

SAR Compliance Test Report

Test report no.:	Salo_SAR_0848_06	Date of report:	2008-11-28
Template version:	10	Number of pages:	80
Testing laboratory:	TCC Nokia Salo Laboratory FIN-24101 SALO FINLAND TCC Nokia Copenhagen Lab. 1790 COPENHAGEN V DENMARK	Client:	Nokia Corporation P.O. Box 50 Elektroniikkatie 10 FIN-90571 OULU, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 47222
Responsible test engineer:	Janne Hirsimäki	Product contact person:	Niina Upola
Measurements made by:	Leif Klysner, Jesper Nielsen, Janne Hirsimäki		
Tested device:	RM-428		
FCC ID:	LJPRM-428	IC:	661E-RM428
Supplement reports:	Salo_SAR_0848_07, Cph_SAR_0821_11 for RM-356 / FCC ID: LJPRM-356 / IC ID: 661E-RM356		
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	4
1.2.3 Maximum Drift	4
1.2.4 Measurement Uncertainty	4
2. DESCRIPTION OF THE DEVICE UNDER TEST	5
2.1 DESCRIPTION OF THE ANTENNA	5
3. TEST CONDITIONS	5
3.1 TEMPERATURE AND HUMIDITY	5
3.2 TEST SIGNAL, FREQUENCIES AND OUTPUT POWER	6
4. DESCRIPTION OF THE TEST EQUIPMENT	7
4.1 MEASUREMENT SYSTEM AND COMPONENTS	7
4.1.1 Isotropic E-field Probe Type ES3DV3	9
4.2 PHANTOMS	9
4.3 TISSUE SIMULANTS	9
4.3.1 Tissue Simulant Recipes	10
4.3.2 System Checking	11
4.3.3 Tissue Simulants used in the Measurements.....	12
5. DESCRIPTION OF THE TEST PROCEDURE	14
5.1 DEVICE HOLDER.....	14
5.2 TEST POSITIONS.....	14
5.2.1 Against Phantom Head.....	14
5.2.2 Body Worn Configuration	14
5.3 SCAN PROCEDURES.....	15
5.4 SAR AVERAGING METHODS.....	15
6. MEASUREMENT UNCERTAINTY	16
7. RESULTS	17
APPENDIX A: SYSTEM CHECKING SCANS.....	22
APPENDIX B: MEASUREMENT SCANS.....	32
APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)	79
APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)	80

1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2008-04-26 to 2008-11-25
SN, HW and SW numbers of tested device	SN: 004401/10/048450/6, HW: 0502, SW: V01.10.1, DUT: 26113 SN: 004401/10/023516/3, HW: 0801, SW: V52.50.2008.39, DUT: 13204
Batteries used in testing	BL-5J, DUT: 13207, 13208, 13209, 26103, 26104, 26105 26106, 26107, 26110
Headsets used in testing	HS-45 + AD-54, DUT: 13205, 13206, 26109, 26108
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 GPRS850**	251 / 848.8	23.9 dBm ERP	Left, Cheek	0.466 W/kg	0.52 W/kg	1.6 W/kg	PASSED
WCDMA850	4233 / 846.6	17.3 dBm ERP	Left, Cheek	0.629 W/kg	0.70 W/kg	1.6 W/kg	PASSED
GSM1900**	810 / 1909.8	29.5 dBm EIRP	Right, Cheek	0.937 W/kg	1.05 W/kg	1.6 W/kg	PASSED
WCDMA1900	9400 / 1880.0	14.4 dBm EIRP	Right, Cheek	0.726 W/kg	0.81 W/kg	1.6 W/kg	PASSED
WLAN2450**	11 / 2462.0	20.3 dBm EIRP	Right, Cheek	0.211 W/kg	0.24 W/kg	1.6 W/kg	PASSED
3-slot GPRS850 + WLAN2450**	-	-	Left, Cheek	0.644 W/kg	0.72 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	Left, Cheek	0.807 W/kg	0.90 W/kg	1.6 W/kg	PASSED
GSM1900 + WLAN2450**	-	-	Right, Cheek	1.148 W/kg	1.29 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	Right, Cheek	0.937 W/kg	1.05 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 GPRS850**	251 / 848.8	23.9 dBm ERP	1.5 cm	0.647 W/kg	0.72 W/kg	1.6 W/kg	PASSED
WCDMA850	4233 / 846.6	17.3 dBm ERP	1.5 cm	0.745 W/kg	0.83 W/kg	1.6 W/kg	PASSED
GSM1900**	512 / 1850.2	30.9 dBm EIRP	1.5 cm	0.494 W/kg	0.55 W/kg	1.6 W/kg	PASSED
WCDMA1900	9400 / 1880.0	14.4 dBm EIRP	1.5 cm	0.417 W/kg	0.47 W/kg	1.6 W/kg	PASSED
WLAN2450**	11 / 2462.0	20.3 dBm EIRP	1.5 cm	0.074 W/kg	0.08 W/kg	1.6 W/kg	PASSED
3-slot GPRS850 + WLAN2450**	-	-	1.5 cm	0.721 W/kg	0.81 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	1.5 cm	0.819 W/kg	0.92 W/kg	1.6 W/kg	PASSED
GSM1900 + WLAN2450**	-	-	1.5 cm	0.568 W/kg	0.64 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	1.5 cm	0.491 W/kg	0.55 W/kg	1.6 W/kg	PASSED

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

**SAR results duplicated from Cph_SAR_0821_11 for RM-356 / FCC ID: LJPRM-356 / IC ID: 661E-RM356.

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.45 dB

1.2.4 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	± 25.8%
--------------------------------	---------

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) 1900 (Band II)		1	826 – 847 1852 – 1908
BT	2450	GFSK	1	2402 – 2480
WLAN	2450	11Mbps QPSK	1	2412 – 2462

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900 and GSM/GPRS/EGPRS1800 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 internal antennas.

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	32 to 55
Ambient humidity (RH %):	20.2 to 22.6

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester except for testing WLAN2450 where control software was used. Communication between the device and the call tester was established by air link.

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

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.

Some of the SAR results, SAR plots and test details given in this report are duplicated from the earlier test report Cph_SAR_0821_11 for RM-356 / FCC ID: LJPRM-356 / IC ID: 661E-RM356. The only difference between RM-428 and RM-356 is that RM-428 has had WCDMA900 and WCDMA2100 components removed and WCDMA850 and WCDMA1900 components added.

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	339	12 months	2008-06
DAE3	501	12 months	2009-03
DAE4	682	12 months	2008-08
DAE4	728	12 months	2009-04
DAE4	793	12 months	2009-04
E-field Probe ES3DV3	3117	12 months	2008-08
E-field Probe ES3DV3	3118	12 months	2008-10
E-field Probe ES3DV3	3131	12 months	2009-04
E-field Probe ES3DV3	3165	12 months	2009-04
Dipole Validation Kit, D835V2	4d042	24 months	2008-09
Dipole Validation Kit, D835V2	480	24 months	2009-05
Dipole Validation Kit, D1900V2	5d026	24 months	2010-03
Dipole Validation Kit, D1900V2	5d030	24 months	2010-01
Dipole Validation Kit, D2450V2	790	24 months	2008-08
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
Signal Generator	SML03	101265	12 months	2009-07
Amplifier	2100-BBS3Q8CCJ	1003	-	-
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2009-07
Power Meter	NRP	100293	24 months	2009-07
Power Meter	NRVS	849305/028	12 months	2009-07
Power Sensor	NRP-Z51	100830	24 months	2009-07
Power Sensor	NRV-Z32	839176/020	12 months	2009-07
Call Tester	CMU200	105900	-	-
Call Tester	CMU200	110735	-	-
Call Tester	CMU 200	101111	-	-
Call Tester	CMU 200	103293	-	-
Call Tester	CMU 200	100084	-	-
BT Tester	CBT	100263	-	-
Vector Network Analyzer	AT8753ES	MY40001091	12 months	2008-08
Vector Network Analyzer	8753E	US38432928	12 months	2009-07
Dielectric Probe Kit	HP85070B	US33020403	-	-
Dielectric Probe Kit	85070B	US33020420	-	-

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 Distance from probe tip to dipole centers: 2.0 mm
Application	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

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	54.88	69.02
Butyl Diglycol	44.91	30.76
Salt	0.21	0.22

1900MHz band

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

2450MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	56.0	70.20
Tween 20	44.0	29.62
Salt	-	0.18

4.3.2 System Checking

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

System checking, head tissue simulant

f [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			
	2008-05-14	2.24	40.3	0.89	22.5
835	Reference result	2.29	41.6	0.90	
	± 10% window	2.06 - 2.52			
	2008-10-23	2.33	40.5	0.89	21.0
1900	Reference result	10.3	40.2	1.47	
	± 10% window	9.3 - 11.3			
	2008-05-19	10.7	39.2	1.49	22.4
1900	Reference result	10.2	38.5	1.46	
	± 10% window	9.2 - 11.2			
	2008-11-20	10.3	40.0	1.41	21.0
	2008-11-25	10.3	40.2	1.39	21.0
2450	Reference result	14.1	39.8	1.84	
	± 10% window	12.7 - 15.5			
	2008-04-26	14.2	38.9	1.84	22.5

System checking, body tissue simulant

f [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			
	2008-05-19	2.47	53.0	0.97	22.5
835	Reference result	2.48	53.0	0.98	
	± 10% window	2.23 - 2.73			
	2008-10-24	2.63	54.0	1.00	21.0
2450	Reference result	13.5	51.9	1.96	
	± 10% window	12.1 - 14.9			
	2008-04-29	13.9	51.8	1.98	22.3

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	
	± 5% window	39.4 - 43.6	0.86 - 0.95	
	2008-05-14	40.3	0.89	22.5
	2008-10-23	40.5	0.89	21.0
1880	Recommended value	40.0	1.40	
	± 5% window	38.0 - 42.0	1.33 - 1.47	
	2008-05-19	39.2	1.47	22.4
	2008-11-25	40.3	1.37	21.0
2442	Recommended value	39.2	1.79	
	± 5% window	37.3 - 41.2	1.70 - 1.88	
	2008-04-26	38.9	1.83	22.5

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	55.2	0.97	
	$\pm 5\%$ window	52.4 – 58.0	0.92 – 1.02	
	2008-05-19	53.0	0.96	22.5
	2008-10-24	54.0	1.00	21.0
1880	Recommended value	53.3	1.52	
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2008-05-19	52.8	1.60	22.5
	2008-11-20	52.4	1.50	21.0
2442	Recommended value	52.7	1.94	
	$\pm 5\%$ window	50.1 – 55.3	1.85 – 2.04	
	2008-04-29	51.8	1.98	22.3

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:

850MHz 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		26.1 dBm	27.5 dBm	27.4 dBm
	Left	Cheek	-	0.345	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Power		24.5 dBm	25.7 dBm	25.5 dBm
	Left	Cheek	-	0.431	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power		23.1 dBm	24.1 dBm	23.9 dBm
	Left	Cheek	0.396	0.437	0.466
		Tilt	-	0.301	-
	Right	Cheek	-	0.409	-
		Tilt	-	0.287	-
3-slot 8PSK EGPRS	Power		18.7 dBm	19.8 dBm	19.2 dBm
	Left	Cheek	-	-	0.082
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
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		14.7 dBm	16.7 dBm	17.3 dBm
	Left	Cheek	0.443	0.604	0.629
		Tilt	-	0.361	-
	Right	Cheek	-	0.590	-
		Tilt	-	0.384	-

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		30.9 dBm	30.6 dBm	29.5 dBm
	Left	Cheek	-	0.700	-
		Tilt	-	0.303	-
	Right	Cheek	0.881	0.744	0.937
		Tilt	-	0.380	-
2-slot GPRS	Power				
	Left	Cheek	-	0.682	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power				
	Left	Cheek	-	0.664	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot 8PSK EGPRS	Power				
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.323
		Tilt	-	-	-
Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Power		15.7 dBm	14.4 dBm	14.7 dBm
	Left	Cheek	-	0.705	-
		Tilt	-	0.300	-
	Right	Cheek	0.684	0.726	0.582
		Tilt	-	0.328	-

2450MHz Head SAR results

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN	Power		20.7 dBm	21.1 dBm	20.3 dBm
	Left	Cheek	-	0.178	-
		Tilt	-	0.066	-
	Right	Cheek	0.202	0.203	0.211
		Tilt	-	0.061	-

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	Ch190 836.6 MHz	Ch 251 848.8 MHz
3-slot GPRS	Power		23.1 dBm	24.1 dBm	23.9 dBm
Display facing Phantom	Without headset		-	0.387	-
	Headset HS-45+AD-54		-	0.214	-
Back facing Phantom	Without headset		0.464	0.567	0.647
	Headset HS-45+AD-54		0.292	0.346	0.381
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		14.7 dBm	16.7 dBm	17.3 dBm
Display facing Phantom	Without headset		-	0.479	-
	Headset HS-45+AD-54		-	0.324	-
Back facing Phantom	Without headset		0.479	0.642	0.745
	Headset HS-45+AD-54		-	0.460	-

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
GSM	Power	30.9 dBm	30.6 dBm	29.5 dBm
Display facing phantom	Without headset	-	0.354	-
	Headset HS-45+AD-54	-	0.307	-
Back facing phantom	Without headset	0.494	0.471	0.426
	Headset HS-45+AD-54	0.446	0.423	0.392
Option used	Test configuration	SAR, averaged over 1g (W/kg)		
		Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Power	15.7 dBm	14.4 dBm	14.7 dBm
Display facing phantom	Without headset	-	0.286	-
	Headset HS-45+AD-54	-	0.236	-
Back facing phantom	Without headset	0.416	0.417	0.363
	Headset HS-45+AD-54	-	0.381	-

2450MHz Body SAR results

Option used	Test configuration	SAR, averaged over 1g (W/kg)		
		Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN	Power	20.7 dBm	21.1 dBm	20.3 dBm
Display facing phantom	Without headset	-	0.030	-
	Headset HS-45+AD-54	-	0.029	-
Back facing phantom	Without headset	0.064	0.059	0.074
	Headset HS-45+AD-54	0.055	0.052	0.065

Simultaneous transmissions: Combined SAR results

Test configuration	Max. 1g SAR results				
	WLAN	GSM 850	WCDMA 850	GSM 1900	WCDMA 1900
Head: Left, Cheek	0.178	0.466	0.629	0.700	0.705
Head: Left, Tilt	0.066	0.301	0.361	0.303	0.300
Head: Right, Cheek	0.211	0.409	0.590	0.937	0.726
Head: Right, Tilt	0.061	0.287	0.384	0.380	0.328
Body: Without Headset	0.074	0.647	0.745	0.494	0.417
Body: Headset HS-45+AD-54	0.065	0.381	0.460	0.446	0.381

Test configuration	Combined 1g SAR values			
	WLAN + GSM 850	WLAN + WCDMA 850	WLAN + GSM 1900	WLAN + WCDMA 1900
Head: Left, Cheek	0.644	0.807	0.878	0.883
Head: Left, Tilt	0.367	0.427	0.369	0.366
Head: Right, Cheek	0.620	0.801	1.148	0.937
Head: Right, Tilt	0.348	0.445	0.441	0.389
Body: Without Headset	0.721	0.819	0.568	0.491
Body: Headset HS-45+AD-54	0.446	0.525	0.511	0.446

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

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

See the following pages

Date/Time: 2008-05-14 15:14:58

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: 22.5 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.889$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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) = 2.41 mW/g

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

Reference Value = 53.3 V/m

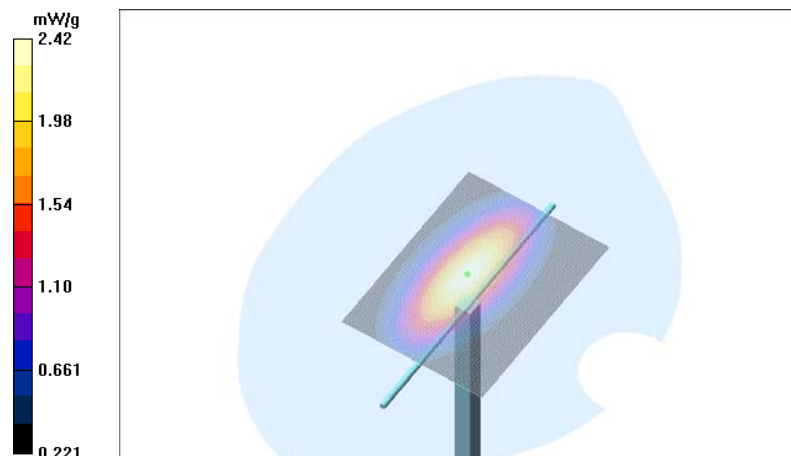
Peak SAR (extrapolated) = 3.26 W/kg

SAR(1 g) = 2.24 mW/g

SAR(10 g) = 1.47 mW/g

Power Drift = -0.065 dB

Maximum value of SAR (measured) = 2.42 mW/g



Date/Time: 2008-10-23 11:12:18

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.8C

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.892 \text{ mho/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(6.14, 6.14, 6.14); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- 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) = 2.51 mW/g

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

Reference Value = 54.1 V/m

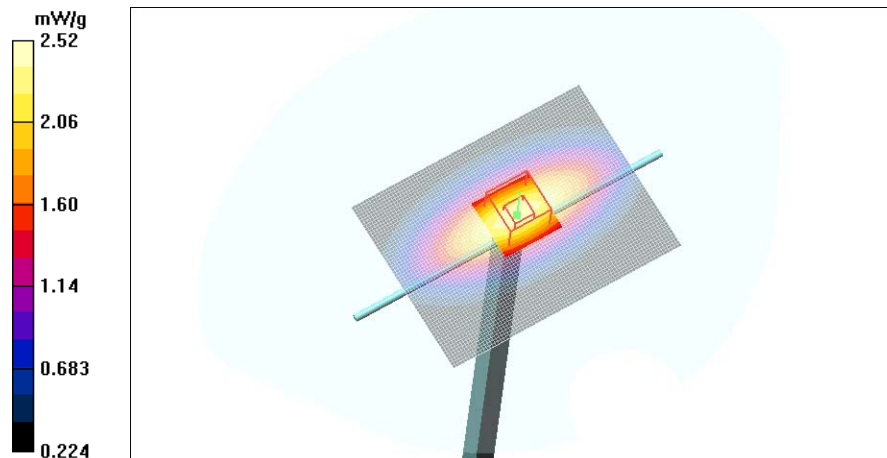
Peak SAR (extrapolated) = 3.48 W/kg

SAR(1 g) = 2.33 mW/g

SAR(10 g) = 1.52 mW/g

Power Drift = -0.040 dB

Maximum value of SAR (measured) = 2.52 mW/g



Date/Time: 2008-05-19 15:23:51

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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) = 12.2 mW/g

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

Reference Value = 91.8 V/m

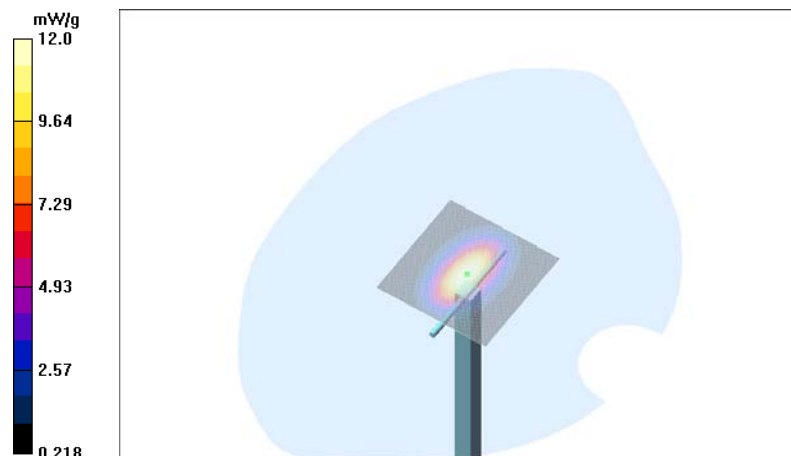
Peak SAR (extrapolated) = 19.9 W/kg

SAR(1 g) = 10.7 mW/g

SAR(10 g) = 5.51 mW/g

Power Drift = 0.006 dB

Maximum value of SAR (measured) = 12.0 mW/g



Date/Time: 2008-11-20 09:25:45

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d013

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.0C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- 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) = 12.1 mW/g

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

Reference Value = 88.7 V/m

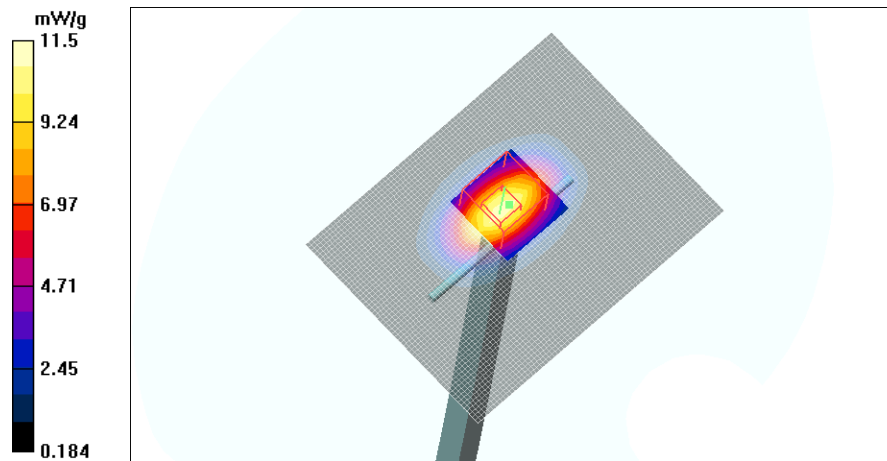
Peak SAR (extrapolated) = 19.4 W/kg

SAR(1 g) = 10.3 mW/g

SAR(10 g) = 5.27 mW/g

Power Drift = 0.026 dB

Maximum value of SAR (measured) = 11.5 mW/g



Date/Time: 2008-11-25 09:46:17

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 20.7C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- 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) = 12.1 mW/g

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

Reference Value = 85.1 V/m

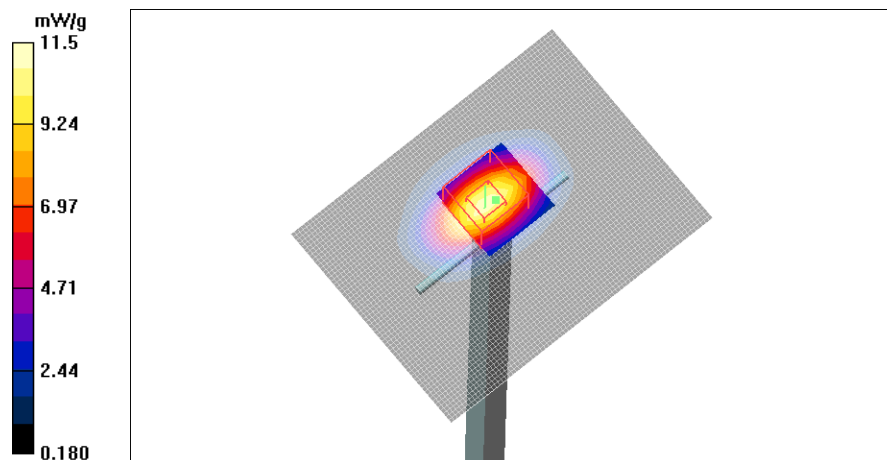
Peak SAR (extrapolated) = 19.3 W/kg

SAR(1 g) = 10.3 mW/g

SAR(10 g) = 5.32 mW/g

Power Drift = 0.053 dB

Maximum value of SAR (measured) = 11.5 mW/g



Date/Time: 2008-04-26 17:25:32

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: 790

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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) = 16.8 mW/g

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

Reference Value = 95.1 V/m

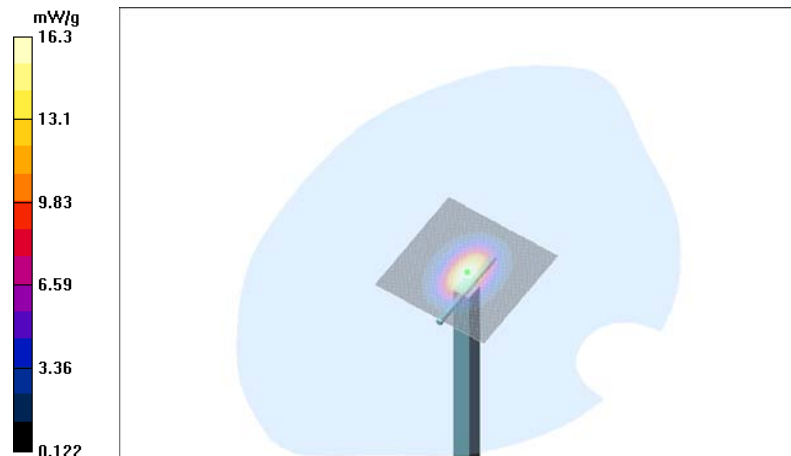
Peak SAR (extrapolated) = 29.6 W/kg

SAR(1 g) = 14.2 mW/g

SAR(10 g) = 6.61 mW/g

Power Drift = 0.026 dB

Maximum value of SAR (measured) = 16.3 mW/g



Date/Time: 2008-05-19 17:49:01

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: 22.5 C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.966$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.59, 5.59, 5.59); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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) = 2.63 mW/g

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

Reference Value = 35.5 V/m

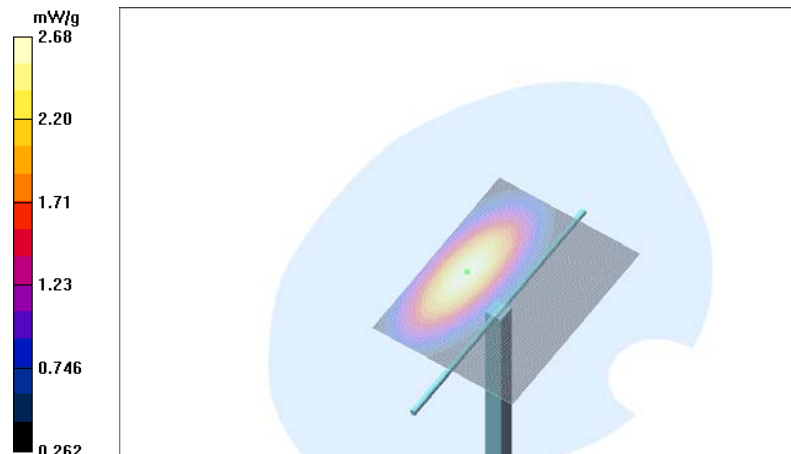
Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 2.47 mW/g

SAR(10 g) = 1.63 mW/g

Power Drift = -0.033 dB

Maximum value of SAR (measured) = 2.68 mW/g



Date/Time: 2008-10-24 10:47:25

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

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 20.2C

Medium parameters used: $f = 835$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.68, 5.68, 5.68); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- 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) = 2.82 mW/g

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

Reference Value = 54.1 V/m

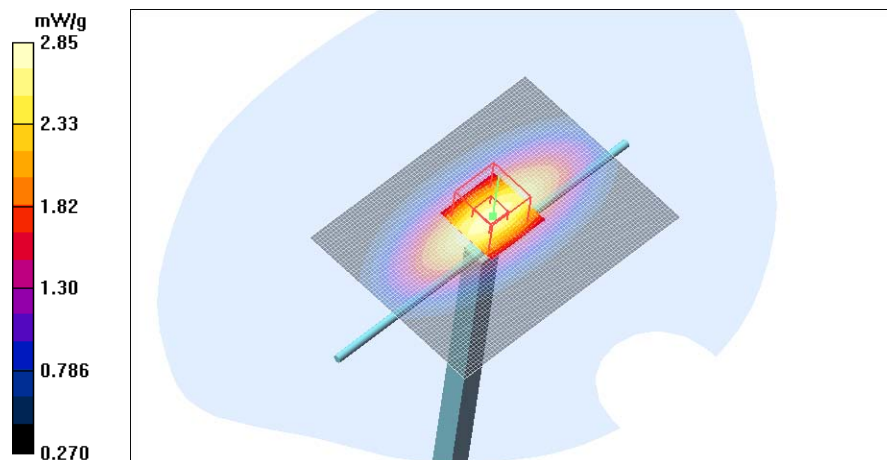
Peak SAR (extrapolated) = 3.84 W/kg

SAR(1 g) = 2.63 mW/g

SAR(10 g) = 1.72 mW/g

Power Drift = 0.013 dB

Maximum value of SAR (measured) = 2.85 mW/g



Date/Time: 2008-04-29 17:27:35

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: 790

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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) = 16.9 mW/g

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

Reference Value = 91.5 V/m

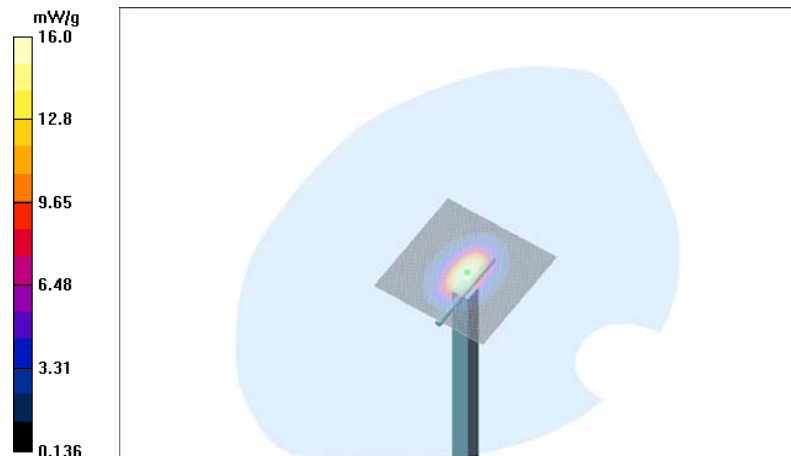
Peak SAR (extrapolated) = 29.3 W/kg

SAR(1 g) = 13.9 mW/g

SAR(10 g) = 6.41 mW/g

Power Drift = -0.129 dB

Maximum value of SAR (measured) = 16.0 mW/g



APPENDIX B: MEASUREMENT SCANS

See the following pages

Date/Time: 2008-05-14 16:57:38

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.365 mW/g

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

Reference Value = 9.52 V/m

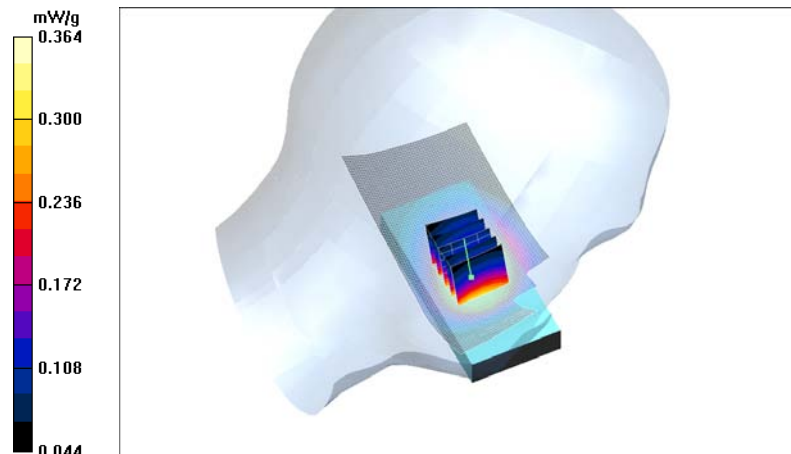
Peak SAR (extrapolated) = 0.423 W/kg

SAR(1 g) = 0.345 mW/g

SAR(10 g) = 0.259 mW/g

Power Drift = -0.072 dB

Maximum value of SAR (measured) = 0.364 mW/g



Date/Time: 2008-05-14 17:24:02

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.457 mW/g

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

Reference Value = 9.33 V/m

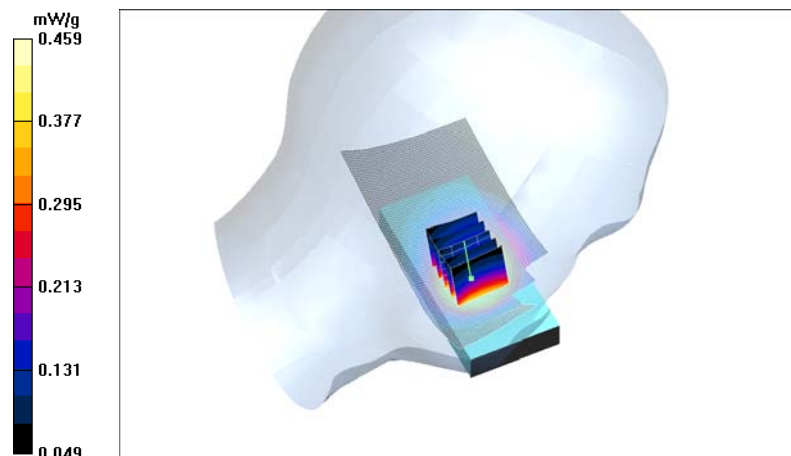
Peak SAR (extrapolated) = 0.546 W/kg

SAR(1 g) = 0.431 mW/g

SAR(10 g) = 0.319 mW/g

Power Drift = -0.116 dB

Maximum value of SAR (measured) = 0.459 mW/g



Date/Time: 2008-05-14 19:04:28

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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 - High/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 10.6 V/m

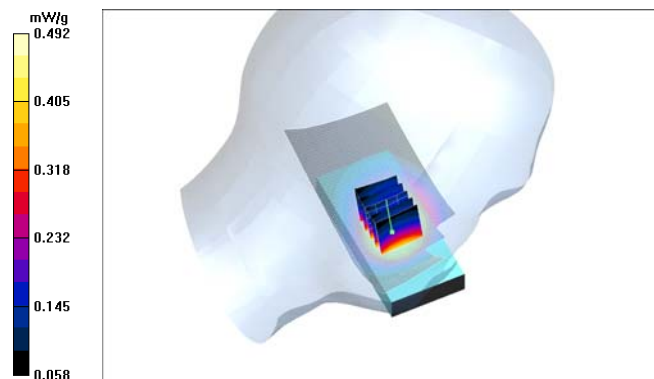
Peak SAR (extrapolated) = 0.568 W/kg

SAR(1 g) = 0.466 mW/g

SAR(10 g) = 0.351 mW/g

Power Drift = -0.147 dB

Maximum value of SAR (measured) = 0.492 mW/g



Date/Time: 2008-05-14 18:01:39

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 13.8 V/m

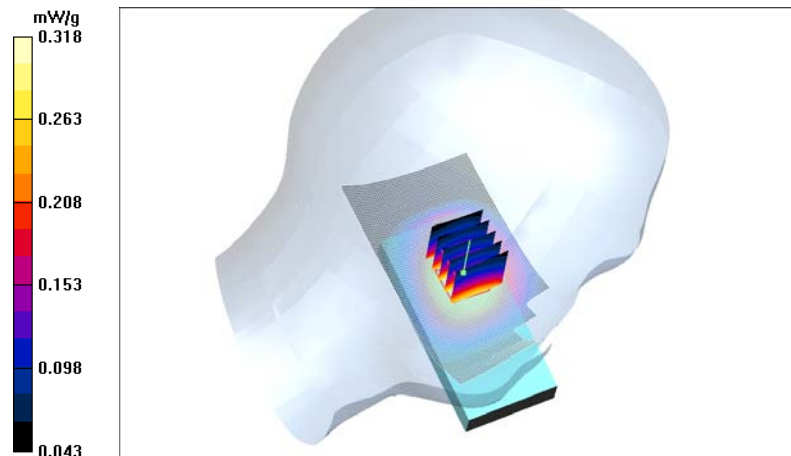
Peak SAR (extrapolated) = 0.371 W/kg

SAR(1 g) = 0.301 mW/g

SAR(10 g) = 0.225 mW/g

Power Drift = -0.065 dB

Maximum value of SAR (measured) = 0.318 mW/g



Date/Time: 2008-05-14 18:17:03

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.429 mW/g

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

Reference Value = 8.25 V/m

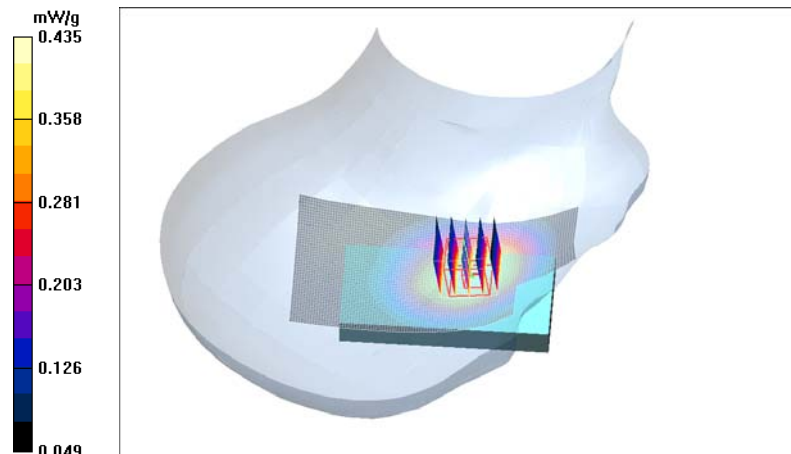
Peak SAR (extrapolated) = 0.499 W/kg

SAR(1 g) = 0.409 mW/g

SAR(10 g) = 0.304 mW/g

Power Drift = -0.173 dB

Maximum value of SAR (measured) = 0.435 mW/g



Date/Time: 2008-05-14 18:34:22

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.300 mW/g

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

Reference Value = 12.8 V/m

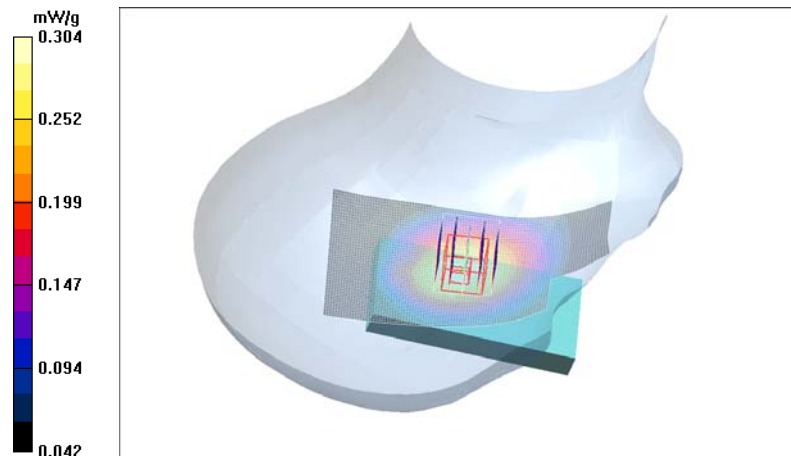
Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.287 mW/g

SAR(10 g) = 0.213 mW/g

Power Drift = -0.012 dB

Maximum value of SAR (measured) = 0.304 mW/g



Date/Time: 2008-05-14 19:51:35

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot 8PSK EGPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.903$ mho/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.99, 5.99, 5.99); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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 - High/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.092 mW/g

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

Reference Value = 4.34 V/m

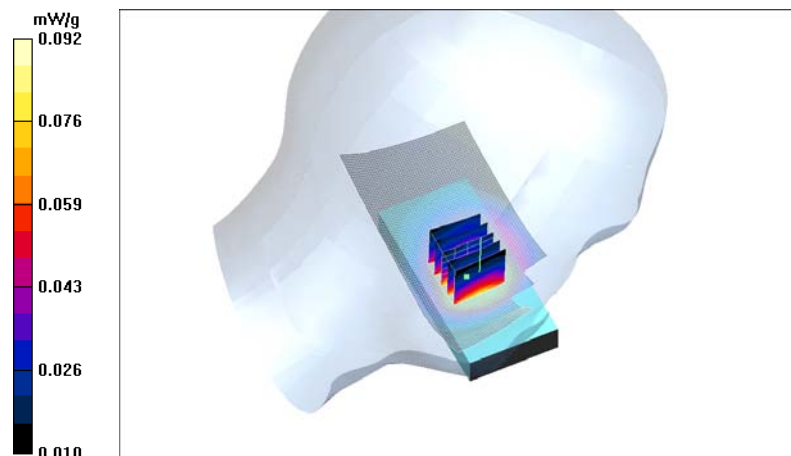
Peak SAR (extrapolated) = 0.103 W/kg

SAR(1 g) = 0.082 mW/g

SAR(10 g) = 0.062 mW/g

Power Drift = 0.161 dB

Maximum value of SAR (measured) = 0.092 mW/g



Date/Time: 2008-10-23 14:36:03

Test Laboratory: TCC Nokia
Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.3C

Medium parameters used: $f = 847$ MHz; $\sigma = 0.901$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(6.14, 6.14, 6.14); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.658 mW/g

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

Reference Value = 10.7 V/m

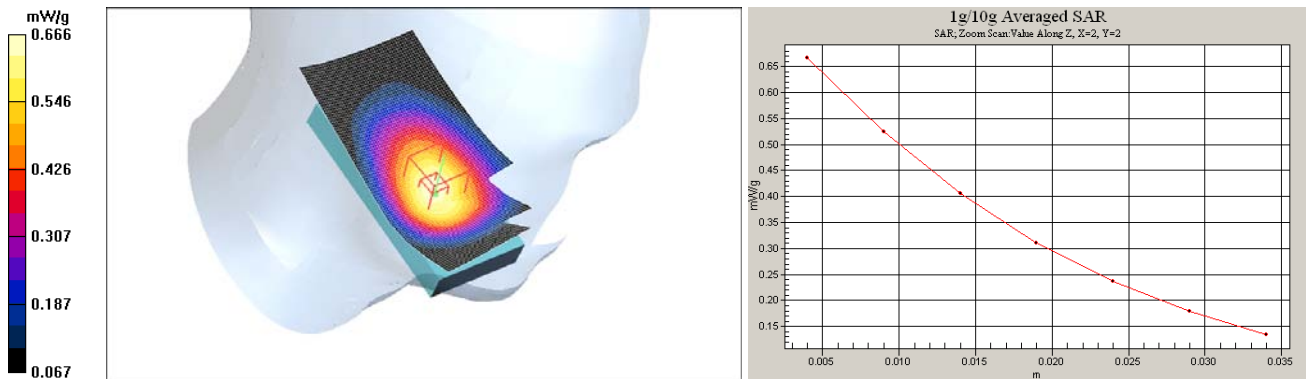
Peak SAR (extrapolated) = 0.803 W/kg

SAR(1 g) = 0.629 mW/g

SAR(10 g) = 0.465 mW/g

Power Drift = 0.094 dB

Maximum value of SAR (measured) = 0.666 mW/g



Date/Time: 2008-10-23 12:58:37

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.3C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.892$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(6.14, 6.14, 6.14); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 14.5 V/m

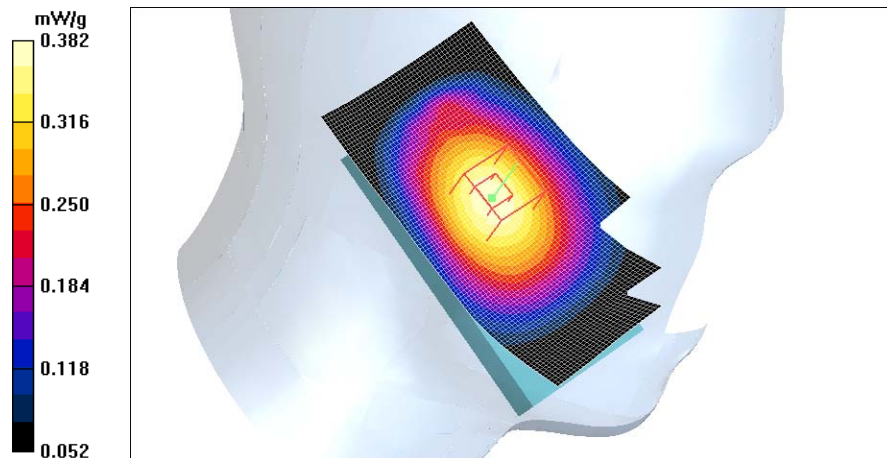
Peak SAR (extrapolated) = 0.458 W/kg

SAR(1 g) = 0.361 mW/g

SAR(10 g) = 0.268 mW/g

Power Drift = -0.010 dB

Maximum value of SAR (measured) = 0.382 mW/g



Date/Time: 2008-10-23 13:31:01

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.3C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.892$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(6.14, 6.14, 6.14); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.633 mW/g

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

Reference Value = 10.1 V/m

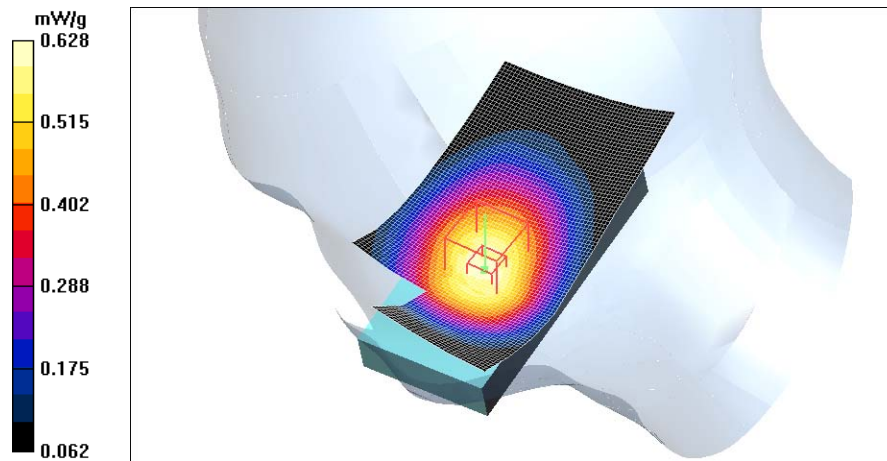
Peak SAR (extrapolated) = 0.752 W/kg

SAR(1 g) = 0.590 mW/g

SAR(10 g) = 0.431 mW/g

Power Drift = -0.098 dB

Maximum value of SAR (measured) = 0.628 mW/g



Date/Time: 2008-10-23 13:45:40

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.3C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.892$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(6.14, 6.14, 6.14); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.405 mW/g

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

Reference Value = 15.0 V/m

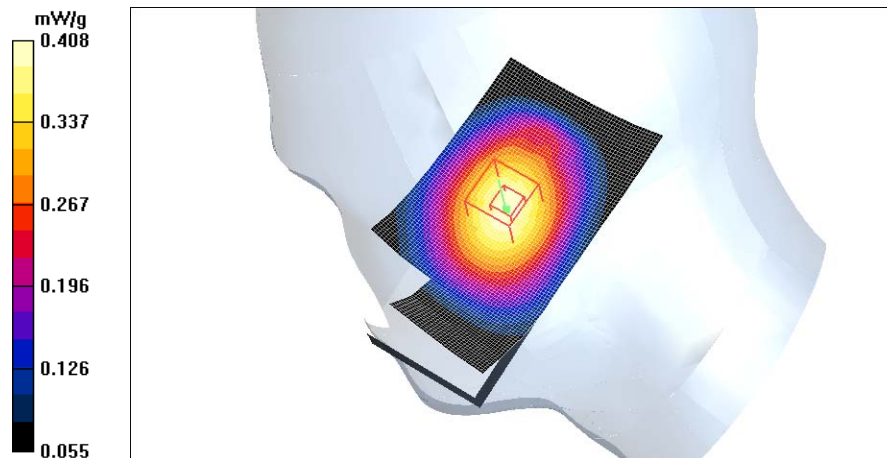
Peak SAR (extrapolated) = 0.487 W/kg

SAR(1 g) = 0.384 mW/g

SAR(10 g) = 0.285 mW/g

Power Drift = -0.077 dB

Maximum value of SAR (measured) = 0.408 mW/g



Date/Time: 2008-05-19 16:27:35

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.770 mW/g

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

Reference Value = 8.94 V/m

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.700 mW/g

SAR(10 g) = 0.420 mW/g

Power Drift = -0.162 dB

Maximum value of SAR (measured) = 0.750 mW/g

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

Reference Value = 8.94 V/m

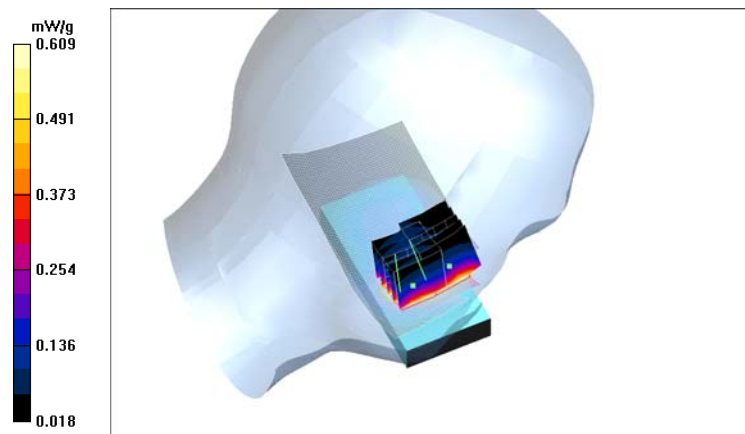
Peak SAR (extrapolated) = 0.867 W/kg

SAR(1 g) = 0.554 mW/g

SAR(10 g) = 0.354 mW/g

Power Drift = -0.162 dB

Maximum value of SAR (measured) = 0.609 mW/g



SAR Report

Salo_SAR_0848_06

Applicant: Nokia Corporation

Type: RM-428

Copyright © 2008 TCC Nokia

Date/Time: 2008-05-19 17:47:19

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 13.6 V/m

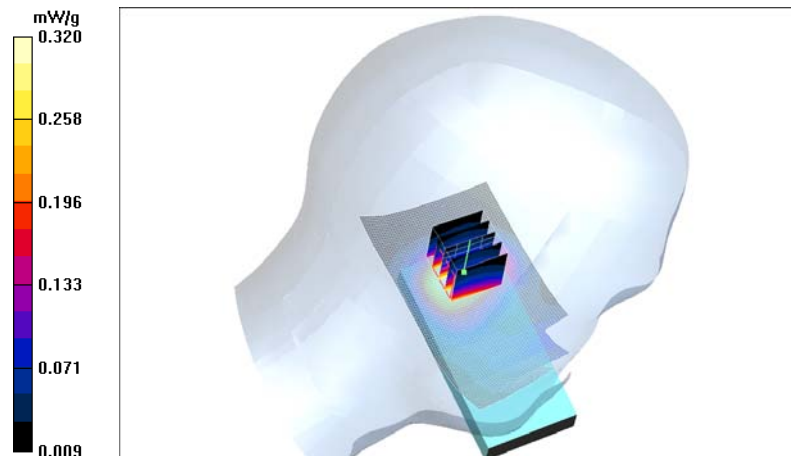
Peak SAR (extrapolated) = 0.443 W/kg

SAR(1 g) = 0.303 mW/g

SAR(10 g) = 0.194 mW/g

Power Drift = -0.018 dB

Maximum value of SAR (measured) = 0.320 mW/g



Date/Time: 2008-05-19 19:28:34

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 39.1$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.978 mW/g

Cheek position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.26 V/m

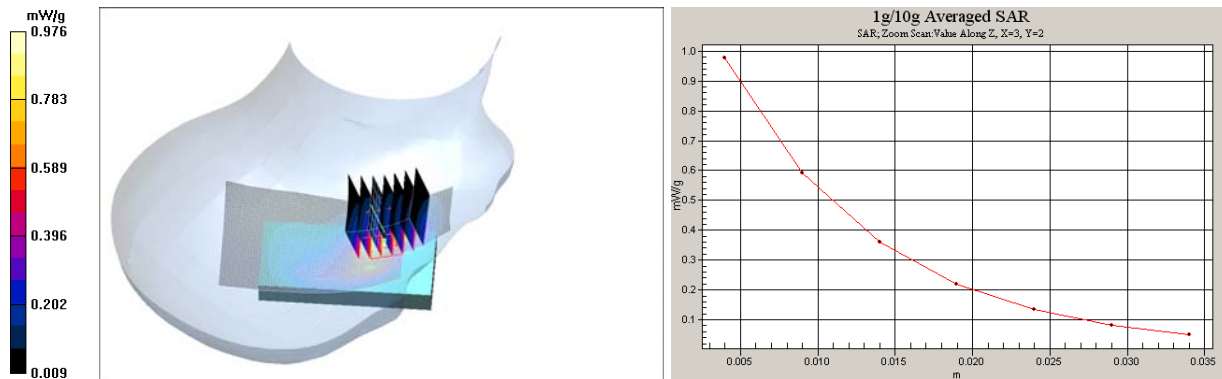
Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.937 mW/g

SAR(10 g) = 0.526 mW/g

Power Drift = -0.009 dB

Maximum value of SAR (measured) = 0.976 mW/g



Date/Time: 2008-05-19 18:17:46

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.459 mW/g

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

Reference Value = 12.9 V/m

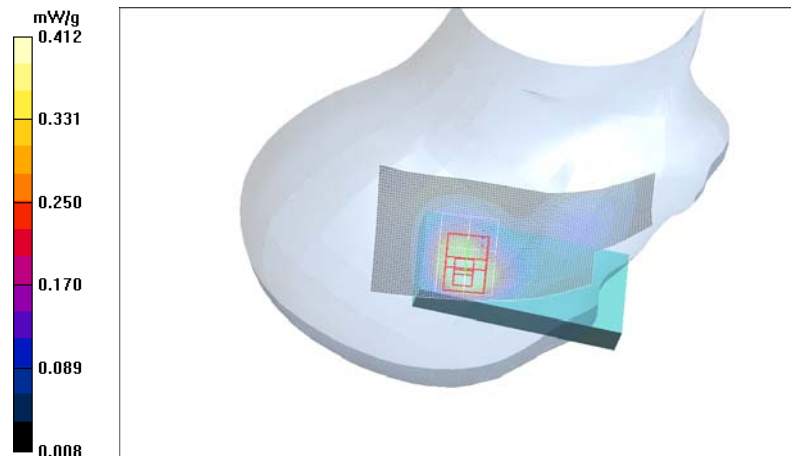
Peak SAR (extrapolated) = 0.580 W/kg

SAR(1 g) = 0.380 mW/g

SAR(10 g) = 0.233 mW/g

Power Drift = -0.078 dB

Maximum value of SAR (measured) = 0.412 mW/g



Date/Time: 2008-05-19 16:48:49

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.758 mW/g

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

Reference Value = 8.87 V/m

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.682 mW/g

SAR(10 g) = 0.412 mW/g

Power Drift = -0.183 dB

Maximum value of SAR (measured) = 0.731 mW/g

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

Reference Value = 8.87 V/m

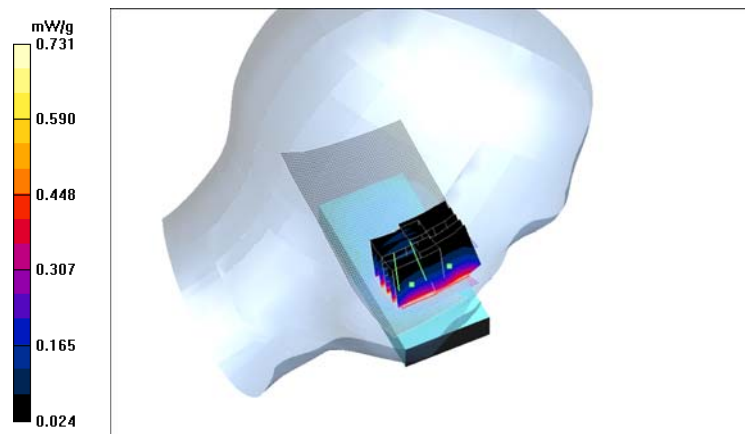
Peak SAR (extrapolated) = 0.827 W/kg

SAR(1 g) = 0.537 mW/g

SAR(10 g) = 0.344 mW/g

Power Drift = -0.183 dB

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



Date/Time: 2008-05-19 17:09:36

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.720 mW/g

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

Reference Value = 8.61 V/m

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.664 mW/g

SAR(10 g) = 0.400 mW/g

Power Drift = -0.159 dB

Maximum value of SAR (measured) = 0.716 mW/g

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

Reference Value = 8.61 V/m

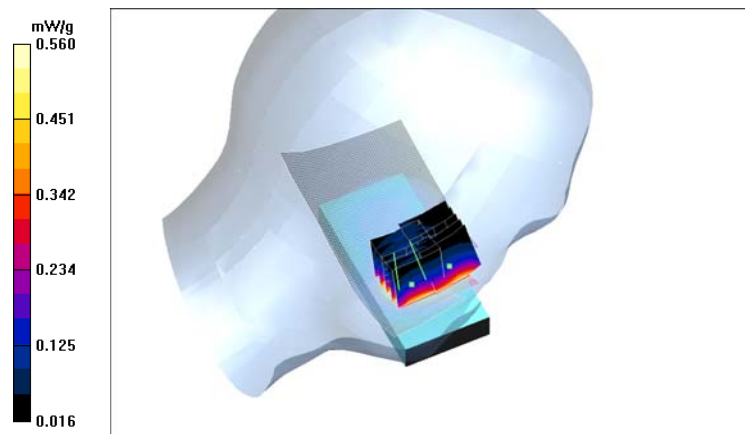
Peak SAR (extrapolated) = 0.803 W/kg

SAR(1 g) = 0.520 mW/g

SAR(10 g) = 0.332 mW/g

Power Drift = -0.159 dB

Maximum value of SAR (measured) = 0.560 mW/g



SAR Report

Salo_SAR_0848_06

Applicant: Nokia Corporation

Type: RM-428

Copyright © 2008 TCC Nokia

Date/Time: 2008-05-19 20:52:29

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 1-slot 8PSK EGPRS 1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: 22.4 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 39.1$; $\rho = 1000$ 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/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.253 mW/g

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

Reference Value = 5.01 V/m

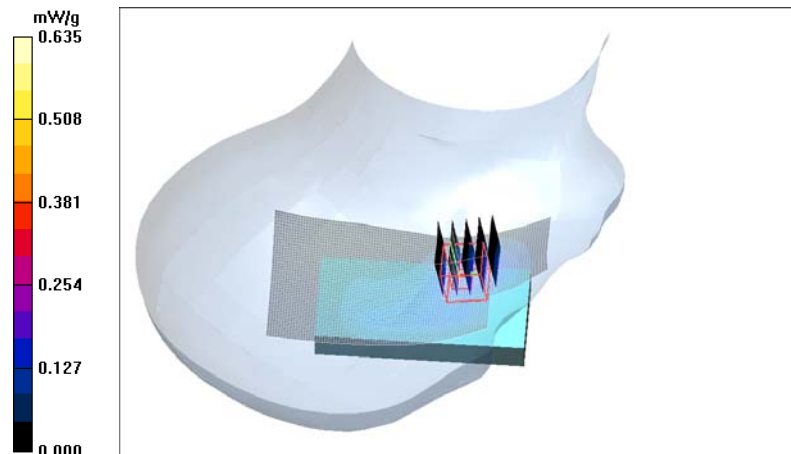
Peak SAR (extrapolated) = 0.635 W/kg

SAR(1 g) = 0.323 mW/g

SAR(10 g) = 0.138 mW/g

Power Drift = 0.039 dB

Maximum value of SAR (measured) = 0.635 mW/g



Date/Time: 2008-11-25 11:01:20

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 20.7C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.740 mW/g

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

Reference Value = 9.05 V/m

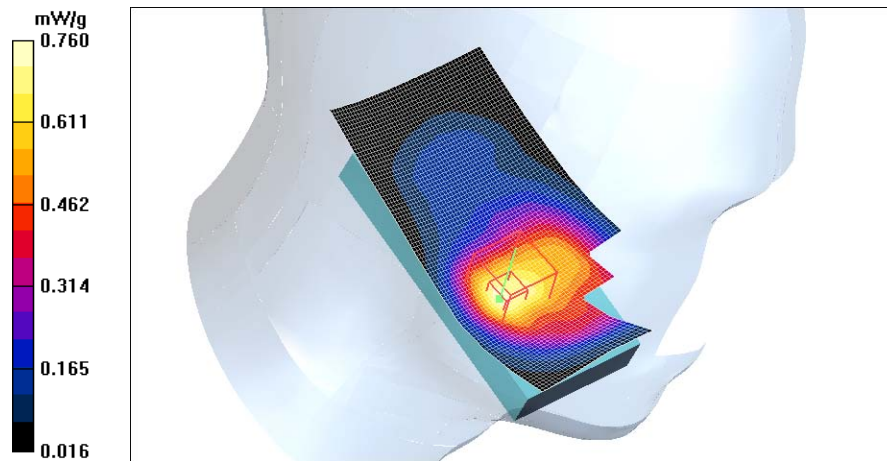
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.705 mW/g

SAR(10 g) = 0.430 mW/g

Power Drift = -0.069 dB

Maximum value of SAR (measured) = 0.760 mW/g



Date/Time: 2008-11-25 11:16:45

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 20.7C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.335 mW/g

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

Reference Value = 14.4 V/m

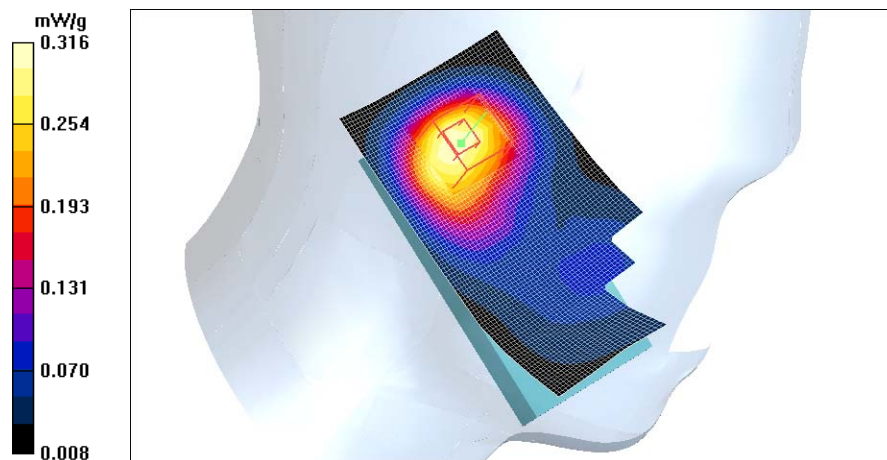
Peak SAR (extrapolated) = 0.439 W/kg

SAR(1 g) = 0.300 mW/g

SAR(10 g) = 0.191 mW/g

Power Drift = 0.070 dB

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



Date/Time: 2008-11-25 12:24:21

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 20.7C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Cheek position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.854 mW/g

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

Reference Value = 9.01 V/m

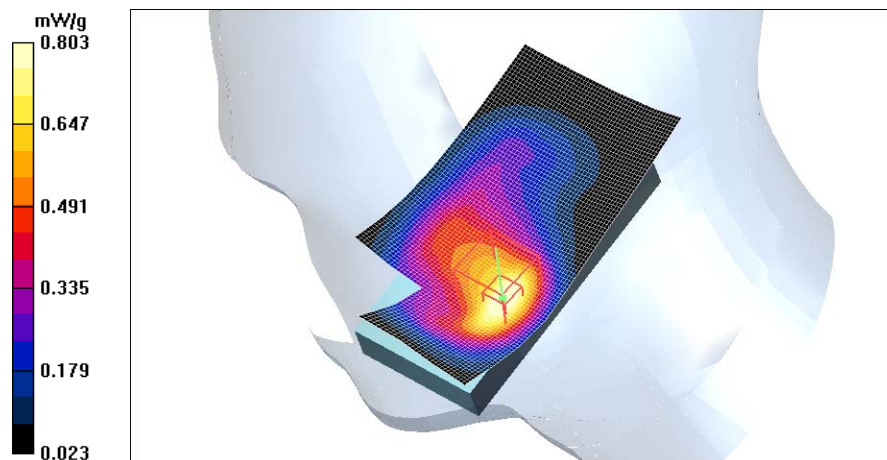
Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.726 mW/g

SAR(10 g) = 0.421 mW/g

Power Drift = -0.023 dB

Maximum value of SAR (measured) = 0.803 mW/g



Date/Time: 2008-11-25 12:42:09

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 20.7C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.14, 5.14, 5.14); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 13.9 V/m

Peak SAR (extrapolated) = 0.500 W/kg

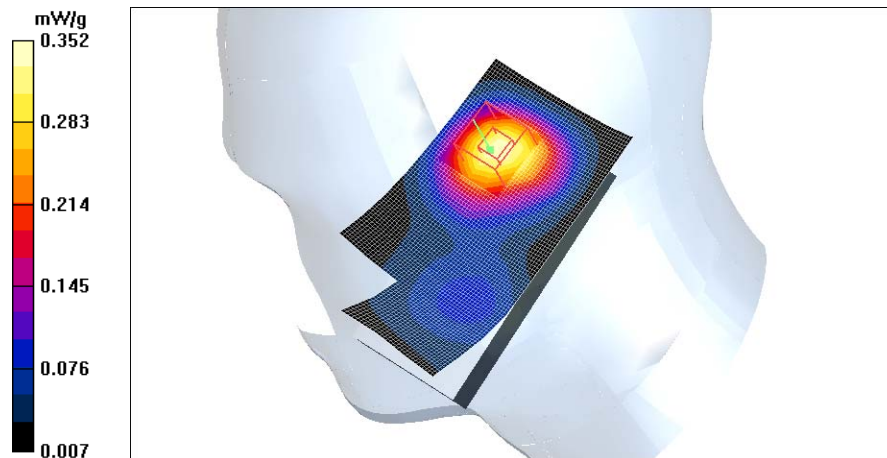
SAR(1 g) = 0.328 mW/g

SAR(10 g) = 0.203 mW/g

Power Drift = -0.118 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) = 0.352 mW/g



Date/Time: 2008-04-26 18:20:25

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

Maximum value of SAR (interpolated) = 0.168 mW/g

Cheek position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.65 V/m

Peak SAR (extrapolated) = 0.404 W/kg

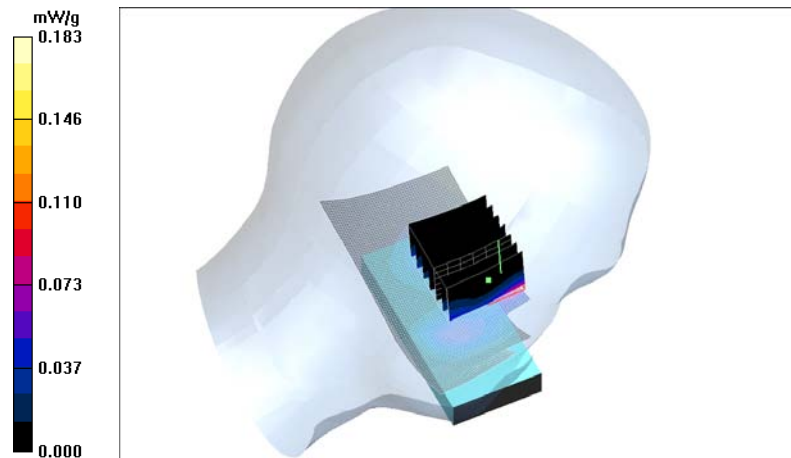
SAR(1 g) = 0.178 mW/g

SAR(10 g) = 0.079 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) = 0.183 mW/g



Date/Time: 2008-04-26 18:41:07

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

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

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.09 V/m

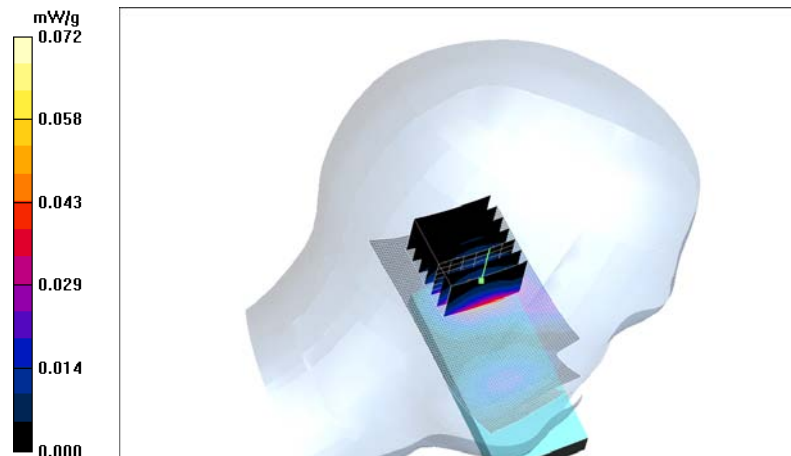
Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.066 mW/g

SAR(10 g) = 0.037 mW/g

Power Drift = 0.058 dB

Maximum value of SAR (measured) = 0.072 mW/g



Date/Time: 2008-04-26 20:12:56

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

Maximum value of SAR (interpolated) = 0.193 mW/g

Cheek position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.60 V/m

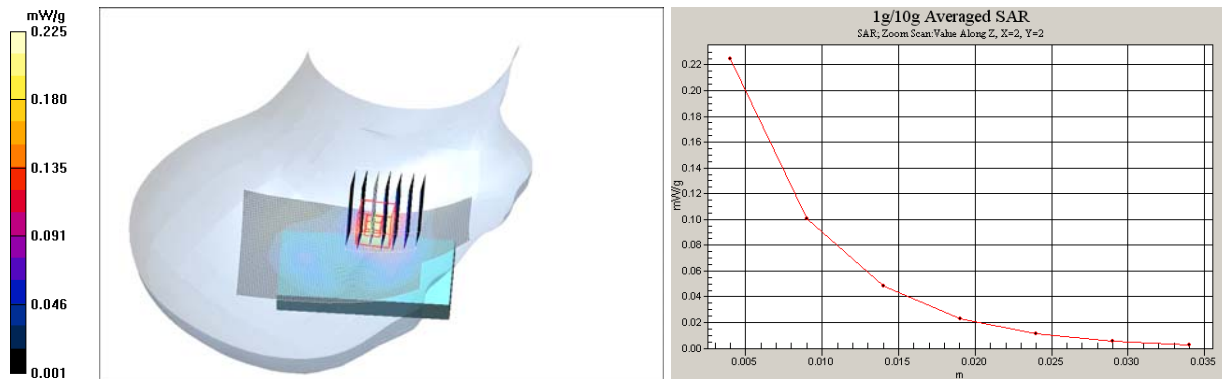
Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.211 mW/g

SAR(10 g) = 0.098 mW/g

Power Drift = -0.254 dB

Maximum value of SAR (measured) = 0.225 mW/g



Date/Time: 2008-04-26 19:29:37

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

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

Maximum value of SAR (interpolated) = 0.075 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.04 V/m

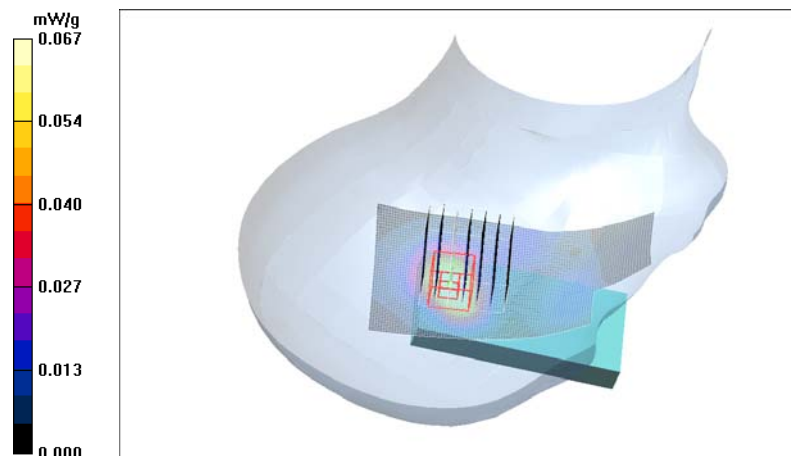
Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.061 mW/g

SAR(10 g) = 0.034 mW/g

Power Drift = 0.003 dB

Maximum value of SAR (measured) = 0.067 mW/g



Date/Time: 2008-05-19 23:22:01

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.59, 5.59, 5.59); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.421 mW/g

Body - Middle - No Accessory - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.30 V/m

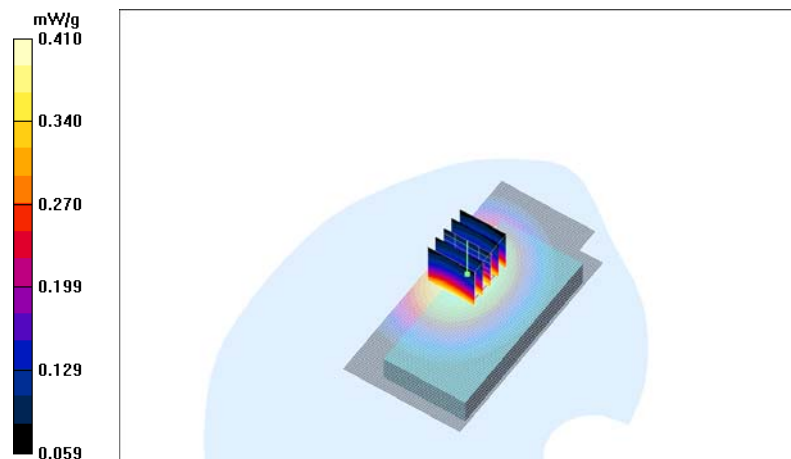
Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.387 mW/g

SAR(10 g) = 0.290 mW/g

Power Drift = -0.330 dB

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



Date/Time: 2008-05-19 23:34:56

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.59, 5.59, 5.59); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- 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-45+AD-54 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.228 mW/g

Body - Middle - HS-45+AD-54 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.60 V/m

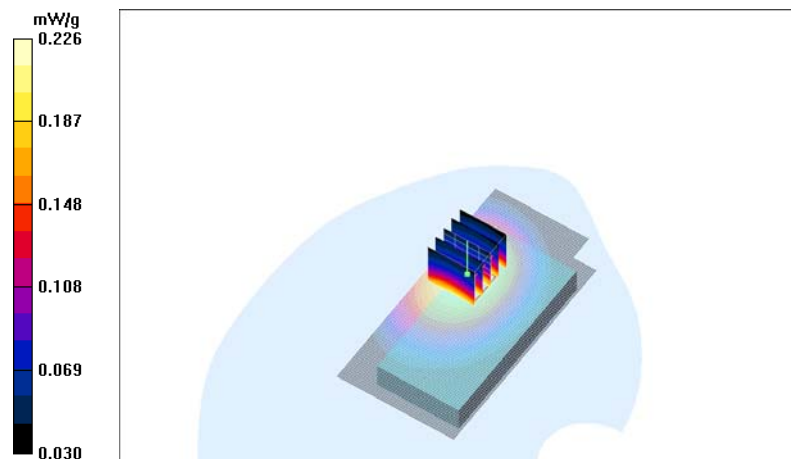
Peak SAR (extrapolated) = 0.268 W/kg

SAR(1 g) = 0.214 mW/g

SAR(10 g) = 0.160 mW/g

Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.226 mW/g



Date/Time: 2008-05-20 00:16:20

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.59, 5.59, 5.59); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - High - No Accessory - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.679 mW/g

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

Reference Value = 9.46 V/m

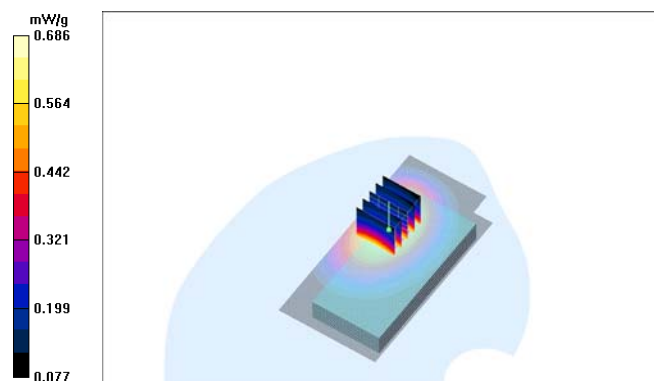
Peak SAR (extrapolated) = 0.831 W/kg

SAR(1 g) = 0.647 mW/g

SAR(10 g) = 0.469 mW/g

Power Drift = 0.039 dB

Maximum value of SAR (measured) = 0.686 mW/g



Date/Time: 2008-05-20 00:06:32

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: 3-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:2.8

Medium: Body 850; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.59, 5.59, 5.59); Calibrated: 2007-10-26
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2007-08-29
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - High - HS-45+AD-54 - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.398 mW/g

Body - High - HS-45+AD-54 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.84 V/m

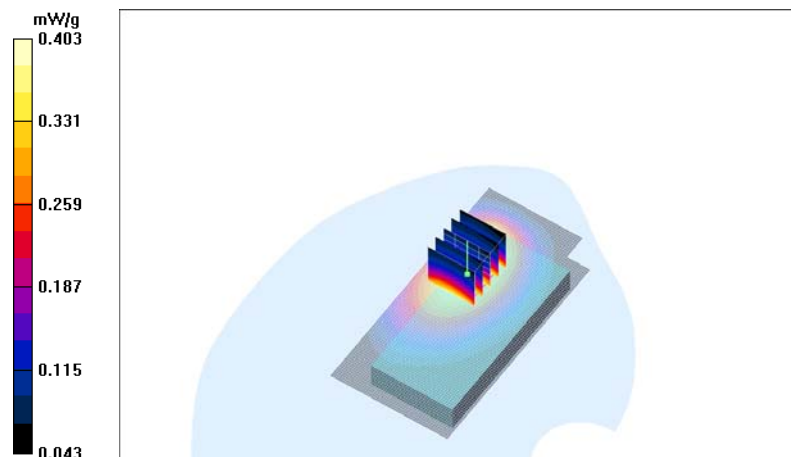
Peak SAR (extrapolated) = 0.494 W/kg

SAR(1 g) = 0.381 mW/g

SAR(10 g) = 0.276 mW/g

Power Drift = -0.118 dB

Maximum value of SAR (measured) = 0.403 mW/g



Date/Time: 2008-10-24 11:26:42

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 20.2C

Medium parameters used: $f = 835$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.68, 5.68, 5.68); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - No accessory - Display facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - No accessory - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.3 V/m

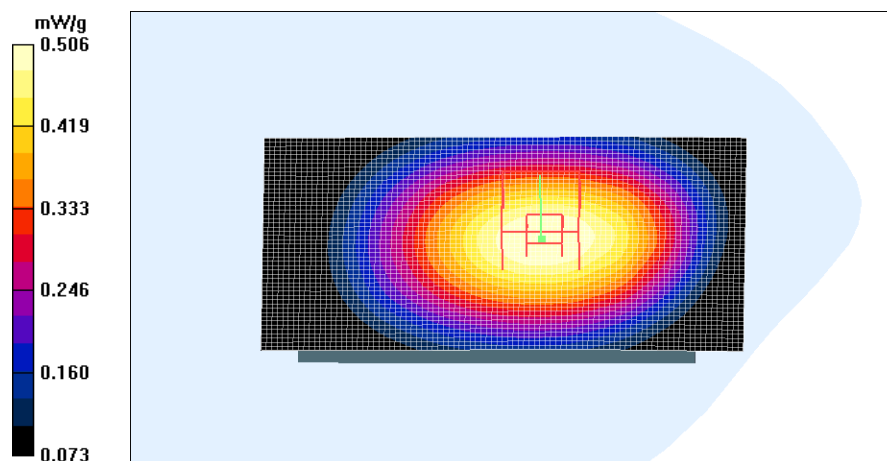
Peak SAR (extrapolated) = 0.609 W/kg

SAR(1 g) = 0.479 mW/g

SAR(10 g) = 0.355 mW/g

Power Drift = -0.061 dB

Maximum value of SAR (measured) = 0.506 mW/g



Date/Time: 2008-10-24 11:42:15

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 20.2C

Medium parameters used: $f = 835$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.68, 5.68, 5.68); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body – Middle - HS-45 + AD-54 - Display facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

Body – Middle - HS-45 + AD-54 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.46 V/m

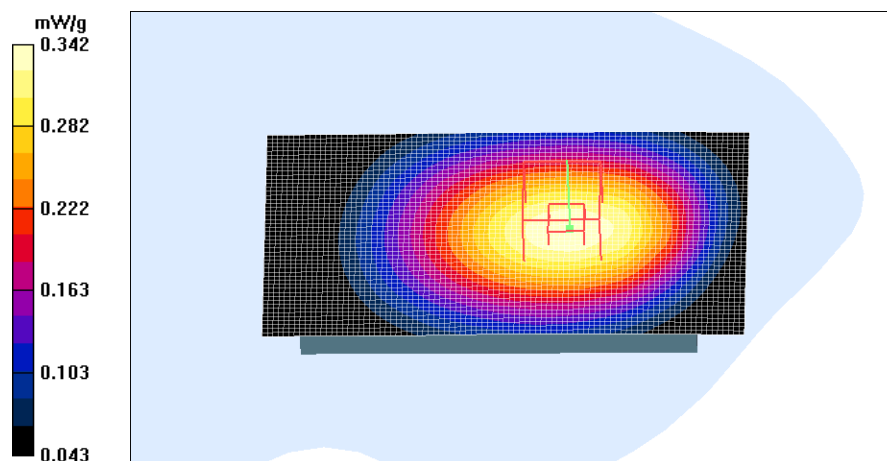
Peak SAR (extrapolated) = 0.415 W/kg

SAR(1 g) = 0.324 mW/g

SAR(10 g) = 0.238 mW/g

Power Drift = 0.085 dB

Maximum value of SAR (measured) = 0.342 mW/g



Date/Time: 2008-10-24 12:53:01

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 20.2C

Medium parameters used: $f = 847$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131

- ConvF(5.68, 5.68, 5.68); Calibrated: 2008-04-22

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn728; Calibrated: 2008-04-23

- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body Measurement, High, No accessory, Back facing phantom/Area Scan (51x91x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.786 mW/g

Body Measurement, High, No accessory, Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 12.0 V/m

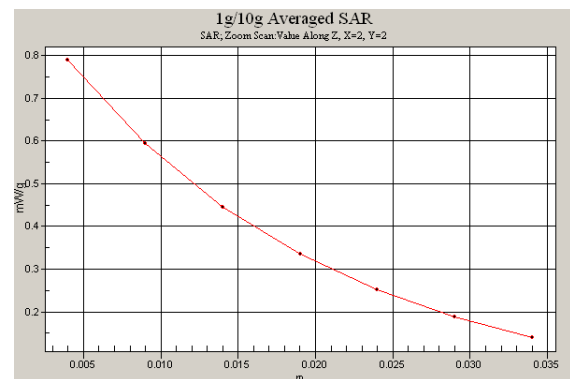
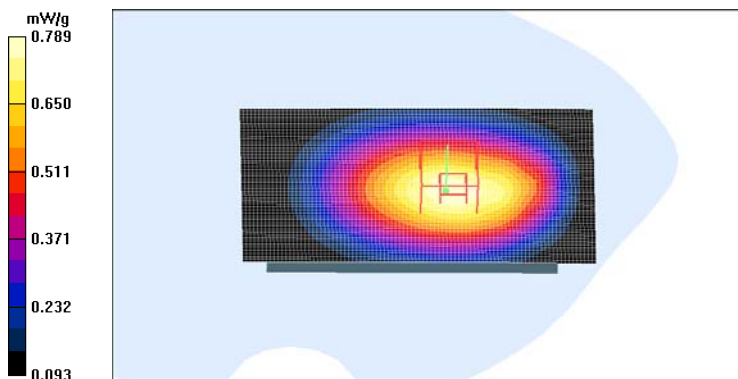
Peak SAR (extrapolated) = 0.978 W/kg

SAR(1 g) = 0.745 mW/g

SAR(10 g) = 0.537 mW/g

Power Drift = 0.085 dB

Maximum value of SAR (measured) = 0.789 mW/g



SAR Report

Salo_SAR_0848_06

Applicant: Nokia Corporation

Type: RM-428

Copyright © 2008 TCC Nokia

Date/Time: 2008-10-24 11:57:52

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 20.2C

Medium parameters used: $f = 835$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.68, 5.68, 5.68); Calibrated: 2008-04-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2008-04-23
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body – Middle - HS-45 + AD-54 - Back facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.489 mW/g

Body – Middle - HS-45 + AD-54 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.41 V/m

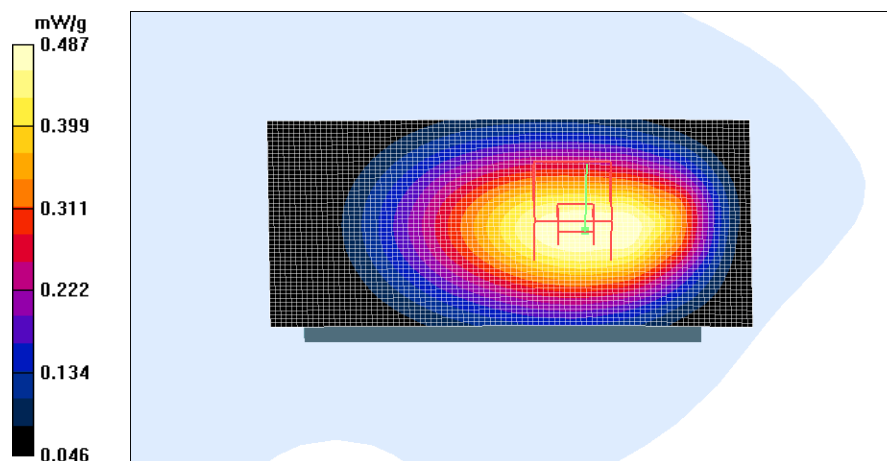
Peak SAR (extrapolated) = 0.610 W/kg

SAR(1 g) = 0.460 mW/g

SAR(10 g) = 0.330 mW/g

Power Drift = -0.070 dB

Maximum value of SAR (measured) = 0.487 mW/g



Date/Time: 2008-05-19 21:25:31

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.6$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.62, 4.62, 4.62); Calibrated: 2007-08-29
- 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 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.385 mW/g

Body - Middle - No Accessory - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.96 V/m

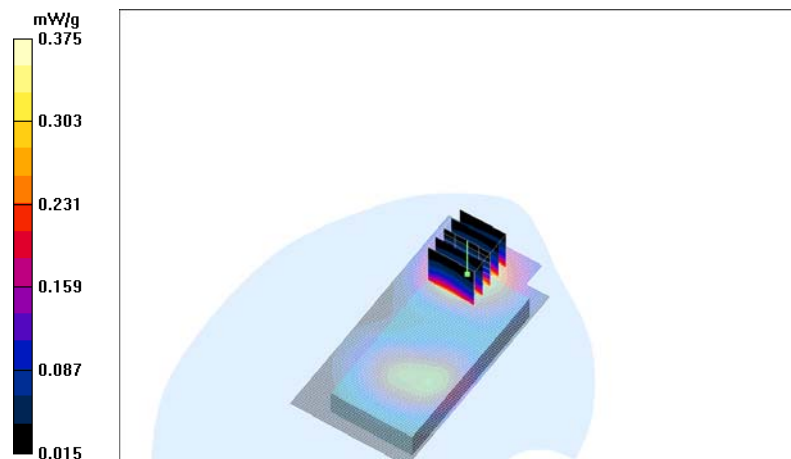
Peak SAR (extrapolated) = 0.576 W/kg

SAR(1 g) = 0.354 mW/g

SAR(10 g) = 0.214 mW/g

Power Drift = -0.344 dB

Maximum value of SAR (measured) = 0.375 mW/g



Date/Time: 2008-05-19 21:39:52

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.6$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.62, 4.62, 4.62); 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 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - HS-45+AD-54 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.335 mW/g

Body - Middle - HS-45+AD-54 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.74 V/m

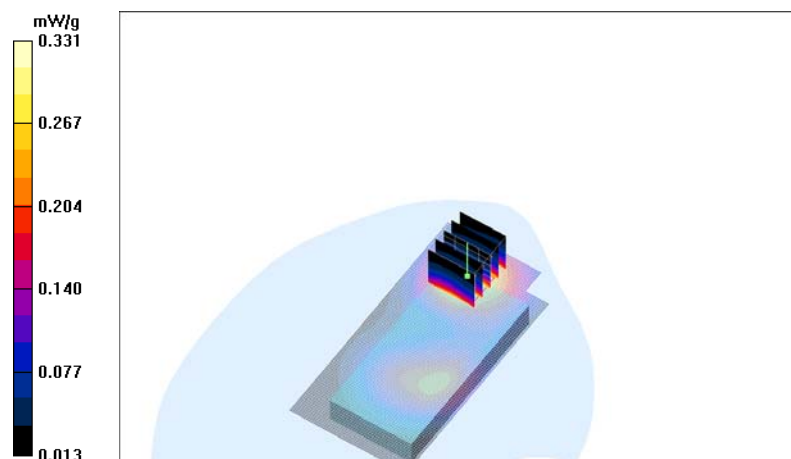
Peak SAR (extrapolated) = 0.504 W/kg

SAR(1 g) = 0.307 mW/g

SAR(10 g) = 0.185 mW/g

Power Drift = 0.005 dB

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



Date/Time: 2008-05-19 22:40:32

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.62, 4.62, 4.62); 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 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - No Accessory - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.557 mW/g

Body - Low - No Accessory - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.99 V/m

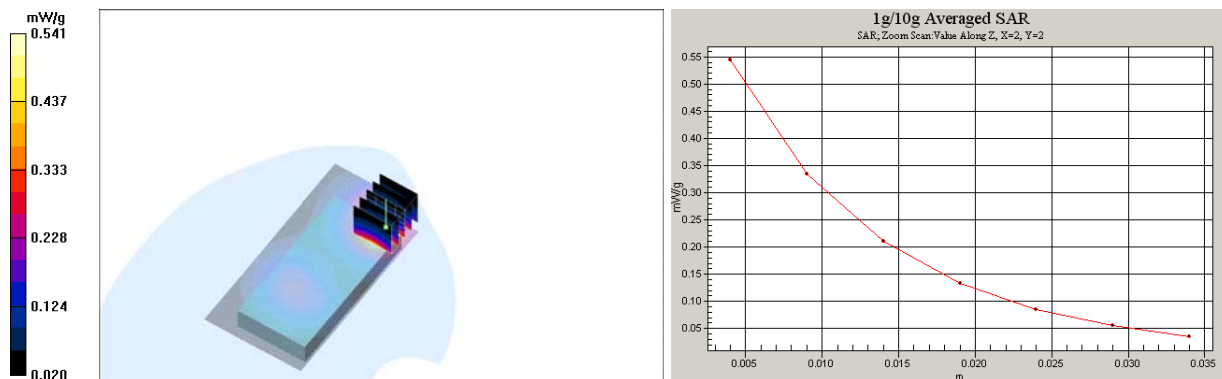
Peak SAR (extrapolated) = 0.812 W/kg

SAR(1 g) = 0.494 mW/g

SAR(10 g) = 0.293 mW/g

Power Drift = -0.022 dB

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



Date/Time: 2008-05-19 22:28:54

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: GSM 1900

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: 22.5 C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.62, 4.62, 4.62); 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 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Low - HS-45+AD-54 - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.505 mW/g

Body - Low - HS-45+AD-54 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.55 V/m

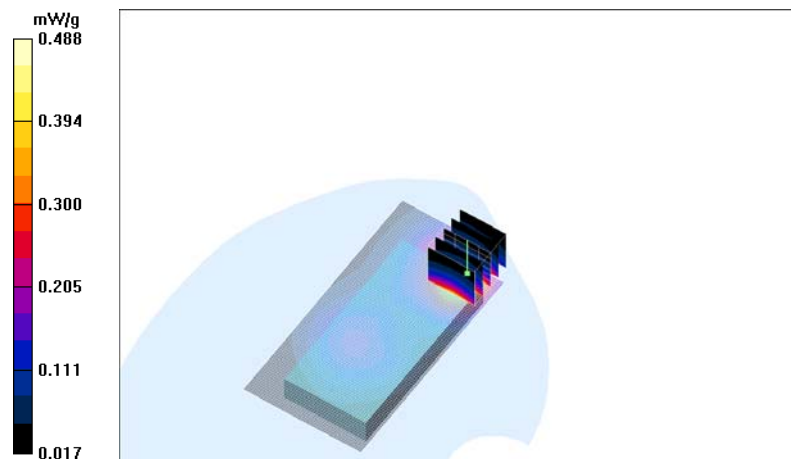
Peak SAR (extrapolated) = 0.746 W/kg

SAR(1 g) = 0.446 mW/g

SAR(10 g) = 0.263 mW/g

Power Drift = -0.029 dB

Maximum value of SAR (measured) = 0.488 mW/g



Date/Time: 2008-11-20 16:13:41

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: 20.6C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.23, 5.23, 5.23); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body – Middle - No accessory - Display facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.326 mW/g

Body – Middle - No accessory - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.7 V/m

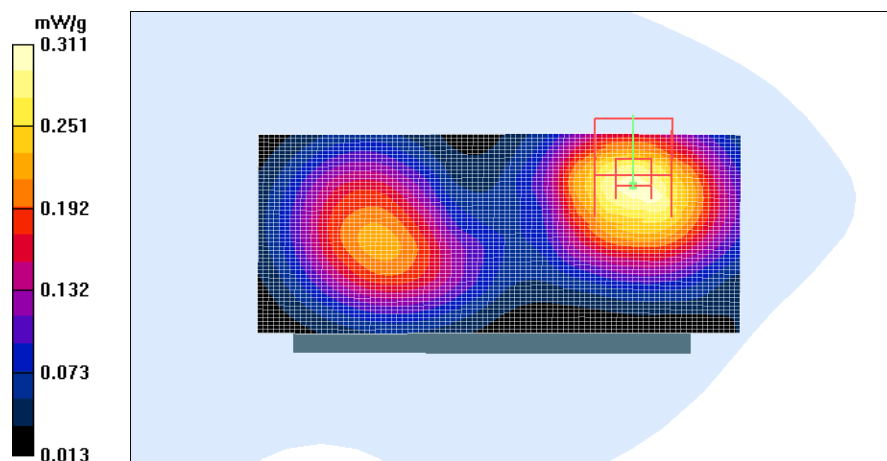
Peak SAR (extrapolated) = 0.465 W/kg

SAR(1 g) = 0.286 mW/g

SAR(10 g) = 0.176 mW/g

Power Drift = -0.267 dB

Maximum value of SAR (measured) = 0.311 mW/g



Date/Time: 2008-11-20 16:28:11

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: 20.6C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.23, 5.23, 5.23); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body – Middle - HS-45 + AD-54 - Display facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.265 mW/g

Body – Middle - HS-45 + AD-54 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.44 V/m

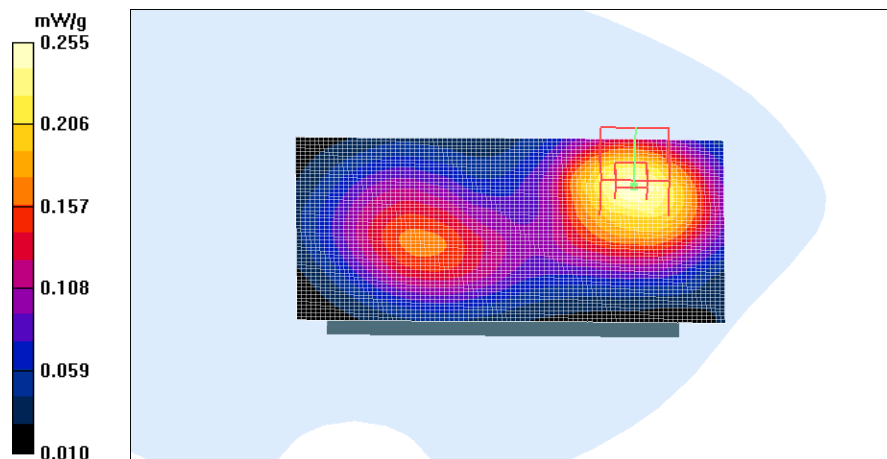
Peak SAR (extrapolated) = 0.389 W/kg

SAR(1 g) = 0.236 mW/g

SAR(10 g) = 0.145 mW/g

Power Drift = -0.006 dB

Maximum value of SAR (measured) = 0.255 mW/g



Date/Time: 2008-11-20 16:42:03

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: 20.6C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.23, 5.23, 5.23); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body – Middle - No accessory - Back facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.472 mW/g

Body – Middle - No accessory - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.69 V/m

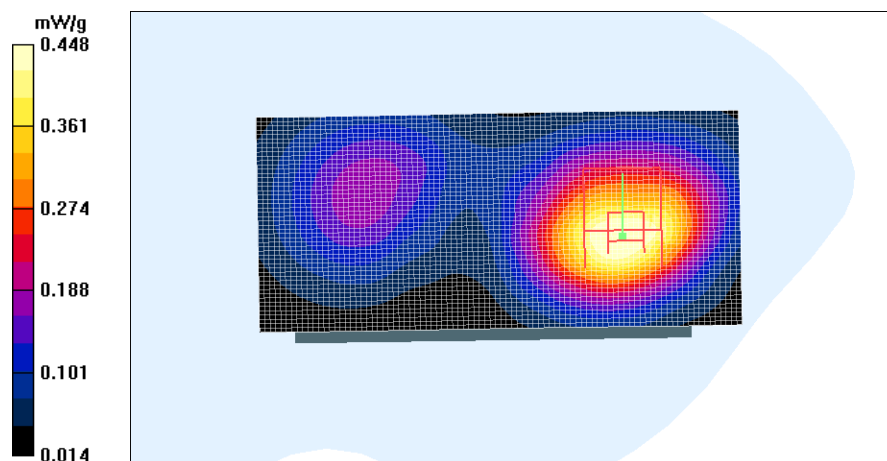
Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.417 mW/g

SAR(10 g) = 0.253 mW/g

Power Drift = -0.095 dB

Maximum value of SAR (measured) = 0.448 mW/g



Date/Time: 2008-11-20 16:55:09

Test Laboratory: TCC Nokia

Type: RM-428; Serial: 004401/10/023516/3

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: 20.6C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.23, 5.23, 5.23); Calibrated: 2008-04-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2008-04-30
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Body - Middle - HS-45 + AD-54 - Back facing phantom/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.418 mW/g

Body - Middle - HS-45 + AD-54 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.99 V/m

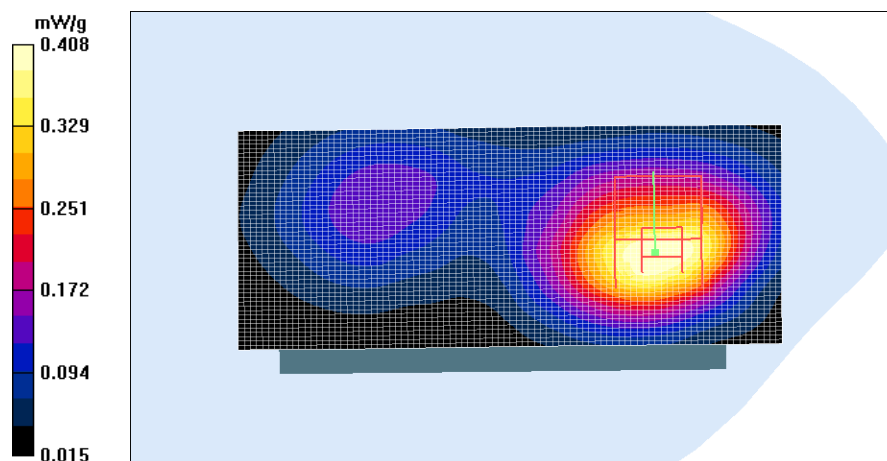
Peak SAR (extrapolated) = 0.631 W/kg

SAR(1 g) = 0.381 mW/g

SAR(10 g) = 0.228 mW/g

Power Drift = -0.018 dB

Maximum value of SAR (measured) = 0.408 mW/g



Date/Time: 2008-04-29 18:00:24

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - No Accessory - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 3.90 V/m

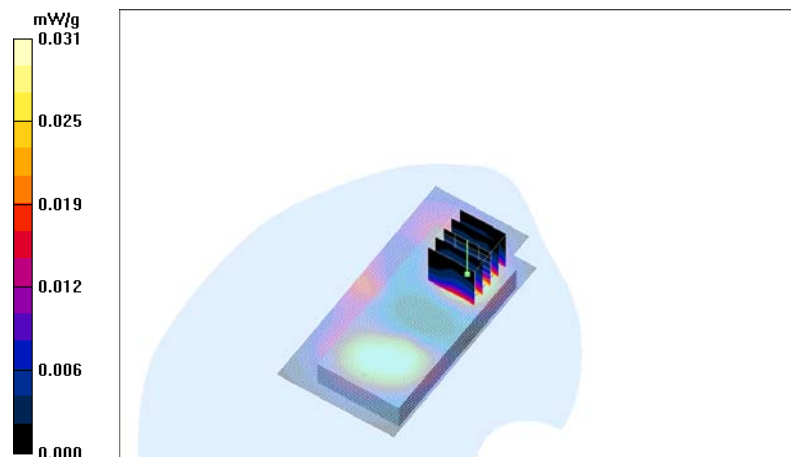
Peak SAR (extrapolated) = 0.052 W/kg

SAR(1 g) = 0.029 mW/g

SAR(10 g) = 0.017 mW/g

Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.031 mW/g



Date/Time: 2008-04-29 18:14:22

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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-45+AD-54 - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.034 mW/g

Body - Middle - HS-45+AD-54 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 3.08 V/m

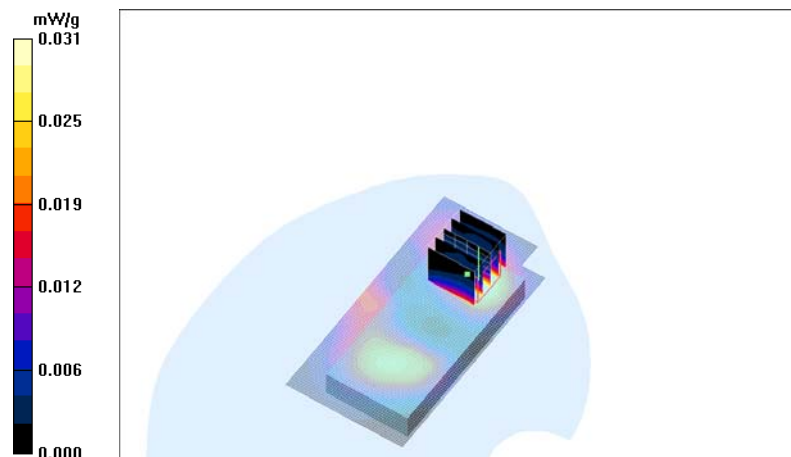
Peak SAR (extrapolated) = 0.051 W/kg

SAR(1 g) = 0.029 mW/g

SAR(10 g) = 0.017 mW/g

Power Drift = 0.049 dB

Maximum value of SAR (measured) = 0.031 mW/g



Date/Time: 2008-04-29 19:26:10

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 2462$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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 - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.082 mW/g

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

Reference Value = 5.57 V/m

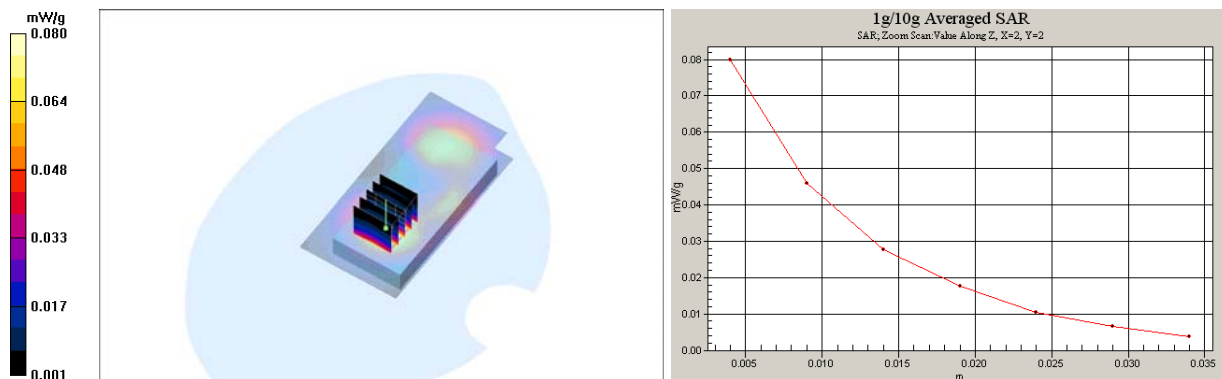
Peak SAR (extrapolated) = 0.131 W/kg

SAR(1 g) = 0.074 mW/g

SAR(10 g) = 0.043 mW/g

Power Drift = -0.106 dB

Maximum value of SAR (measured) = 0.080 mW/g



Date/Time: 2008-04-29 19:37:17

Test Laboratory: TCC Nokia

Type: RM-356; Serial: 0044001/10/048450/6

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: 22.3 C

Medium parameters used: $f = 2462$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2007-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn339; Calibrated: 2007-06-12
- 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-45+AD-54 - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - High - HS-45+AD-54 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.98 V/m

Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.065 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = 0.036 dB

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

