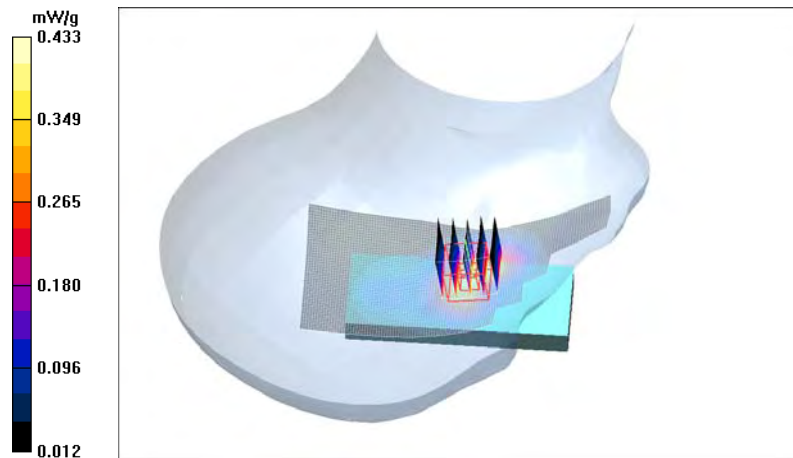
Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.396 mW/g

SAR(10 g) = 0.238 mW/g

Power Drift = 0.102 dB

Maximum value of SAR (measured) = 0.433 mW/g



Date/Time: 2008-07-04 15:46:46

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle - Slide Open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.330 mW/g

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

Reference Value = 11.8 V/m

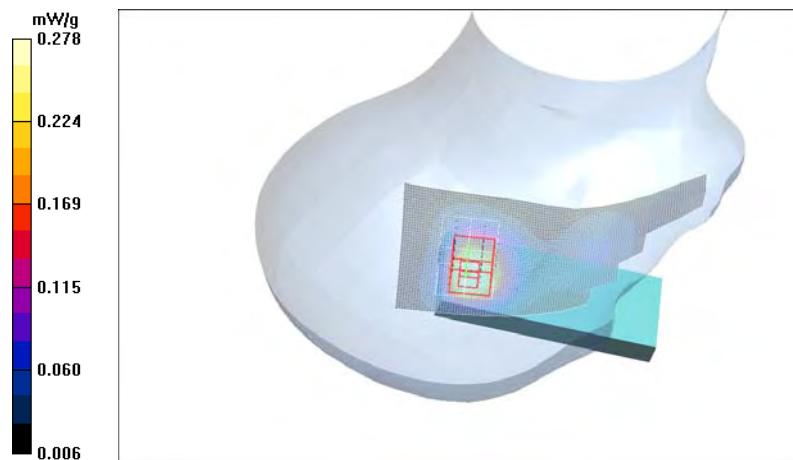
Peak SAR (extrapolated) = 0.382 W/kg

SAR(1 g) = 0.257 mW/g

SAR(10 g) = 0.157 mW/g

Power Drift = -0.084 dB

Maximum value of SAR (measured) = 0.278 mW/g



Date/Time: 2008-07-04 17:29:52

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot 8PSK EGPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - High - Slide Closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.194 mW/g

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

Reference Value = 5.06 V/m

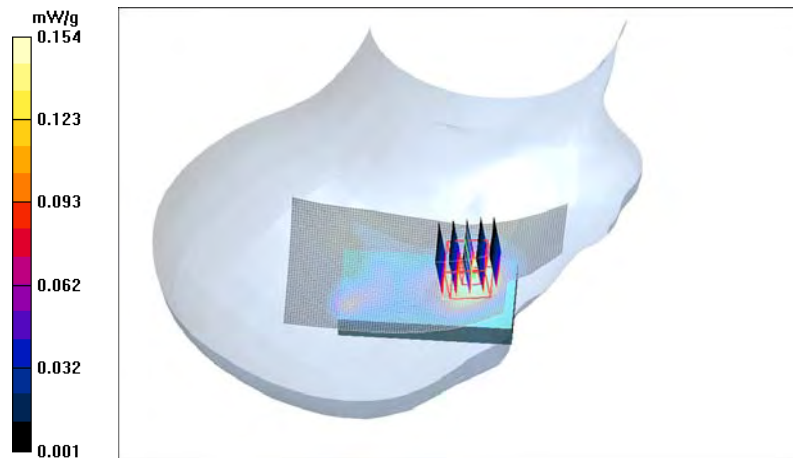
Peak SAR (extrapolated) = 0.366 W/kg

SAR(1 g) = 0.144 mW/g

SAR(10 g) = 0.080 mW/g

Power Drift = -0.151 dB

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



Date/Time: 2008-07-04 16:35:21

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.05, 5.05, 5.05); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - High - Slide Closed - BT active/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.608 mW/g

Cheek position - High - Slide Closed - BT active/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.71 V/m

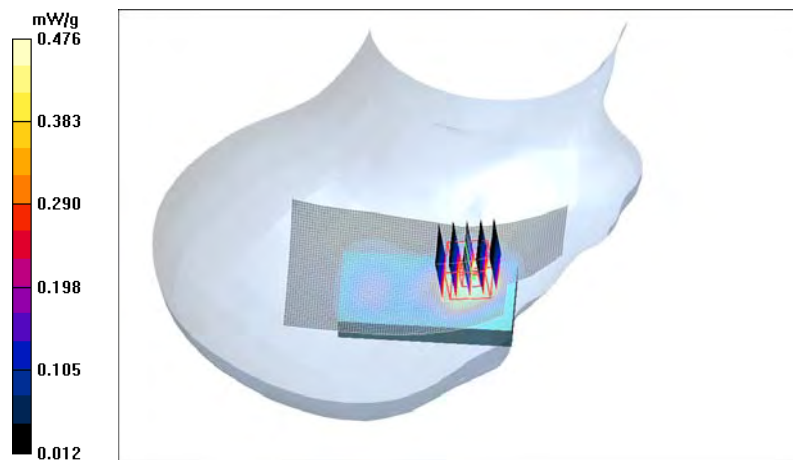
Peak SAR (extrapolated) = 0.735 W/kg

SAR(1 g) = 0.452 mW/g

SAR(10 g) = 0.261 mW/g

Power Drift = 0.093 dB

Maximum value of SAR (measured) = 0.476 mW/g



Date/Time: 2008-06-30 19:17:12

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.962$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - No Accessory – Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.261 mW/g

Body - Middle - No Accessory - Slide Closed - Display Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement

grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.18 V/m

Peak SAR (extrapolated) = 0.326 W/kg

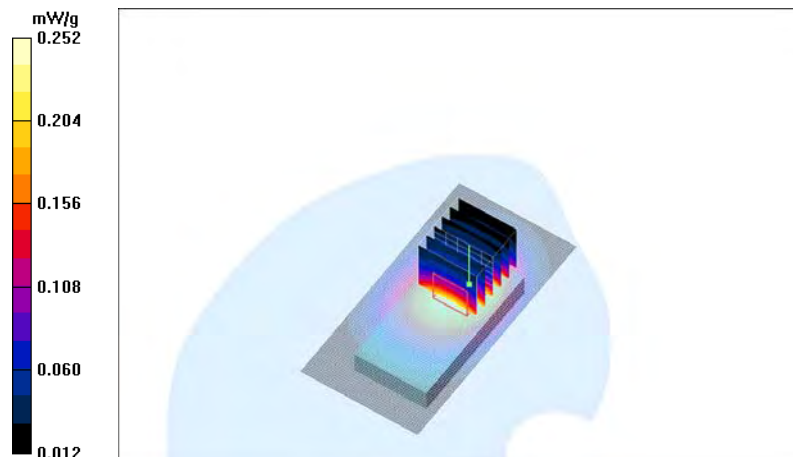
SAR(1 g) = 0.238 mW/g

SAR(10 g) = 0.167 mW/g

Power Drift = -0.269 dB

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) = 0.252 mW/g



Date/Time: 2008-06-30 19:41:13

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.962$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - HS-83+AD-83 - Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

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

Body - Middle - HS-83+AD-83 - Slide Closed - Display Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.64 V/m

Peak SAR (extrapolated) = 0.264 W/kg

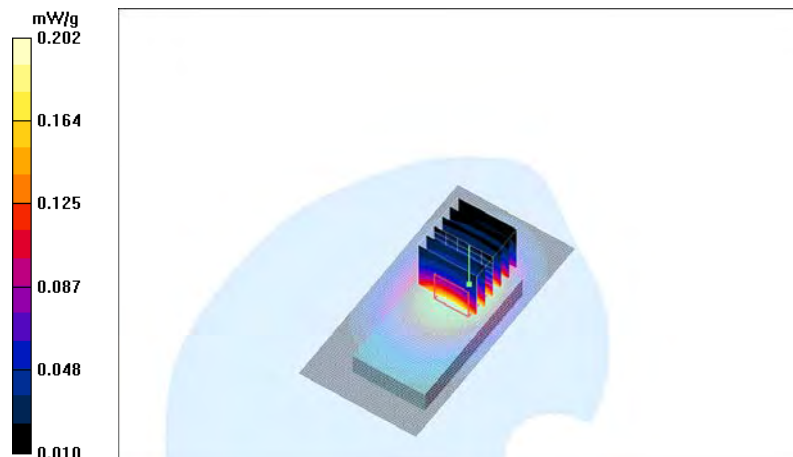
SAR(1 g) = 0.190 mW/g

SAR(10 g) = 0.134 mW/g

Power Drift = 0.060 dB

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) = 0.202 mW/g



Date/Time: 2008-06-30 21:00:32

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - No Accessory - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.422 mW/g

Body - Low - No Accessory - Slide Closed - Back Facing Phantom/Zoom Scan (7x7x8)/Cube 0: Measurement grid:

$dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.03 V/m

Peak SAR (extrapolated) = 0.542 W/kg

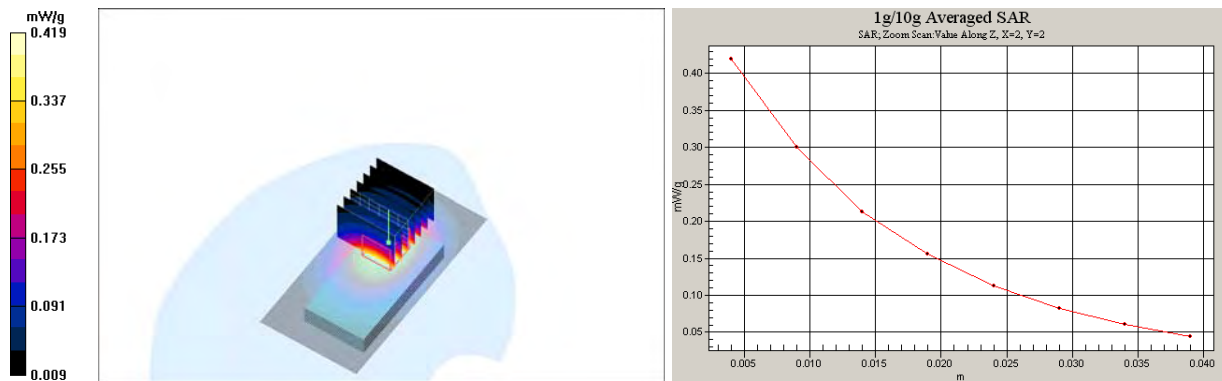
SAR(1 g) = 0.392 mW/g

SAR(10 g) = 0.273 mW/g

Power Drift = -0.006 dB

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) = 0.419 mW/g



Date/Time: 2008-06-30 20:47:08

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.372 mW/g

Body - Low - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement grid:

$dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.89 V/m

Peak SAR (extrapolated) = 0.483 W/kg

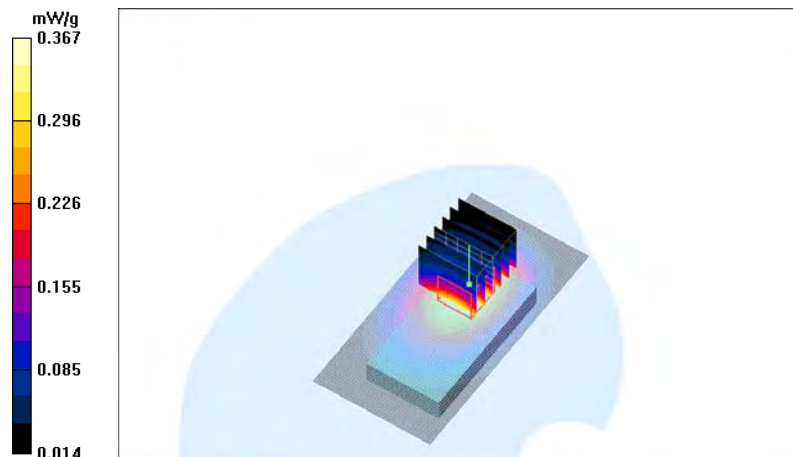
SAR(1 g) = 0.343 mW/g

SAR(10 g) = 0.239 mW/g

Power Drift = -0.004 dB

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) = 0.367 mW/g



Date/Time: 2008-06-30 15:38:30

Test Laboratory: TCC Nokia
Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - No Accessory - Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.176 mW/g

Body - Middle - No Accessory - Slide Closed - Display Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.95 V/m

Peak SAR (extrapolated) = 0.215 W/kg

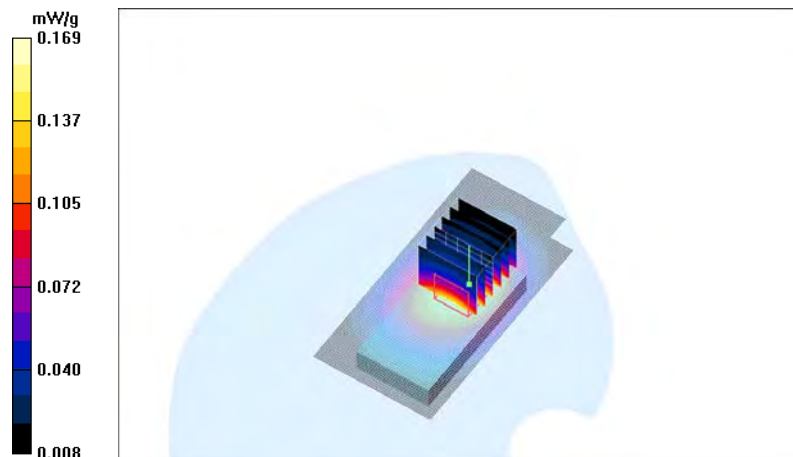
SAR(1 g) = 0.158 mW/g

SAR(10 g) = 0.111 mW/g

Power Drift = -0.320 dB

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) = 0.169 mW/g



Date/Time: 2008-06-30 16:07:12

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle – HS-83+AD-83 - Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.146 mW/g

Body - Middle – HS-83+AD-83 - Slide Closed - Display Facing Phantom/Zoom Scan (6x6x8)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.79 V/m

Peak SAR (extrapolated) = 0.187 W/kg

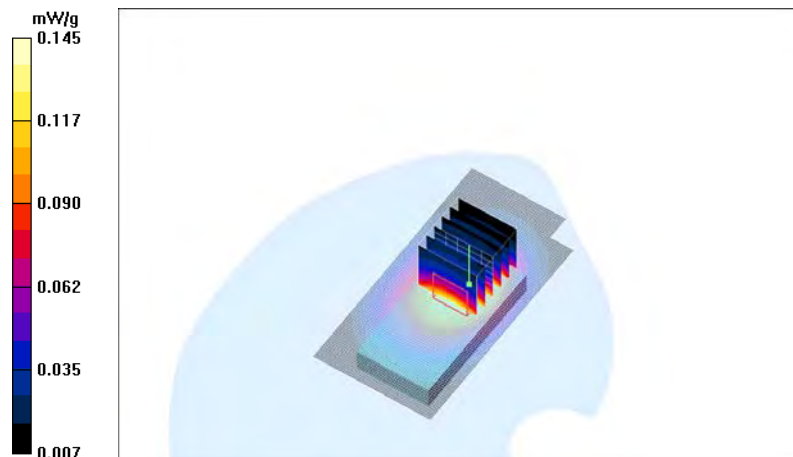
SAR(1 g) = 0.136 mW/g

SAR(10 g) = 0.096 mW/g

Power Drift = 0.235 dB

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) = 0.145 mW/g



Date/Time: 2008-06-30 17:11:24

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.952$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - No Accessory - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.260 mW/g

Body - Low - No Accessory - Slide Closed - Back Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement grid:

$dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.10 V/m

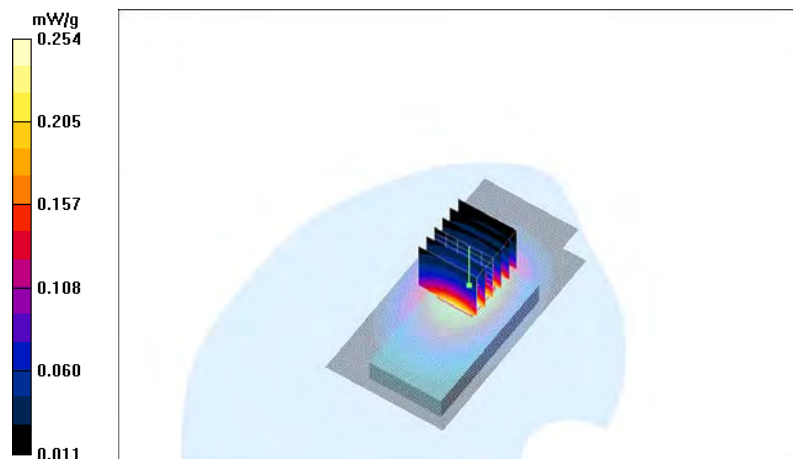
Peak SAR (extrapolated) = 0.330 W/kg

SAR(1 g) = 0.238 mW/g

SAR(10 g) = 0.166 mW/g

Power Drift = 0.186 dB

Maximum value of SAR (measured) = 0.254 mW/g



Date/Time: 2008-06-30 18:11:12

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.952$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

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

Body - Low - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Zoom Scan (6x6x8)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.55 V/m

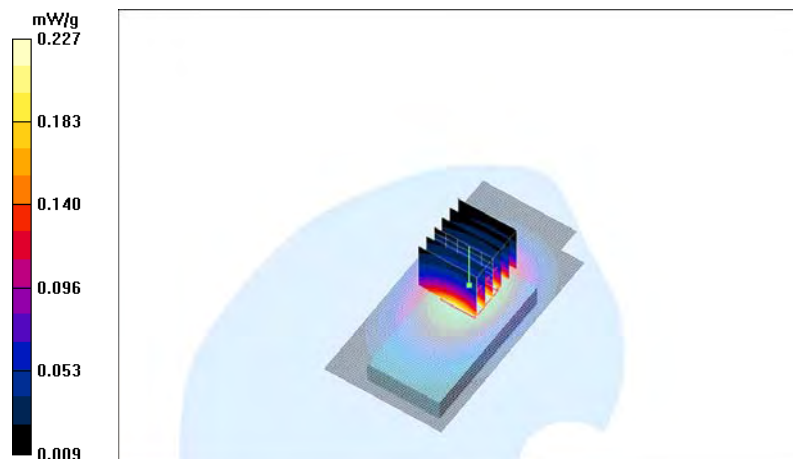
Peak SAR (extrapolated) = 0.294 W/kg

SAR(1 g) = 0.213 mW/g

SAR(10 g) = 0.149 mW/g

Power Drift = -0.075 dB

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



Date/Time: 2008-06-30 21:17:42

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS850

Frequency: 824.2 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.74, 5.74, 5.74); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - No Accessory - Slide Closed - Back Facing Phantom - BT active/Area Scan (51x101x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.422 mW/g

Body - Low - No Accessory - Slide Closed - Back Facing Phantom - BT active/Zoom Scan (7x7x8)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.98 V/m

Peak SAR (extrapolated) = 0.537 W/kg

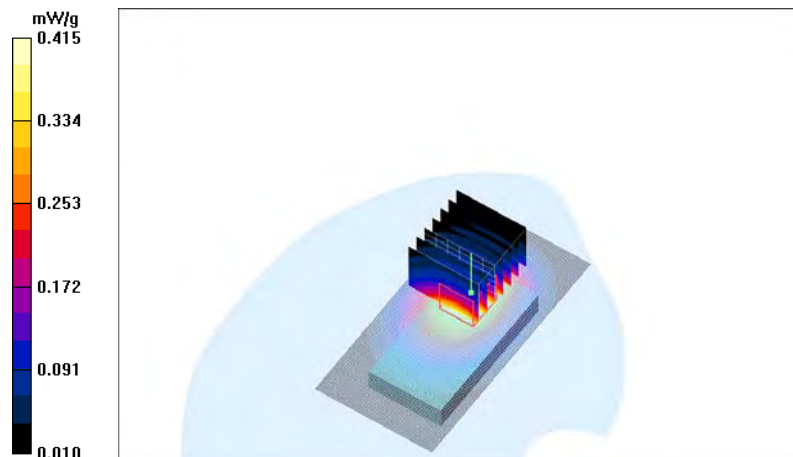
SAR(1 g) = 0.390 mW/g

SAR(10 g) = 0.272 mW/g

Power Drift = -0.031 dB

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) = 0.415 mW/g



Date/Time: 2008-07-11 12:54:47

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - No Accessory - Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.124 mW/g

Body - Middle - No Accessory - Slide Closed - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.88 V/m

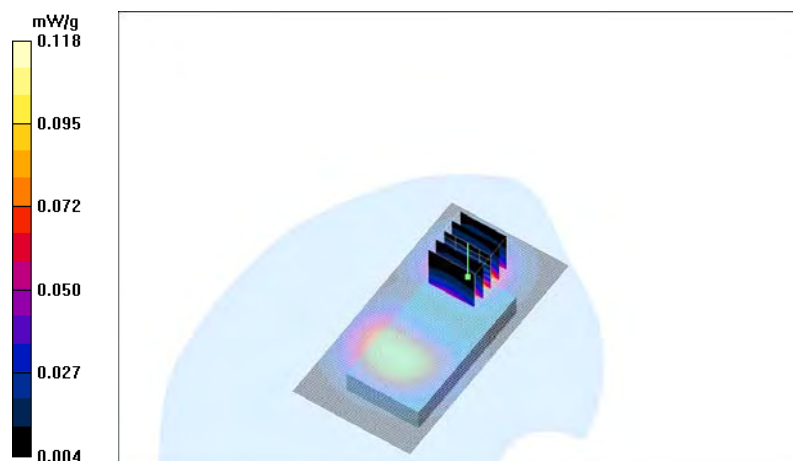
Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.108 mW/g

SAR(10 g) = 0.062 mW/g

Power Drift = -0.049 dB

Maximum value of SAR (measured) = 0.118 mW/g



Date/Time: 2008-07-11 13:11:58

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - HS-83+AD-83 - Slide Closed - Display Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.093 mW/g

Body - Middle - HS-83+AD-83 - Slide Closed - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.48 V/m

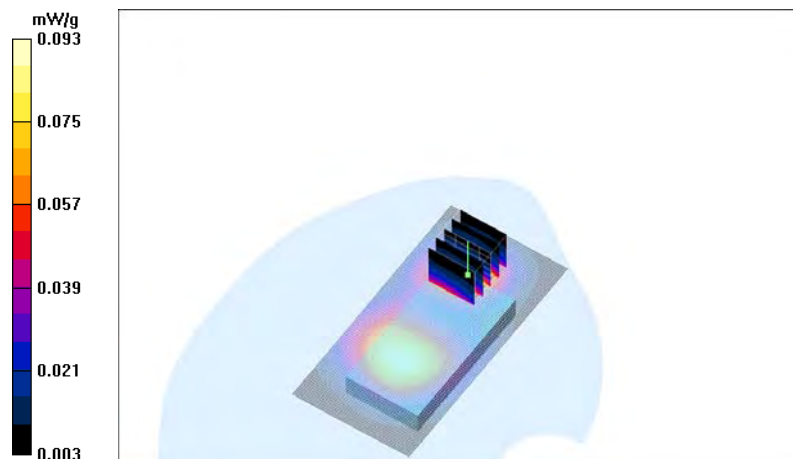
Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.084 mW/g

SAR(10 g) = 0.048 mW/g

Power Drift = -0.056 dB

Maximum value of SAR (measured) = 0.093 mW/g



Date/Time: 2008-07-11 14:40:24

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - High - No Accessory - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.244 mW/g

Body - High - No Accessory - Slide Closed - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.63 V/m

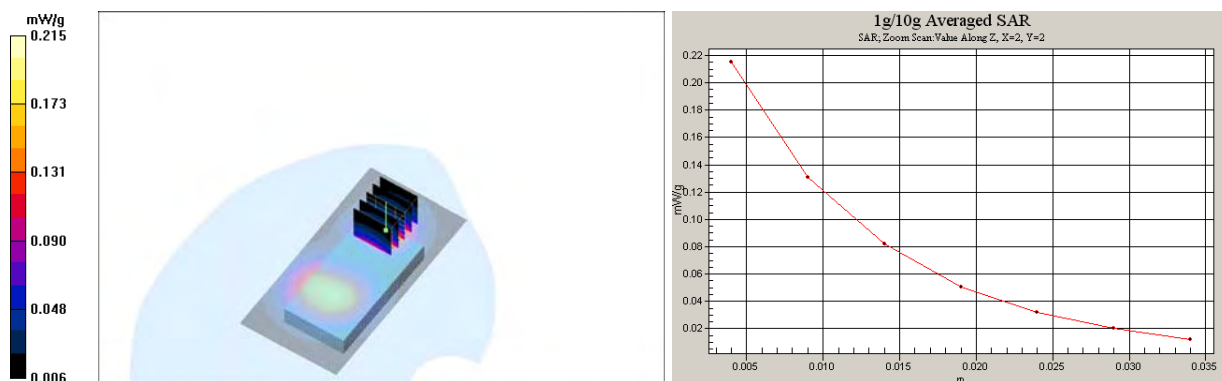
Peak SAR (extrapolated) = 0.333 W/kg

SAR(1 g) = 0.196 mW/g

SAR(10 g) = 0.110 mW/g

Power Drift = -0.044 dB

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



Date/Time: 2008-07-11 15:01:14

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - High - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Area Scan (51x101x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.195 mW/g

Body - High - HS-83+AD-83 - Slide Closed - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.15 V/m

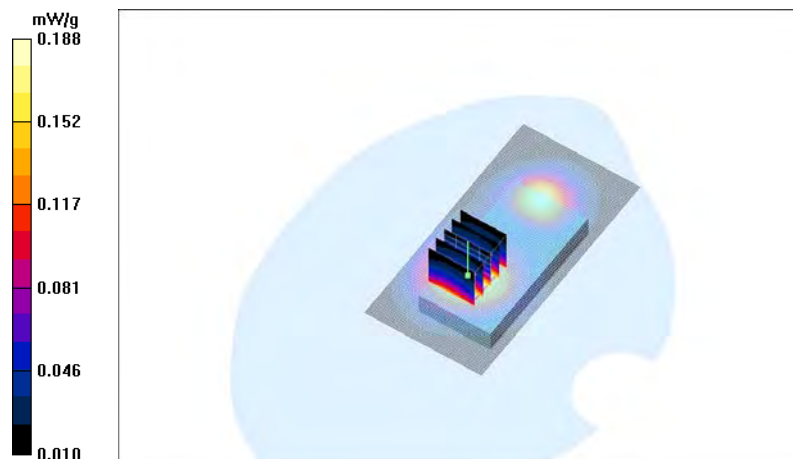
Peak SAR (extrapolated) = 0.261 W/kg

SAR(1 g) = 0.177 mW/g

SAR(10 g) = 0.116 mW/g

Power Drift = -0.057 dB

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



Date/Time: 2008-07-11 15:12:24

Test Laboratory: TCC Nokia

Type: RM-414; Serial: 004401/10/135153/0

Communication System: 3-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:2.8

Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.52$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(4.92, 4.92, 4.92); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn501; Calibrated: 2008-03-17
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - High - No Accessory - Slide Closed - Back Facing Phantom - BT active/Area Scan (51x101x1):

Measurement grid: dx=15mm, dy=15mm

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

Body - High - No Accessory - Slide Closed - Back Facing Phantom - BT active/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.85 V/m

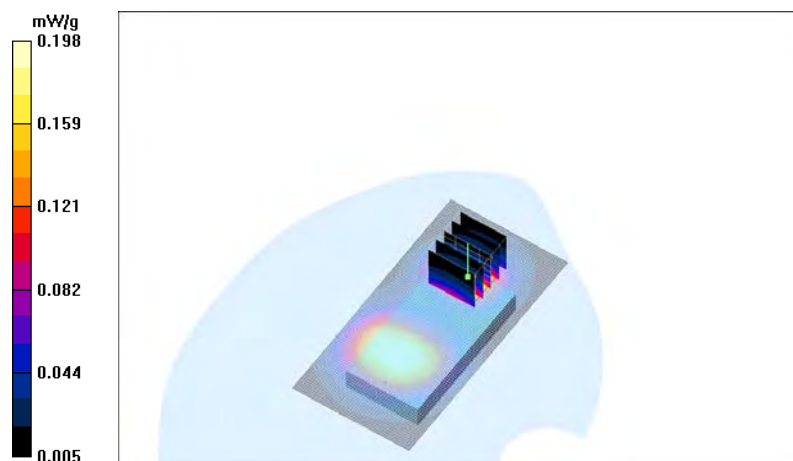
Peak SAR (extrapolated) = 0.301 W/kg

SAR(1 g) = 0.180 mW/g

SAR(10 g) = 0.102 mW/g

Power Drift = -0.021 dB

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



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

See the following pages