

SAR Compliance Test Report

Test report no.:	Salo_SAR_0802_11	Date of report:	2008-01-18
Template version:	8.0	Number of pages:	72
Testing laboratory:	TCC Nokia Salo Laboratory P.O.Box 86 Joensuukatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220	Client:	Nokia Corporation Nokia House Summit Avenue, Southwood FARNBOROUGH HAMPSHIRE GU14 0NG UK Tel. +44 1252 866000 Fax. +44 1252 866001
Responsible test engineer:	Virpi Tuominen	Product contact person:	Alison Kingston
Measurements made by:	Janne Hirsimäki, Ari Orte, Virpi Tuominen		
Tested device:	RM-342		
FCC ID:	QFXRM-342	IC:	661Z-RM342
Supplement reports:	Salo_SAR_0803_04		
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	6
3.1 TEMPERATURE AND HUMIDITY	6
3.2 TEST SIGNAL, FREQUENCIES AND OUTPUT POWER	6
4. DESCRIPTION OF THE TEST EQUIPMENT	6
4.1 MEASUREMENT SYSTEM AND COMPONENTS	6
4.1.1 Isotropic E-field Probe Type ET3DV6	8
4.1.2 Isotropic E-field Probe Type ES3DV3	9
4.2 PHANTOMS	9
4.3 TISSUE SIMULANTS	10
4.3.1 Tissue Simulant Recipes	10
4.3.2 System Checking	10
4.3.3 Tissue Simulants used in the Measurements.....	12
5. DESCRIPTION OF THE TEST PROCEDURE	13
5.1 DEVICE HOLDER.....	13
5.2 TEST POSITIONS.....	13
5.2.1 Against Phantom Head.....	13
5.2.2 Body Worn Configuration	14
5.3 SCAN PROCEDURES	14
5.4 SAR AVERAGING METHODS.....	14
6. MEASUREMENT UNCERTAINTY	15
7. RESULTS	16
APPENDIX A: SYSTEM CHECKING SCANS	21
APPENDIX B: MEASUREMENT SCANS.....	31
APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)	71
APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)	72

1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2008-01-03 to 2008-01-17
SN, HW and SW numbers of tested device	SN: 004401/01/562433/7, HW: 5200, SW: 0.105EE, DUT: 12428 SN: 004401/01/562356/0, HW: 5200, SW: 0.130EE, DUT: 12474
Batteries used in testing	BL-6F, DUT: 12382, 12383, 12384, 12385
Headsets used in testing	HS-45+AD-54, DUT: 12386+12349
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
GSM850	251 / 848.8	29.5 dBm ERP	Right, Cheek	0.905 W/kg	1.01 W/kg	1.6 W/kg	PASSED
WCDMA850	4175 / 835.0	17.0 dBm ERP	Right, Cheek	0.520 W/kg	0.58 W/kg	1.6 W/kg	PASSED
GSM1900	810 / 1909.8	30.4 dBm EIRP	Right, Cheek	1.00 W/kg	1.12 W/kg	1.6 W/kg	PASSED
WCDMA1900	9262 / 1852.4	22.5 dBm EIRP	Right, Cheek	0.922 W/kg	1.03 W/kg	1.6 W/kg	PASSED
WLAN2450	11 / 2462.0	23.6 dBm EIRP	Left, Cheek	0.236 W/kg	0.26 W/kg	1.6 W/kg	PASSED
GSM850 + WLAN2450	-	-	Left, Cheek	1.038 W/kg	1.16 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	Left, Cheek	0.694 W/kg	0.78 W/kg	1.6 W/kg	PASSED
GSM1900 + WLAN2450	-	-	Right, Cheek	1.123 W/kg	1.26 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	Right, Cheek	1.045 W/kg	1.17 W/kg	1.6 W/kg	PASSED

1.2.2 Body Worn Configuration

Mode	Ch / f (MHz)	Radiated power	Separation distance	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
GSM850	128 / 824.2	30.8 dBm ERP	1.5cm	0.681 W/kg	0.76 W/kg	1.6 W/kg	PASSED
WCDMA850	4175 / 835.0	17.0 dBm ERP	1.5cm	0.448 W/kg	0.50 W/kg	1.6 W/kg	PASSED
GSM1900	810 / 1909.8	30.4 dBm EIRP	1.5cm	0.314 W/kg	0.35 W/kg	1.6 W/kg	PASSED
WCDMA1900	9262 / 1852.4	22.5 dBm EIRP	1.5cm	0.297 W/kg	0.33 W/kg	1.6 W/kg	PASSED
WLAN2450	11 / 2462.0	23.6 dBm EIRP	1.5cm	0.251 W/kg	0.28 W/kg	1.6 W/kg	PASSED
GSM850 + WLAN2450	-	-	1.5cm	0.929 W/kg	1.04 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	1.5cm	0.696 W/kg	0.78 W/kg	1.6 W/kg	PASSED
GSM1900 + WLAN2450	-	-	1.5cm	0.562 W/kg	0.63 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	1.5cm	0.545 W/kg	0.61 W/kg	1.6 W/kg	PASSED

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

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.32 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 Voice-over-IP/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):	20.9 to 22.7
Ambient humidity (RH %):	27 to 37

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.

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

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

The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE 4	555	12 months	2008-03
DAE 4	728	12 months	2008-02
E-field Probe ET3DV6	1396	12 months	2008-02
E-field Probe ES3DV3	3131	12 months	2008-02
Dipole Validation Kit, D835V2	480	24 months	2009-05
Dipole Validation Kit, D1900V2	5d013	24 months	2008-07
Dipole Validation Kit, D2450V2	749	24 months	2008-04
DASY4 software	Version 4.7	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SML03	101265	12 months	2008-07
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2008-07
Power Meter	NRVS	849305/028	12 months	2008-07
Power Sensor	NRV-Z32	839176/020	12 months	2008-07
Call Tester	CMU 200	103293	-	-
Call Tester	CMU 200	100084	-	-
Vector Network Analyzer	8753E	US38432928	12 months	2008-07
Dielectric Probe Kit	85070B	US33020420	-	-

4.1.1 Isotropic E-field Probe Type ET3DV6

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

4.1.2 Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., butyl diglycol)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to 4 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in HSL (rotation normal to probe axis)
Dynamic Range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 20 mm Body diameter: 12 mm Tip diameter: 3.9 mm
Application	Distance from probe tip to dipole centers: 2.0 mm General dosimetry up to 4 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

4.2 Phantoms

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

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

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

4.3 Tissue Simulants

Recommended values for the dielectric parameters of the tissue simulants are given in IEEE 1528 - 2003 and FCC Supplement C to OET Bulletin 65. All tests were carried out using simulants whose dielectric parameters were within $\pm 5\%$ of the recommended values. All tests were carried out within 24 hours of measuring the dielectric parameters.

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

4.3.1 Tissue Simulant Recipes

The following recipe(s) were used for Head and Body tissue simulant(s):

800MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	51.50	69.25
Tween 20	47.35	30.00
Salt	1.15	0.75

1900MHz band

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

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

<i>f</i> [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.29	41.6	0.90	
	± 10% window	2.06 – 2.52			
	2008-01-03	2.40	41.1	0.91	21.0
	2008-01-04	2.35	41.3	0.91	21.0
	2008-01-10	2.37	41.2	0.92	21.0
1900	Reference result	9.69	39.3	1.44	
	± 10% window	8.72 – 10.66			
	2008-01-06	10.2	38.9	1.42	21.0
	2008-01-07	10.2	38.9	1.41	21.0
	2008-01-09	10.1	38.5	1.41	21.0
	2008-01-17	10.4	38.6	1.42	21.0
2450	Reference result	13.5	38.8	1.76	
	± 10% window	12.1 – 14.9			
	2008-01-13	13.9	37.7	1.84	21.0

System checking, body tissue simulant

<i>f</i> [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.48	53.0	0.98	
	± 10% window	2.23 – 2.73			
	2008-01-05	2.31	54.9	0.99	21.0
2450	Reference result	14.1	53.7	1.97	
	± 10% window	12.7 – 15.5			
	2008-01-13	13.7	51.8	2.01	21.0

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

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2008-01-03	41.1	0.92	21.0
	2008-01-04	41.3	0.91	21.0
	2008-01-10	41.2	0.92	21.0
1880	Recommended value	40.0	1.40	
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2008-01-06	39.0	1.40	21.0
	2008-01-09	38.6	1.40	21.0
	2008-01-17	38.7	1.40	21.0
2442	Recommended value	39.2	1.79	
	$\pm 5\%$ window	37.3 – 41.2	1.70 – 1.88	
	2008-01-13	37.7	1.83	21.0

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
836	Recommended value	55.2	0.97	
	$\pm 5\%$ window	52.4 – 58.0	0.92 – 1.02	
	2008-01-04	54.6	0.99	21.0
	2008-01-05	54.9	0.99	21.0
1880	Recommended value	53.3	1.52	
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2008-01-07	52.5	1.52	21.0
	2008-01-09	52.2	1.52	21.0
	2008-01-17	52.5	1.54	21.0
2442	Recommended value	52.7	1.94	
	$\pm 5\%$ window	50.1 – 55.3	1.85 – 2.04	
	2008-01-13	51.8	1.99	21.0

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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



Device holder supplied by SPEAG

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



Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

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

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

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 its antenna facing the phantom since this orientation gives higher results.

5.3 Scan Procedures

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

5.4 SAR Averaging Methods

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

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

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

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

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

Uncertainty Component	Section in IEEE 1528	Tol. (%)	Prob Dist	Div	C_i	$C_i \cdot u_i$ (%)	v_i
Measurement System							
Probe Calibration	E2.1	±5.9	N	1	1	±5.9	∞
Axial Isotropy	E2.2	±4.7	R	√3	$(1-c_p)^{1/2}$	±1.9	∞
Hemispherical Isotropy	E2.2	±9.6	R	√3	$(c_p)^{1/2}$	±3.9	∞
Boundary Effect	E2.3	±1.0	R	√3	1	±0.6	∞
Linearity	E2.4	±4.7	R	√3	1	±2.7	∞
System Detection Limits	E2.5	±1.0	R	√3	1	±0.6	∞
Readout Electronics	E2.6	±1.0	N	1	1	±1.0	∞
Response Time	E2.7	±0.8	R	√3	1	±0.5	∞
Integration Time	E2.8	±2.6	R	√3	1	±1.5	∞
RF Ambient Conditions - Noise	E6.1	±3.0	R	√3	1	±1.7	∞
RF Ambient Conditions - Reflections	E6.1	±3.0	R	√3	1	±1.7	∞
Probe Positioner Mechanical Tolerance	E6.2	±0.4	R	√3	1	±0.2	∞
Probe Positioning with respect to Phantom Shell	E6.3	±2.9	R	√3	1	±1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E5	±3.9	R	√3	1	±2.3	∞
Test sample Related							
Test Sample Positioning	E4.2	±6.0	N	1	1	±6.0	11
Device Holder Uncertainty	E4.1	±5.0	N	1	1	±5.0	7
Output Power Variation - SAR drift measurement	6.6.3	±0.0	R	√3	1	±0.0	∞
Phantom and Tissue Parameters							
Phantom Uncertainty (shape and thickness tolerances)	E3.1	±4.0	R	√3	1	±2.3	∞
Conductivity Target - tolerance	E3.2	±5.0	R	√3	0.64	±1.8	∞
Conductivity - measurement uncertainty	E3.3	±5.5	N	1	0.64	±3.5	5
Permittivity Target - tolerance	E3.2	±5.0	R	√3	0.6	±1.7	∞
Permittivity - measurement uncertainty	E3.3	±2.9	N	1	0.6	±1.7	5
Combined Standard Uncertainty			RSS			±12.9	116
Coverage Factor for 95%			k=2				
Expanded Uncertainty						±25.8	

7. RESULTS

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

850MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Power		30.8 dBm	30.3 dBm	29.5 dBm
	Left	Cheek	0.784	0.802	0.765
		Tilt	-	0.467	-
	Right	Cheek	0.828	0.869	0.904
		Tilt	-	0.473	-
2-slot GPRS	Power		28.6 dBm	27.5 dBm	26.3 dBm
	Left	Cheek	-	0.743	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power		26.9 dBm	25.8 dBm	24.4 dBm
	Left	Cheek	-	0.708	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
1-slot 8PSK EGPRS	Power		23.6 dBm	22.8 dBm	22.0 dBm
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.129
		Tilt	-	-	-
Mode	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		16.5 dBm	17.0 dBm	16.6 dBm
	Left	Cheek	-	0.458	-
		Tilt	-	0.260	-
	Right	Cheek	0.413	0.520	0.503
		Tilt	-	0.281	-
GSM	Right Cheek, BT active		-	-	0.905

1900MHz Head SAR results

Mode	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		31.3 dBm	31.6 dBm	30.4 dBm
	Left	Cheek	-	0.563	-
		Tilt	-	0.226	-
	Right	Cheek	0.794	0.883	1.00
		Tilt	-	0.213	-
2-slot GPRS	Power		28.2 dBm	28.8 dBm	27.1 dBm
	Left	Cheek	-	0.551	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Power		26.3 dBm	26.6 dBm	25.1 dBm
	Left	Cheek	-	0.502	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot 8PSK EGPRS	Power		27.2 dBm	27.6 dBm	26.6 dBm
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.390
		Tilt	-	-	-
Mode	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		22.5 dBm	21.3 dBm	22.6 dBm
	Left	Cheek	-	0.567	-
		Tilt	-	0.198	-
	Right	Cheek	0.922	0.838	0.854
		Tilt	-	0.201	-
GSM	Right Cheek, BT active		-	-	0.988

2450MHz Head SAR results

Mode	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		22.4 dBm	24.1 dBm	23.6 dBm
	Left	Cheek	0.133	0.193	0.236
		Tilt	-	0.160	-
	Right	Cheek	-	0.123	-
		Tilt	-	0.162	-

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

850MHz Body SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Power		30.8 dBm	30.3 dBm	29.5 dBm
	Without headset		0.681	0.667	0.651
	Headset HS-45+AD-54		0.463	0.509	0.485
Mode	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		16.5 dBm	17.0 dBm	16.6 dBm
	Without headset		0.388	0.448	0.431
	Headset HS-45+AD-54		0.243	0.287	0.292
GSM	Without headset, BT		0.668	-	-

1900MHz Body SAR results

Mode	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	31.3 dBm	31.6 dBm	30.4 dBm
	Without headset	0.248	0.300	0.314
	Headset HS-45+AD-54	0.231	0.281	0.306
Mode	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	22.5 dBm	21.3 dBm	22.6 dBm
	Without headset	0.297	0.285	0.286
	Headset HS-45+AD-54	0.285	0.272	0.274
GSM	Without headset, BT	-	-	0.308

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	22.4 dBm	24.1 dBm	23.6 dBm
	Without headset	0.178	0.215	0.248
	Headset HS-45+AD-54	0.187	0.230	0.251

Simultaneous transmissions: Combined SAR results

Test configuration	Max. 1g SAR results					Combined 1g SAR values			
	WLAN	GSM 850	WCDMA 850	GSM 1900	WCDMA 1900	GSM850+ WLAN	WCDMA 850 + WLAN	GSM 1900 + WLAN	WCDMA 1900 + WLAN
Left, Cheek	0.236	0.802	0.458	0.563	0.567	1.038	0.694	0.799	0.803
Left, Tilt	0.160	0.467	0.260	0.226	0.198	0.627	0.420	0.386	0.358
Right, Cheek	0.123	0.905	0.520	1.00	0.922	1.028	0.643	1.123	1.045
Right, Tilt	0.162	0.473	0.281	0.213	0.201	0.635	0.443	0.375	0.363
Without headset	0.248	0.681	0.448	0.314	0.297	0.929	0.696	0.562	0.545
Headset HS-45+AD-54	0.251	0.509	0.292	0.306	0.285	0.760	0.543	0.557	0.536

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

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2008-01-03 20:49:45

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL900; Medium Notes: 21.7C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 54.8 V/m

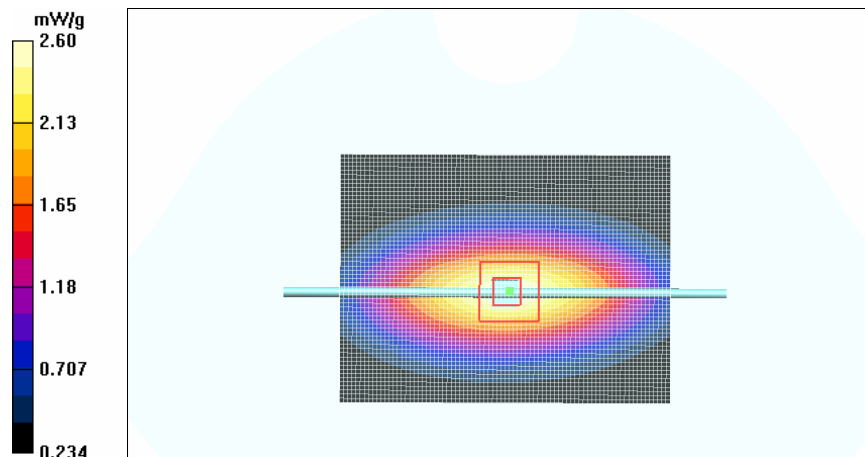
Peak SAR (extrapolated) = 3.56 W/kg

SAR(1 g) = 2.4 mW/g

SAR(10 g) = 1.57 mW/g

Power Drift = -0.012 dB

Maximum value of SAR (measured) = 2.60 mW/g



Date/Time: 2008-01-04 07:33:54

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 21.3C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 2.50 mW/g

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

Reference Value = 54.5 V/m

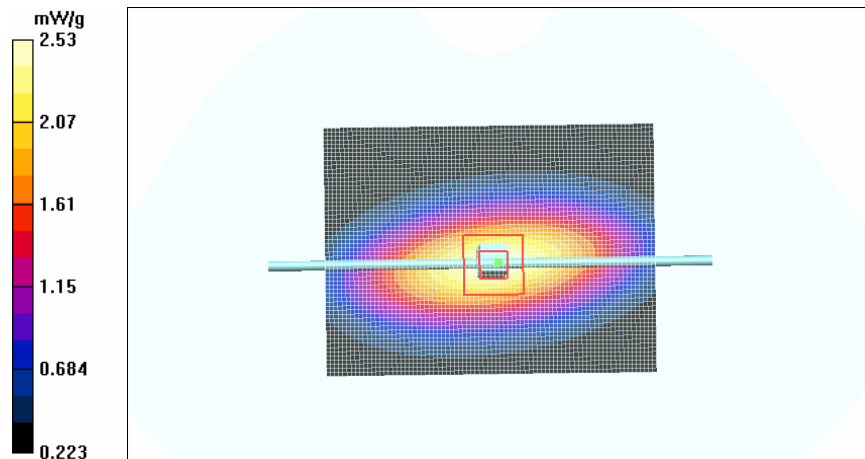
Peak SAR (extrapolated) = 3.47 W/kg

SAR(1 g) = 2.35 mW/g

SAR(10 g) = 1.53 mW/g

Power Drift = 0.011 dB

Maximum value of SAR (measured) = 2.53 mW/g



Date/Time: 2008-01-10 20:12:59

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

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 21.9C

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 41.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 2.53 mW/g

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

Reference Value = 54.2 V/m

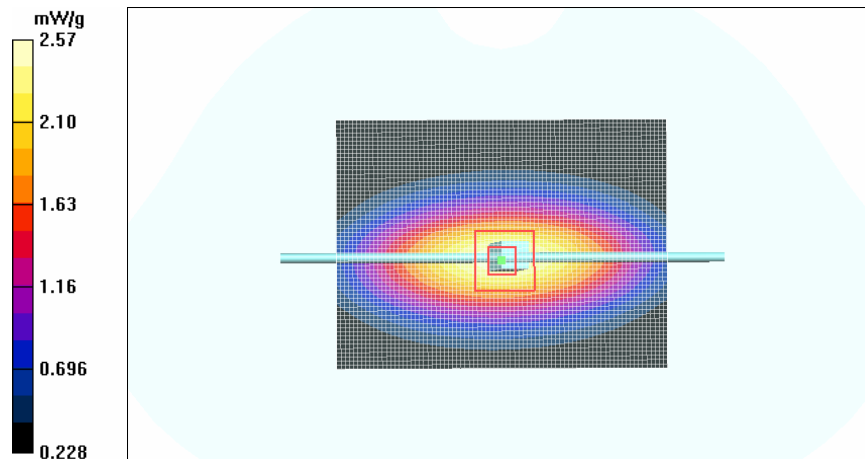
Peak SAR (extrapolated) = 3.51 W/kg

SAR(1 g) = 2.37 mW/g

SAR(10 g) = 1.55 mW/g

Power Drift = -0.016 dB

Maximum value of SAR (measured) = 2.57 mW/g



Date/Time: 2008-01-06 14:32:17

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; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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 = 95.1 V/m

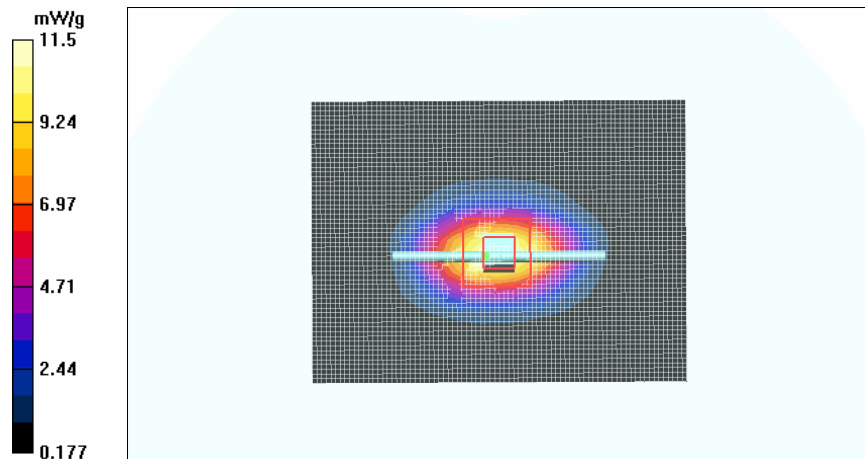
Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 10.2 mW/g

SAR(10 g) = 5.39 mW/g

Power Drift = -0.032 dB

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



Date/Time: 2008-01-07 09:42:30

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.5C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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 = 94.8 V/m

Peak SAR (extrapolated) = 17.6 W/kg

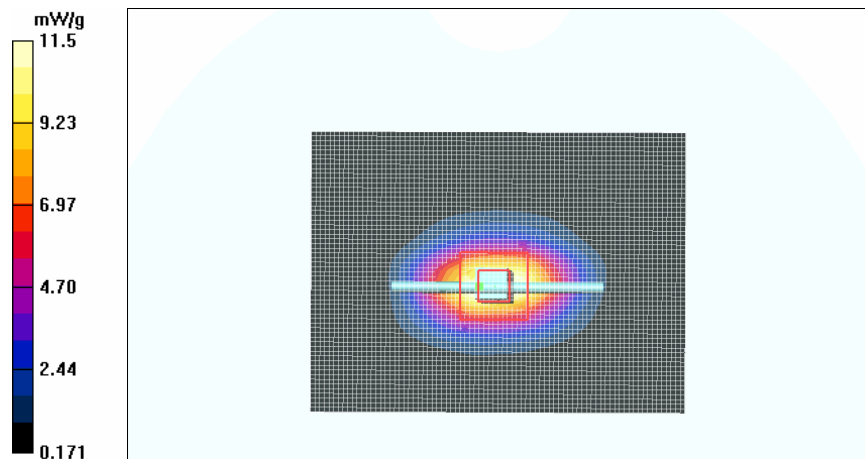
SAR(1 g) = 10.2 mW/g

SAR(10 g) = 5.41 mW/g

Power Drift = 0.014 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) = 11.5 mW/g



Date/Time: 2008-01-09 10:13:14

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 12.2 mW/g

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

Reference Value = 95.4 V/m

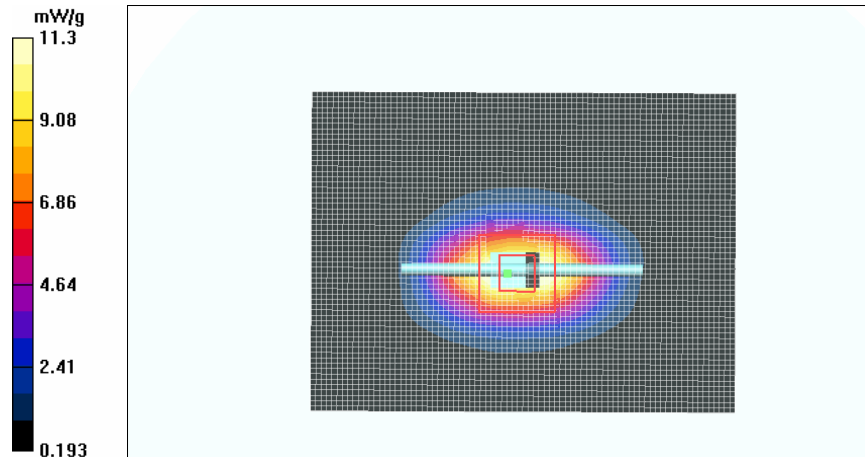
Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 10.1 mW/g

SAR(10 g) = 5.34 mW/g

Power Drift = -0.001 dB

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



Date/Time: 2008-01-17 13:55:58

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 12.5 mW/g

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

Reference Value = 94.2 V/m

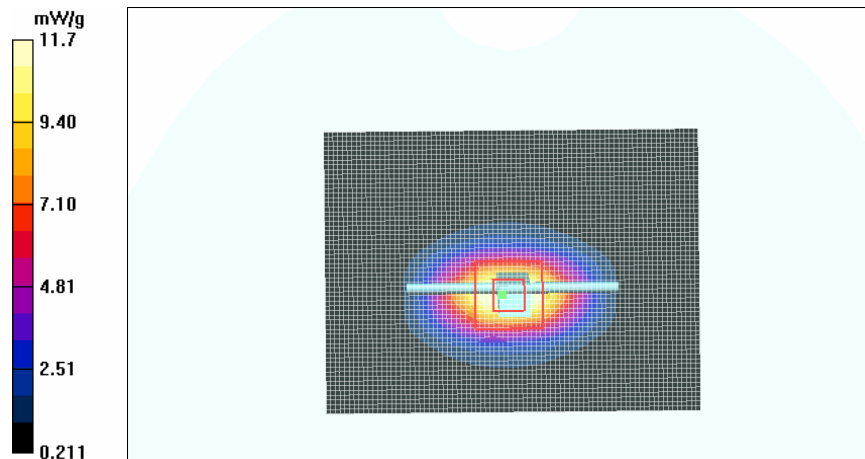
Peak SAR (extrapolated) = 18.0 W/kg

SAR(1 g) = 10.4 mW/g

SAR(10 g) = 5.49 mW/g

Power Drift = 0.005 dB

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



Date/Time: 2008-01-13 14:39:27

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:749

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t=20.6C

Medium parameters used: f = 2450 MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.45, 4.45, 4.45); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 94.3 V/m

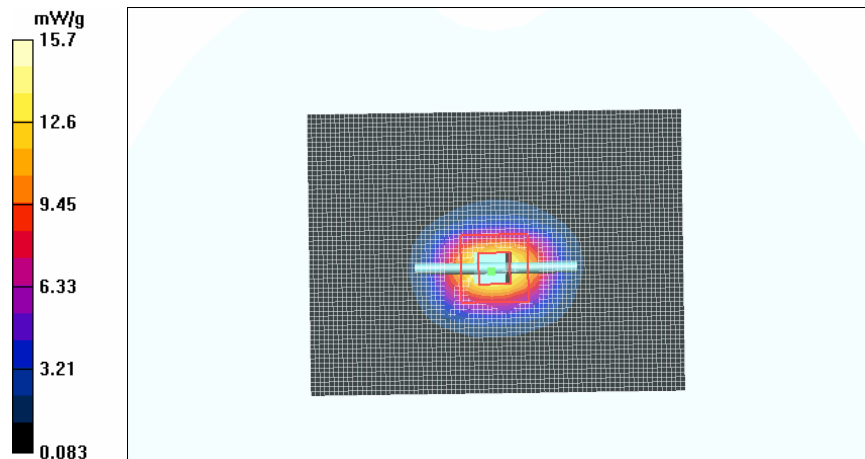
Peak SAR (extrapolated) = 29.5 W/kg

SAR(1 g) = 13.9 mW/g

SAR(10 g) = 6.35 mW/g

Power Drift = -0.063 dB

Maximum value of SAR (measured) = 15.7 mW/g



Date/Time: 2008-01-05 13:31:13

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: 21.0C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 2.50 mW/g

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

Reference Value = 51.8 V/m

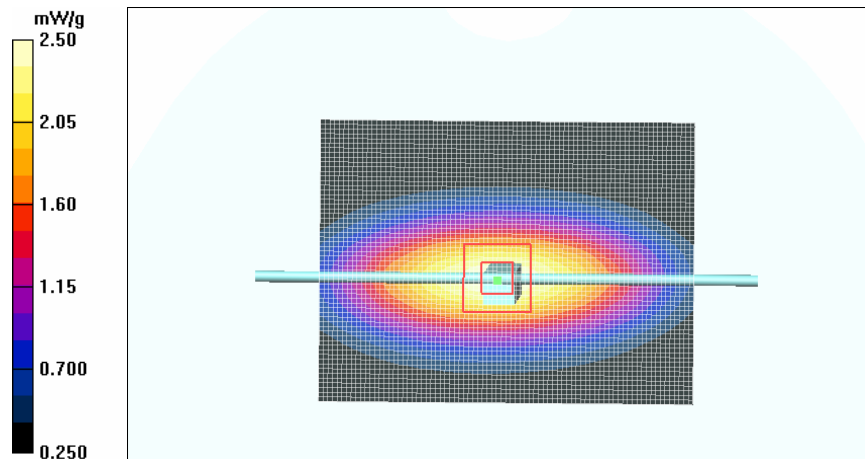
Peak SAR (extrapolated) = 3.31 W/kg

SAR(1 g) = 2.31 mW/g

SAR(10 g) = 1.53 mW/g

Power Drift = 0.018 dB

Maximum value of SAR (measured) = 2.50 mW/g



Date/Time: 2008-01-13 10:44:18

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:749

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t=20.8C

Medium parameters used: f = 2450 MHz; σ = 2.01 mho/m; ϵ_r = 51.8; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.1, 4.1, 4.1); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 15.8 mW/g

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

Reference Value = 90.0 V/m

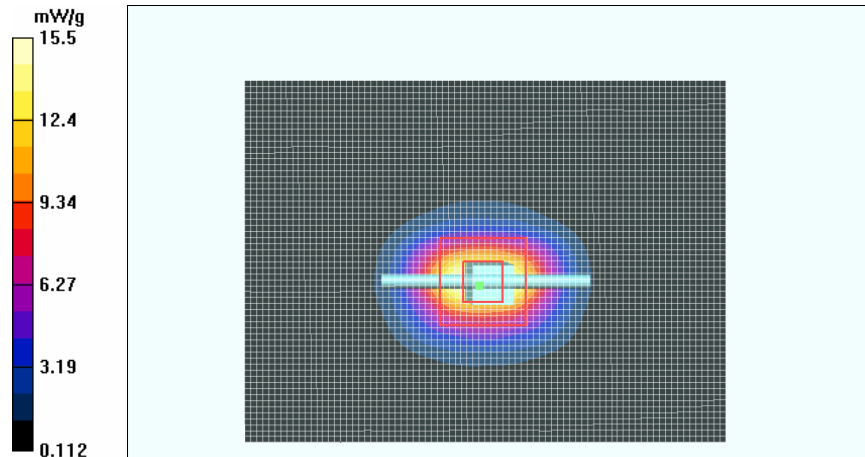
Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 13.7 mW/g

SAR(10 g) = 6.35 mW/g

Power Drift = -0.040 dB

Maximum value of SAR (measured) = 15.5 mW/g



APPENDIX B: MEASUREMENT SCANS

Date/Time: 2008-01-03 21:31:24

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL900; Medium Notes: 21.6C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.883 mW/g

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

Reference Value = 12.0 V/m

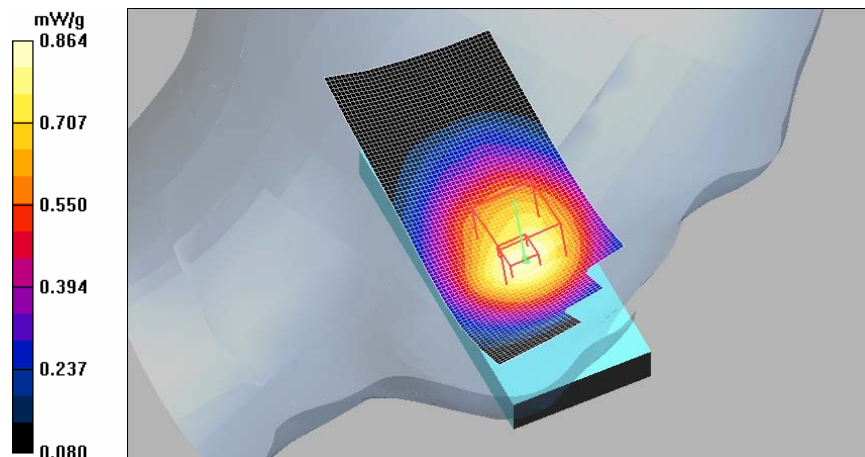
Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.802 mW/g

SAR(10 g) = 0.569 mW/g

Power Drift = -0.062 dB

Maximum value of SAR (measured) = 0.864 mW/g



Date/Time: 2008-01-03 21:50:31

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL900; Medium Notes: 21.6C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.497 mW/g

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

Reference Value = 16.8 V/m

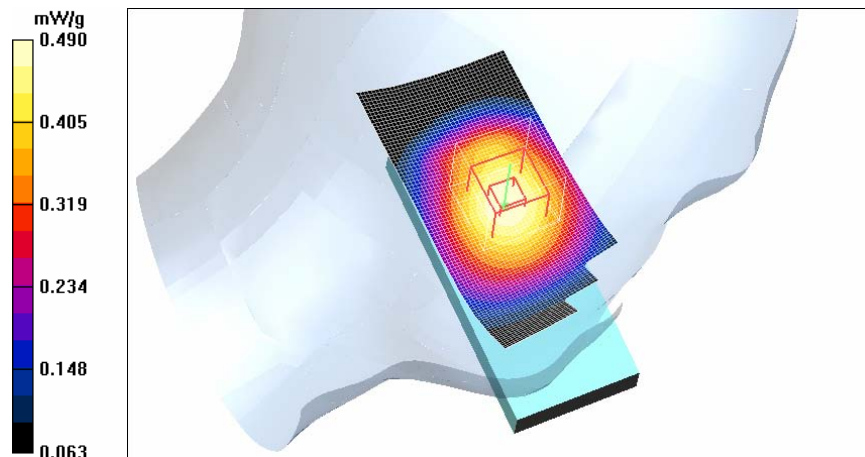
Peak SAR (extrapolated) = 0.598 W/kg

SAR(1 g) = 0.467 mW/g

SAR(10 g) = 0.345 mW/g

Power Drift = -0.002 dB

Maximum value of SAR (measured) = 0.490 mW/g



Date/Time: 2008-01-04 10:38:57

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850; Medium Notes: 21.1C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.987 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

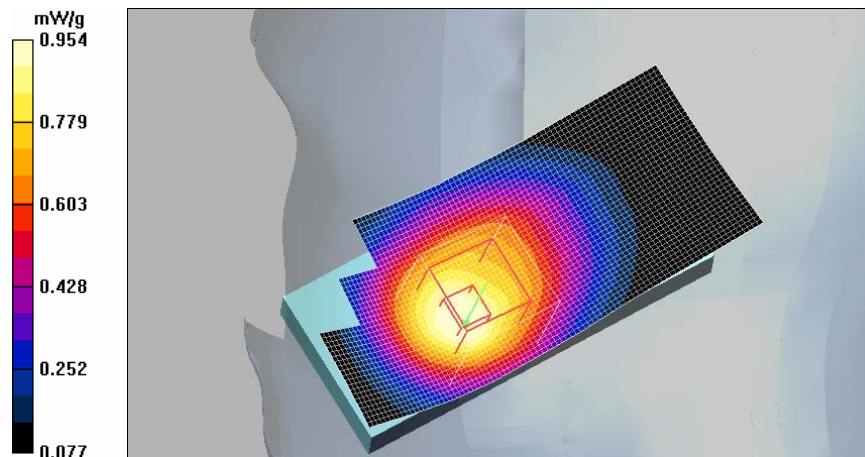
Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.904 mW/g

SAR(10 g) = 0.632 mW/g

Power Drift = 0.025 dB

Maximum value of SAR (measured) = 0.954 mW/g



Date/Time: 2008-01-03 22:28:06

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: HSL900; Medium Notes: 21.4C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.500 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

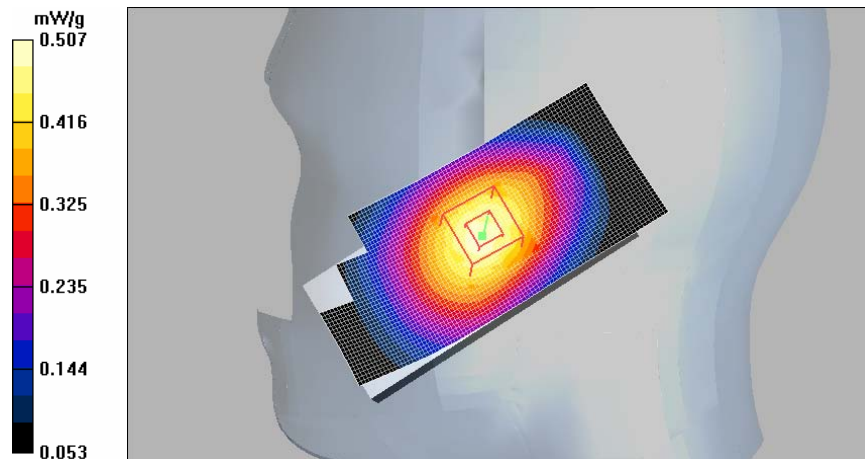
Peak SAR (extrapolated) = 0.599 W/kg

SAR(1 g) = 0.473 mW/g

SAR(10 g) = 0.346 mW/g

Power Drift = -0.048 dB

Maximum value of SAR (measured) = 0.507 mW/g



Date/Time: 2008-01-10 20:51:01

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: HSL850; Medium Notes: 21.8C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.925$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.800 mW/g

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

Reference Value = 11.9 V/m

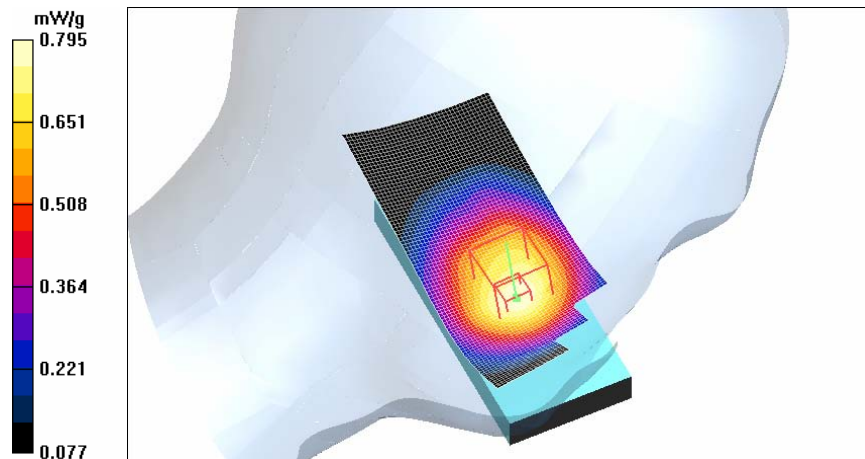
Peak SAR (extrapolated) = 0.982 W/kg

SAR(1 g) = 0.743 mW/g

SAR(10 g) = 0.537 mW/g

Power Drift = -0.099 dB

Maximum value of SAR (measured) = 0.795 mW/g



Date/Time: 2008-01-10 21:06:54

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: HSL850; Medium Notes: 21.8C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.925$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.769 mW/g

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

Reference Value = 11.5 V/m

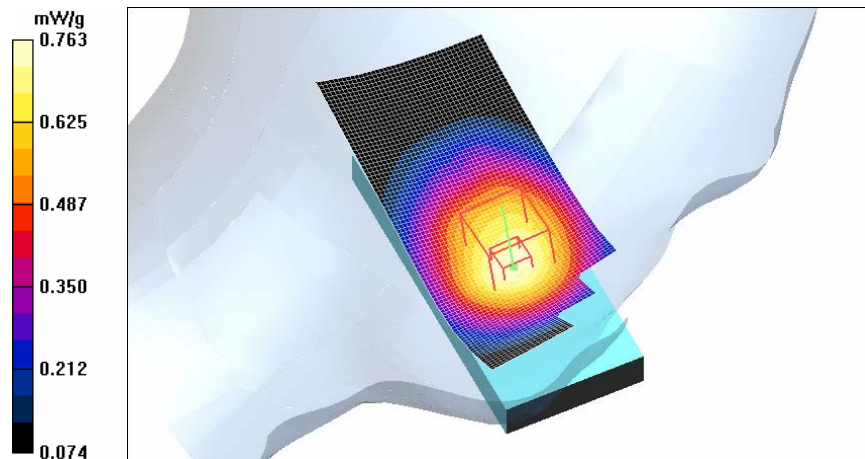
Peak SAR (extrapolated) = 0.930 W/kg

SAR(1 g) = 0.708 mW/g

SAR(10 g) = 0.511 mW/g

Power Drift = -0.053 dB

Maximum value of SAR (measured) = 0.763 mW/g



Date/Time: 2008-01-10 21:32:29

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 1-slot 8PSK EGPRS850

Frequency: 849 MHz; Duty Cycle: 1:8.3

Medium: HSL850; Medium Notes: 21.6C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.934$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 4.62 V/m

Peak SAR (extrapolated) = 0.173 W/kg

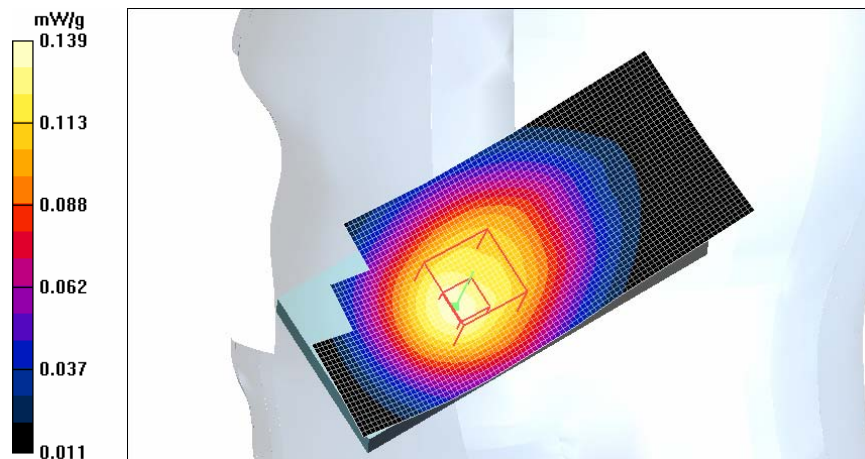
SAR(1 g) = 0.129 mW/g

SAR(10 g) = 0.092 mW/g

Power Drift = -0.003 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) = 0.139 mW/g



Date/Time: 2008-01-04 12:13:59

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.8C

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position, Middle/Area Scan (41x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.499 mW/g

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

Reference Value = 8.65 V/m

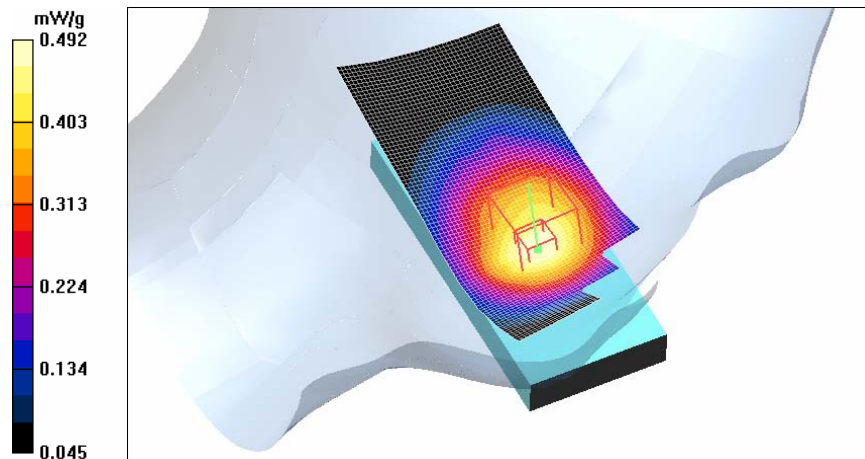
Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.458 mW/g

SAR(10 g) = 0.328 mW/g

Power Drift = 0.005 dB

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



Date/Time: 2008-01-04 12:30:33

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.8C

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position, Middle/Area Scan (41x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Tilt position, Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.9 V/m

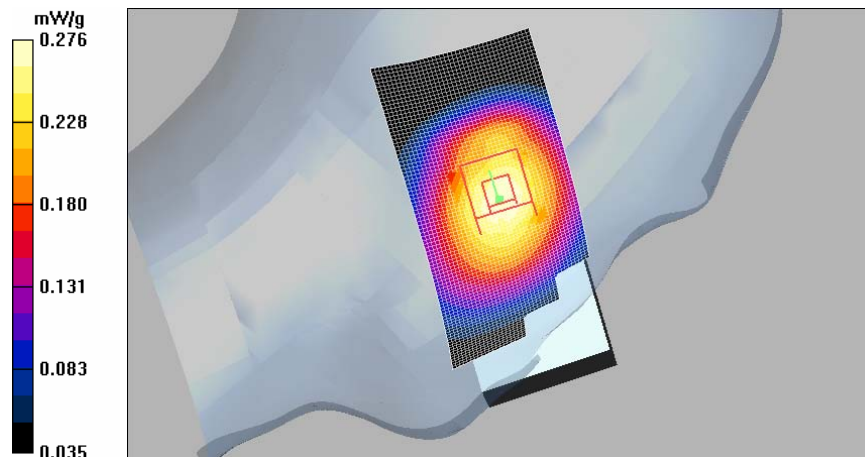
Peak SAR (extrapolated) = 0.328 W/kg

SAR(1 g) = 0.260 mW/g

SAR(10 g) = 0.193 mW/g

Power Drift = -0.043 dB

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



Date/Time: 2008-01-04 18:51:51

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.6C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 9.14 V/m

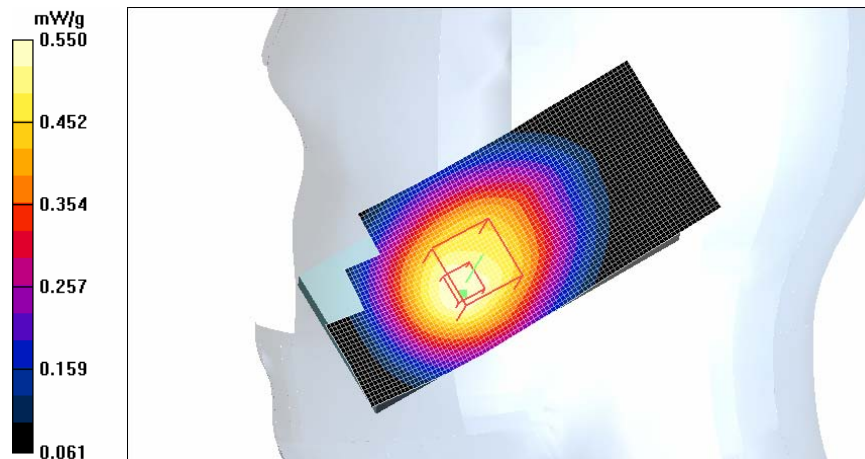
Peak SAR (extrapolated) = 0.693 W/kg

SAR(1 g) = 0.520 mW/g

SAR(10 g) = 0.375 mW/g

Power Drift = -0.085 dB

Maximum value of SAR (measured) = 0.550 mW/g



Date/Time: 2008-01-04 13:11:24

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: 20.6C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.298 mW/g

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

Reference Value = 11.8 V/m

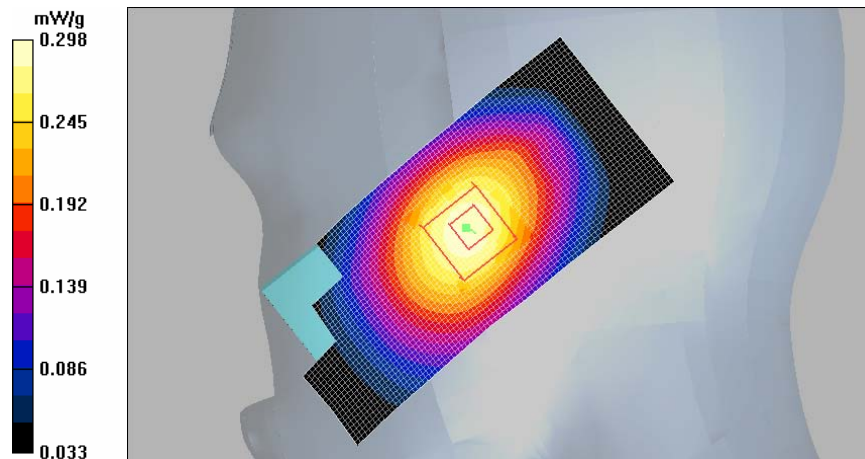
Peak SAR (extrapolated) = 0.353 W/kg

SAR(1 g) = 0.281 mW/g

SAR(10 g) = 0.208 mW/g

Power Drift = 0.001 dB

Maximum value of SAR (measured) = 0.298 mW/g



Date/Time: 2008-01-04 10:59:46

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL850; Medium Notes: 21.1C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.86, 6.86, 6.86); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.985 mW/g

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

Reference Value = 10.7 V/m

Peak SAR (extrapolated) = 1.27 W/kg

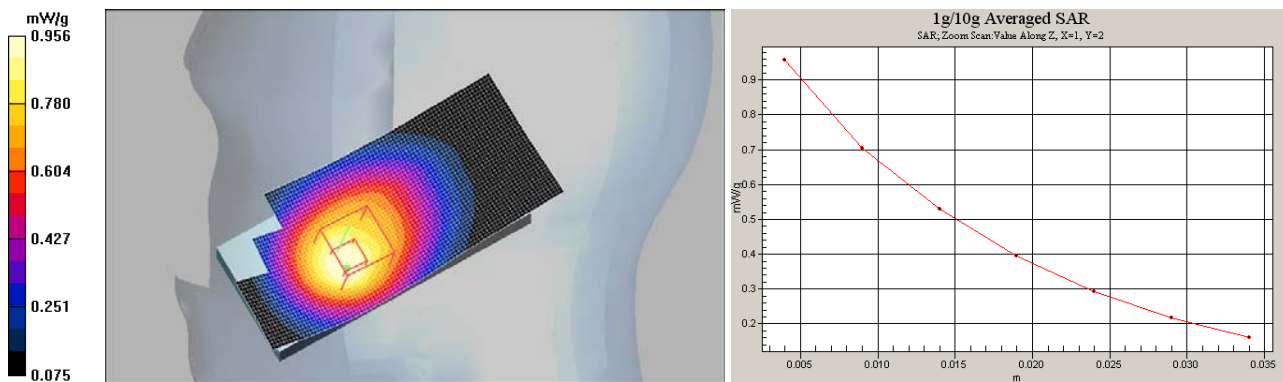
SAR(1 g) = 0.905 mW/g

SAR(10 g) = 0.632 mW/g

Power Drift = -0.026 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) = 0.956 mW/g



Date/Time: 2008-01-09 11:02:52

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 20.9C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 7.39 V/m

Peak SAR (extrapolated) = 0.929 W/kg

SAR(1 g) = 0.563 mW/g

SAR(10 g) = 0.315 mW/g

Power Drift = -0.190 dB

Maximum value of SAR (measured) = 0.626 mW/g

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

Reference Value = 7.39 V/m

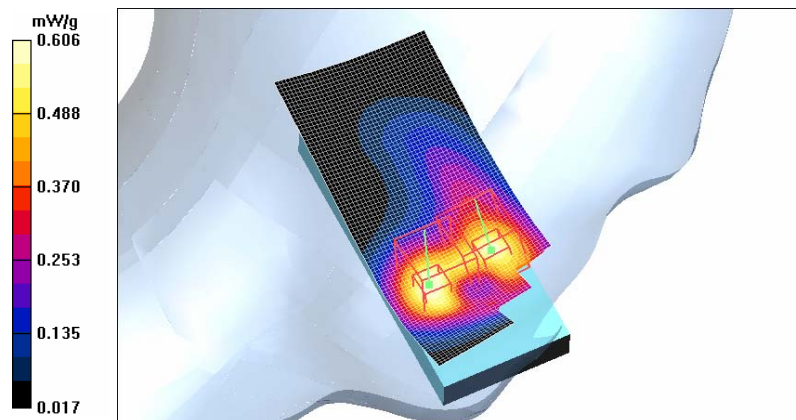
Peak SAR (extrapolated) = 0.808 W/kg

SAR(1 g) = 0.547 mW/g

SAR(10 g) = 0.325 mW/g

Power Drift = -0.190 dB

Maximum value of SAR (measured) = 0.606 mW/g



Date/Time: 2008-01-17 14:29:59

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.264 mW/g

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

Reference Value = 12.7 V/m

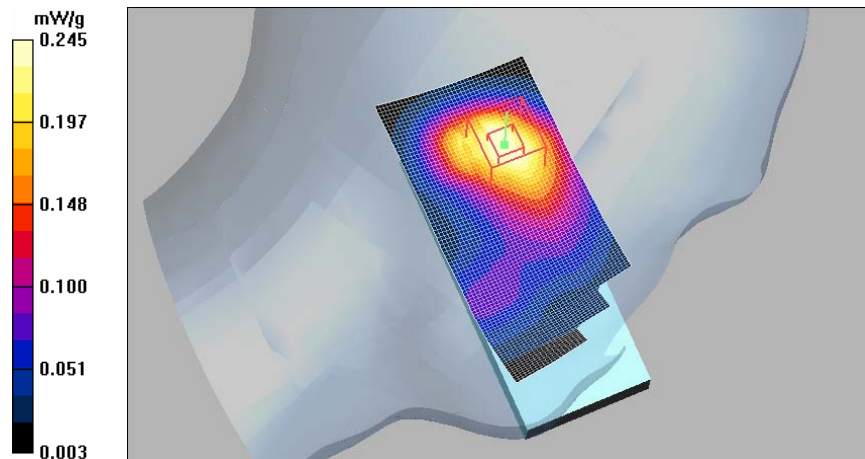
Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.226 mW/g

SAR(10 g) = 0.143 mW/g

Power Drift = -0.019 dB

Maximum value of SAR (measured) = 0.245 mW/g



Date/Time: 2008-01-17 15:38:18

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 1.13 mW/g

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

Reference Value = 9.88 V/m

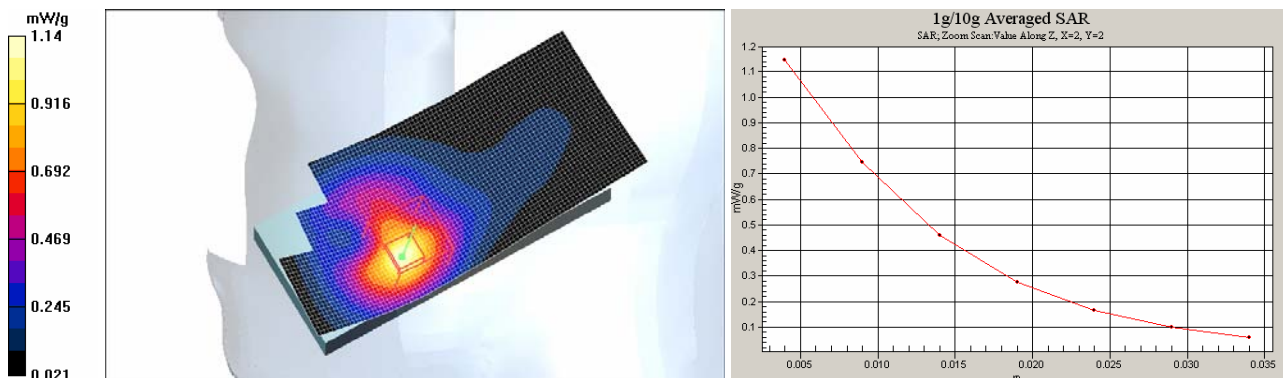
Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 1 mW/g

SAR(10 g) = 0.554 mW/g

Power Drift = -0.026 dB

Maximum value of SAR (measured) = 1.14 mW/g



Date/Time: 2008-01-17 15:04:50

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.257 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) = 0.310 W/kg

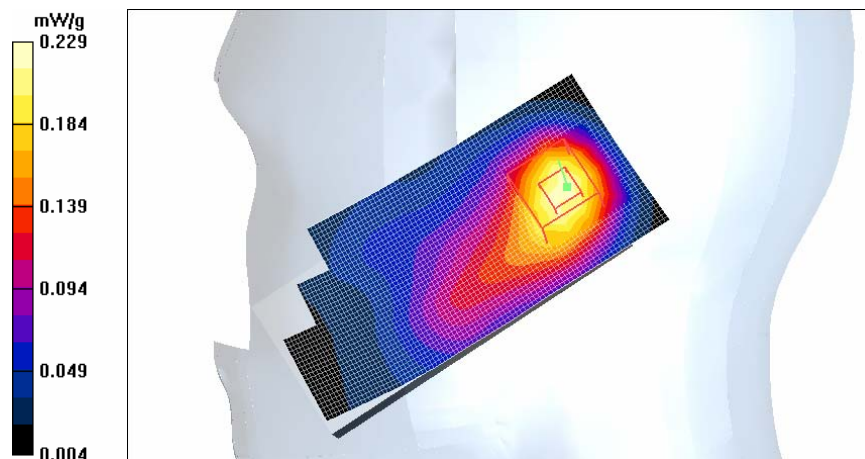
SAR(1 g) = 0.213 mW/g

SAR(10 g) = 0.131 mW/g

Power Drift = 0.052 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) = 0.229 mW/g



Date/Time: 2008-01-09 11:36:55

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 20.9C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 6.90 V/m

Peak SAR (extrapolated) = 0.923 W/kg

SAR(1 g) = 0.551 mW/g

SAR(10 g) = 0.302 mW/g

Power Drift = -0.058 dB

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

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

Reference Value = 6.90 V/m

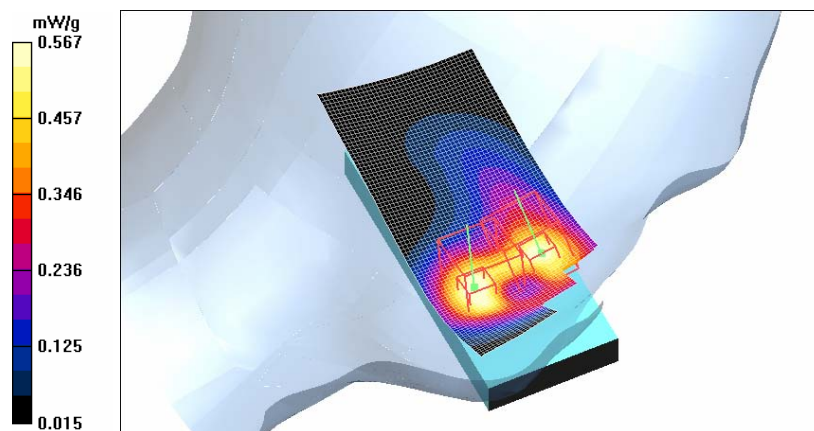
Peak SAR (extrapolated) = 0.755 W/kg

SAR(1 g) = 0.522 mW/g

SAR(10 g) = 0.312 mW/g

Power Drift = -0.058 dB

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



Date/Time: 2008-01-09 12:04:18

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: HSL1900; Medium Notes: 20.9C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.544 mW/g

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

Reference Value = 6.58 V/m

Peak SAR (extrapolated) = 0.833 W/kg

SAR(1 g) = 0.502 mW/g

SAR(10 g) = 0.276 mW/g

Power Drift = -0.277 dB

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

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

Reference Value = 6.58 V/m

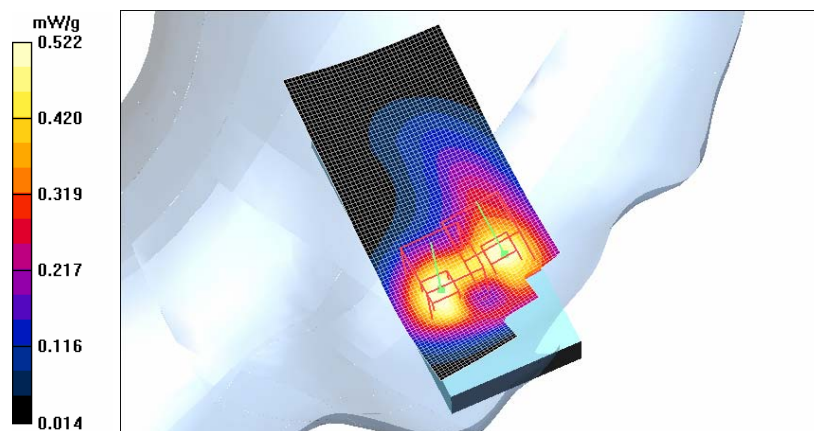
Peak SAR (extrapolated) = 0.684 W/kg

SAR(1 g) = 0.475 mW/g

SAR(10 g) = 0.286 mW/g

Power Drift = -0.277 dB

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



Date/Time: 2008-01-09 17:49:05

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: 2-slot 8PSK EGPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: 20.9C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 6.76 V/m

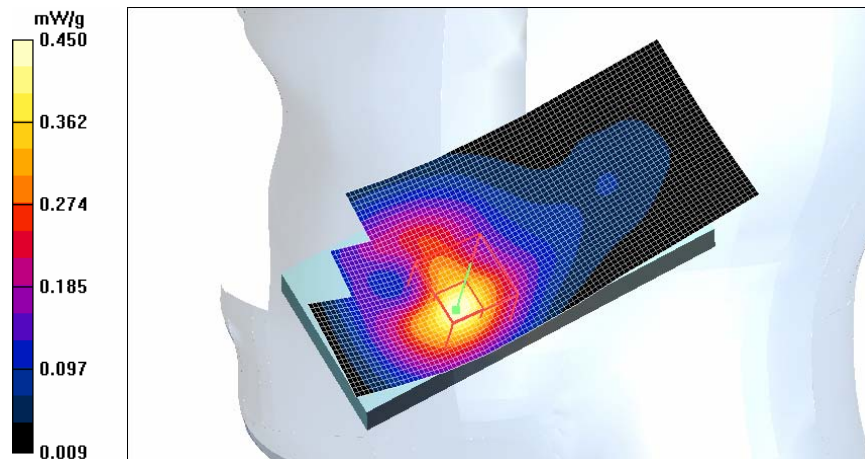
Peak SAR (extrapolated) = 0.606 W/kg

SAR(1 g) = 0.390 mW/g

SAR(10 g) = 0.215 mW/g

Power Drift = -0.060 dB

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



Date/Time: 2008-01-06 15:21:58

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.0C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.566 mW/g

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

Reference Value = 6.70 V/m

Peak SAR (extrapolated) = 0.918 W/kg

SAR(1 g) = 0.567 mW/g

SAR(10 g) = 0.315 mW/g

Power Drift = -0.318 dB

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

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

Reference Value = 6.70 V/m

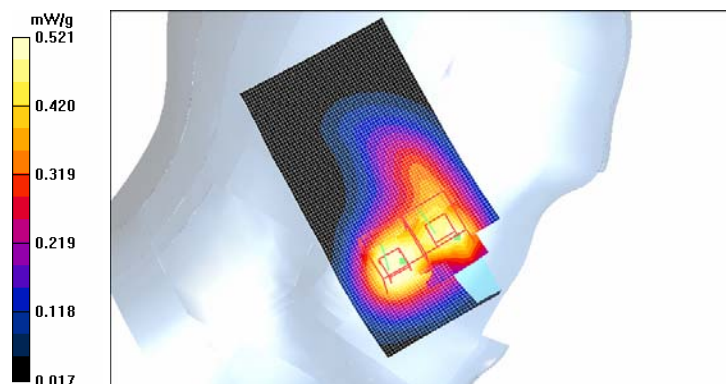
Peak SAR (extrapolated) = 0.719 W/kg

SAR(1 g) = 0.480 mW/g

SAR(10 g) = 0.288 mW/g

Power Drift = -0.318 dB

Maximum value of SAR (measured) = 0.521 mW/g



Date/Time: 2008-01-06 15:57:46

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.0C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 9.99 V/m

Peak SAR (extrapolated) = 0.275 W/kg

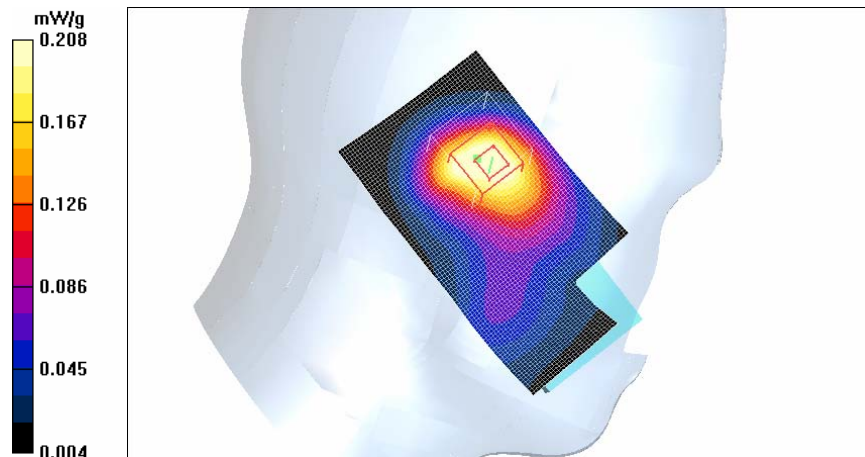
SAR(1 g) = 0.198 mW/g

SAR(10 g) = 0.127 mW/g

Power Drift = 0.085 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) = 0.208 mW/g



Date/Time: 2008-01-06 16:54:49

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.0C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.922 mW/g

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

Reference Value = 8.34 V/m

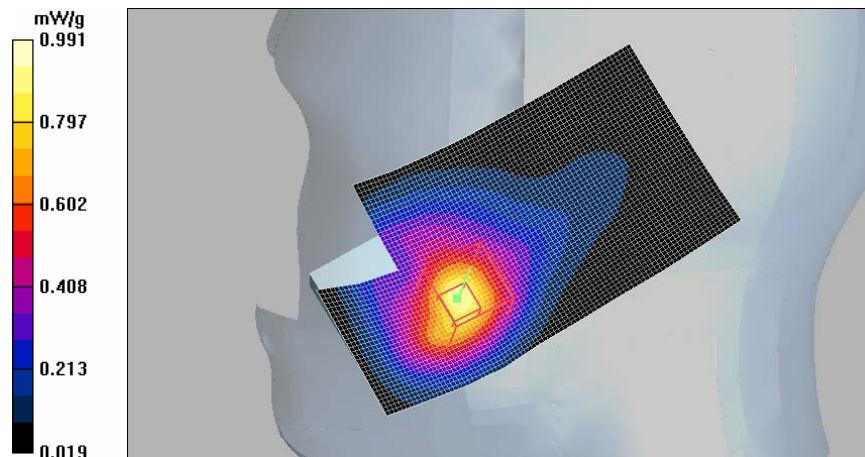
Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.922 mW/g

SAR(10 g) = 0.511 mW/g

Power Drift = -0.035 dB

Maximum value of SAR (measured) = 0.991 mW/g



Date/Time: 2008-01-06 16:39:33

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: 21.0C

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 39$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position, Middle/Area Scan (51x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Tilt position, Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.2 V/m

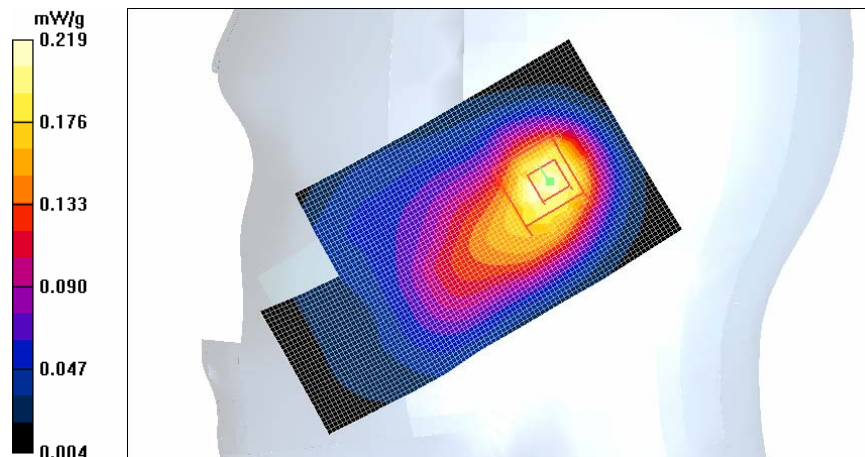
Peak SAR (extrapolated) = 0.292 W/kg

SAR(1 g) = 0.201 mW/g

SAR(10 g) = 0.125 mW/g

Power Drift = 0.016 dB

Maximum value of SAR (measured) = 0.219 mW/g



Date/Time: 2008-01-17 15:57:30

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(5.28, 5.28, 5.28); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 9.95 V/m

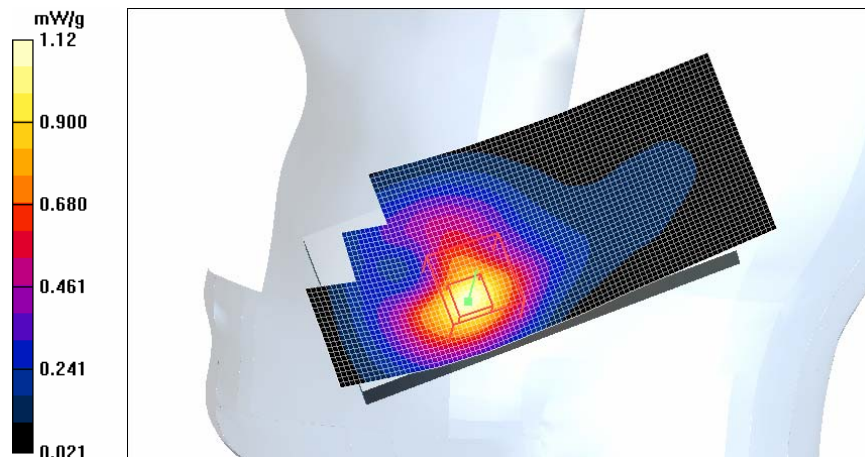
Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.988 mW/g

SAR(10 g) = 0.547 mW/g

Power Drift = -0.114 dB

Maximum value of SAR (measured) = 1.12 mW/g



Date/Time: 2008-01-13 16:39:58

Test Laboratory: TCC Nokia
Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t=20.4C

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.45, 4.45, 4.45); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.252 mW/g

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

Reference Value = 9.21 V/m

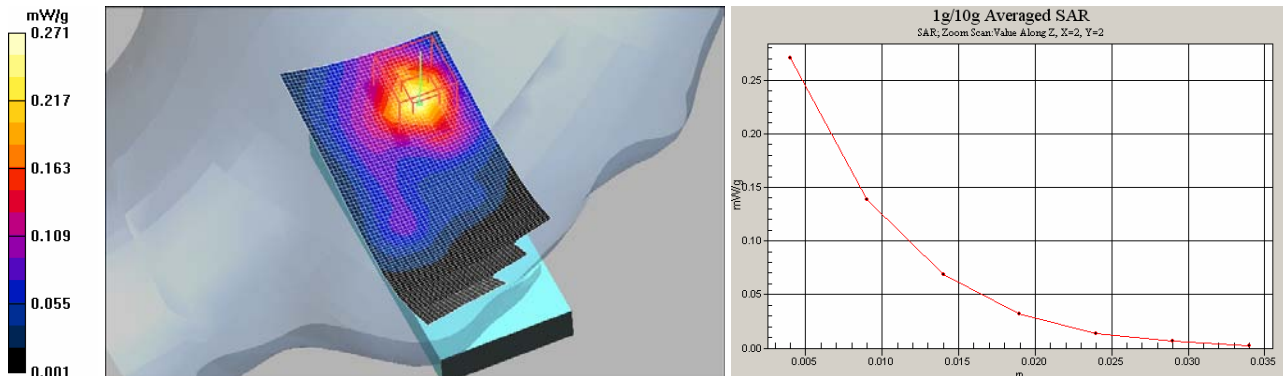
Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.236 mW/g

SAR(10 g) = 0.111 mW/g

Power Drift = 0.011 dB

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



Date/Time: 2008-01-13 15:28:53

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t=20.4C

Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 1.83 \text{ mho/m}$; $\epsilon_r = 37.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.45, 4.45, 4.45); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 8.60 V/m

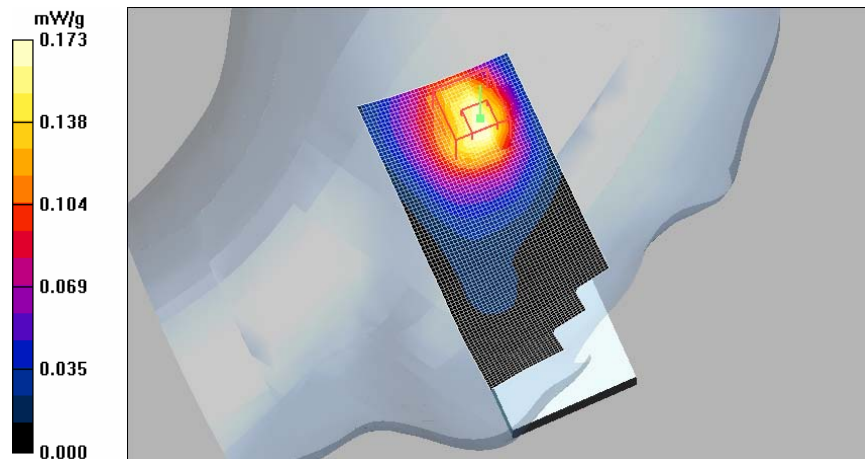
Peak SAR (extrapolated) = 0.322 W/kg

SAR(1 g) = 0.160 mW/g

SAR(10 g) = 0.082 mW/g

Power Drift = 0.084 dB

Maximum value of SAR (measured) = 0.173 mW/g



Date/Time: 2008-01-13 15:50:56

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t=20.4C

Medium parameters used: f = 2442 MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.45, 4.45, 4.45); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.150 mW/g

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

Reference Value = 8.03 V/m

Peak SAR (extrapolated) = 0.231 W/kg

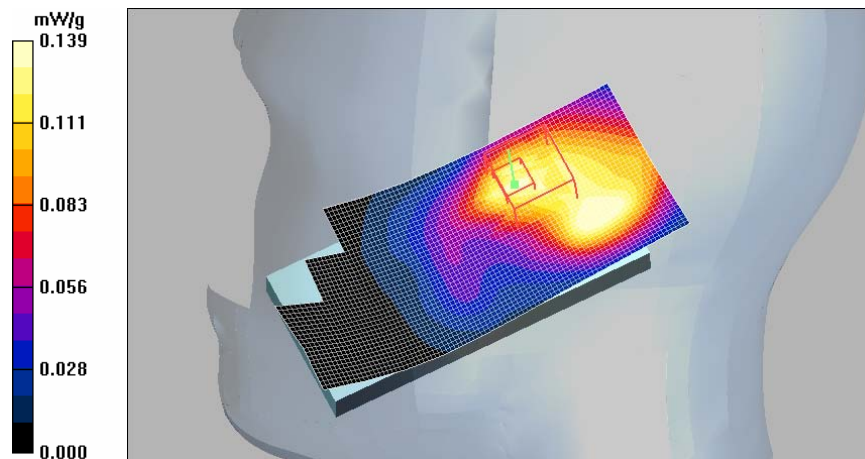
SAR(1 g) = 0.123 mW/g

SAR(10 g) = 0.068 mW/g

Power Drift = -0.144 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) = 0.139 mW/g



Date/Time: 2008-01-13 16:05:54

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t=20.4C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.45, 4.45, 4.45); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.173 mW/g

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

Reference Value = 8.90 V/m

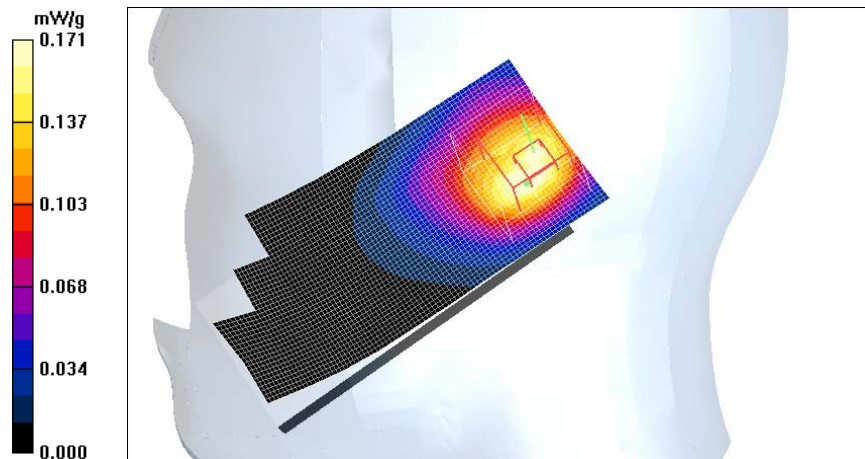
Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.162 mW/g

SAR(10 g) = 0.084 mW/g

Power Drift = 0.079 dB

Maximum value of SAR (measured) = 0.171 mW/g



Date/Time: 2008-01-05 14:48:59

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: BSL850; Medium Notes: 21.0C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, Low, No accessory/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.728 mW/g

Body Measurement, Low, No accessory/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.0 V/m

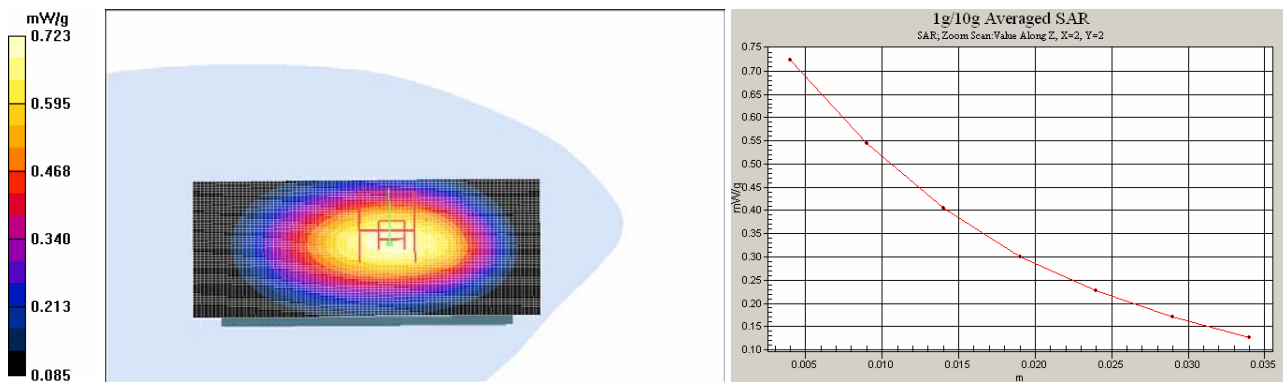
Peak SAR (extrapolated) = 0.887 W/kg

SAR(1 g) = 0.681 mW/g

SAR(10 g) = 0.491 mW/g

Power Drift = -0.038 dB

Maximum value of SAR (measured) = 0.723 mW/g



Date/Time: 2008-01-05 14:06:27

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: BSL850; Medium Notes: 21.0C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.995$ mho/m; $\epsilon_r = 54.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 9.38 V/m

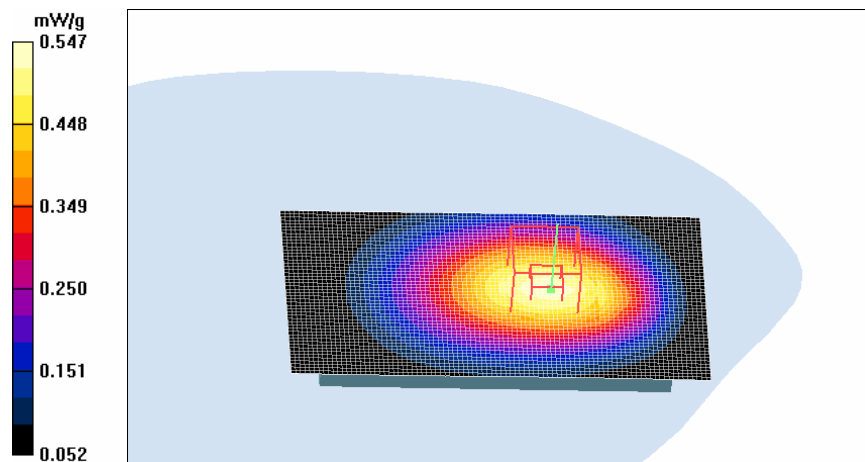
Peak SAR (extrapolated) = 0.684 W/kg

SAR(1 g) = 0.509 mW/g

SAR(10 g) = 0.357 mW/g

Power Drift = -0.121 dB

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



Date/Time: 2008-01-04 20:27:17

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M850; Medium Notes: 21.5C

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.994 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, Middle, No accessory/Area Scan (41x91x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Body Measurement, Middle, No accessory/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.51 V/m

Peak SAR (extrapolated) = 0.581 W/kg

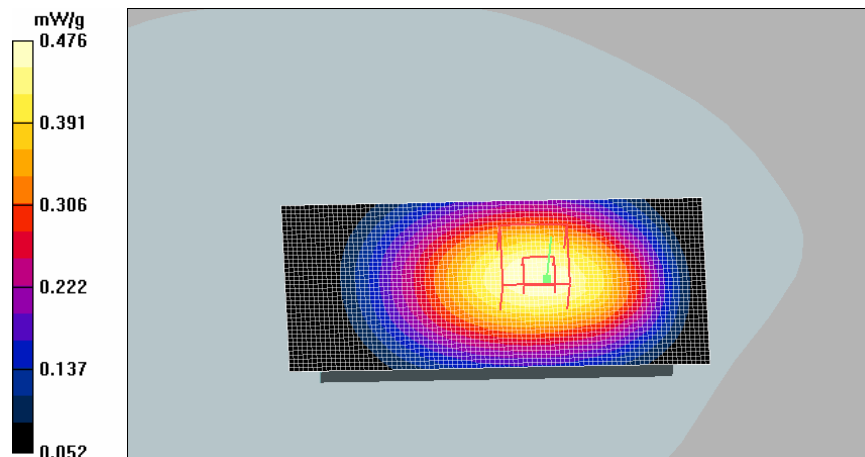
SAR(1 g) = 0.448 mW/g

SAR(10 g) = 0.324 mW/g

Power Drift = 0.004 dB

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

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



Date/Time: 2008-01-04 21:10:55

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: M850; Medium Notes: 21.5C

Medium parameters used: $f = 847$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, High, HS-45+AD-54/Area Scan (41x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.306 mW/g

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

Reference Value = 7.16 V/m

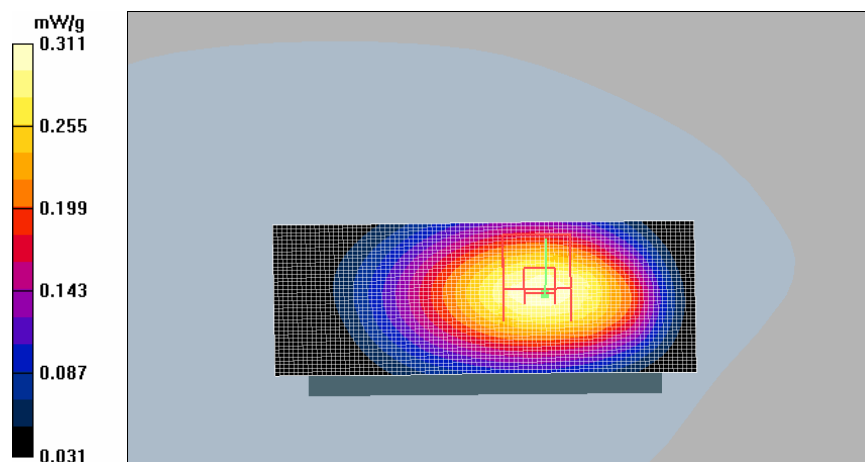
Peak SAR (extrapolated) = 0.383 W/kg

SAR(1 g) = 0.292 mW/g

SAR(10 g) = 0.208 mW/g

Power Drift = 0.022 dB

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



Date/Time: 2008-01-05 15:47:42

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM850

Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: BSL850; Medium Notes: 21.0C

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(6.62, 6.62, 6.62); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, Low, No accessory, BT/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.717 mW/g

Body Measurement, Low, No accessory, BT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.0 V/m

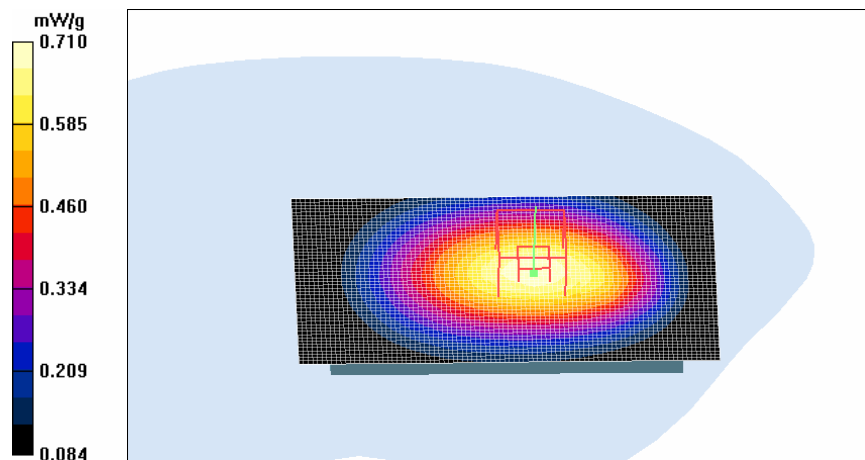
Peak SAR (extrapolated) = 0.862 W/kg

SAR(1 g) = 0.668 mW/g

SAR(10 g) = 0.482 mW/g

Power Drift = -0.004 dB

Maximum value of SAR (measured) = 0.710 mW/g



Date/Time: 2008-01-17 17:24:37

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: BSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(4.7, 4.7, 4.7); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, High, No accessory/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.340 mW/g

Body Measurement, High, No accessory/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.28 V/m

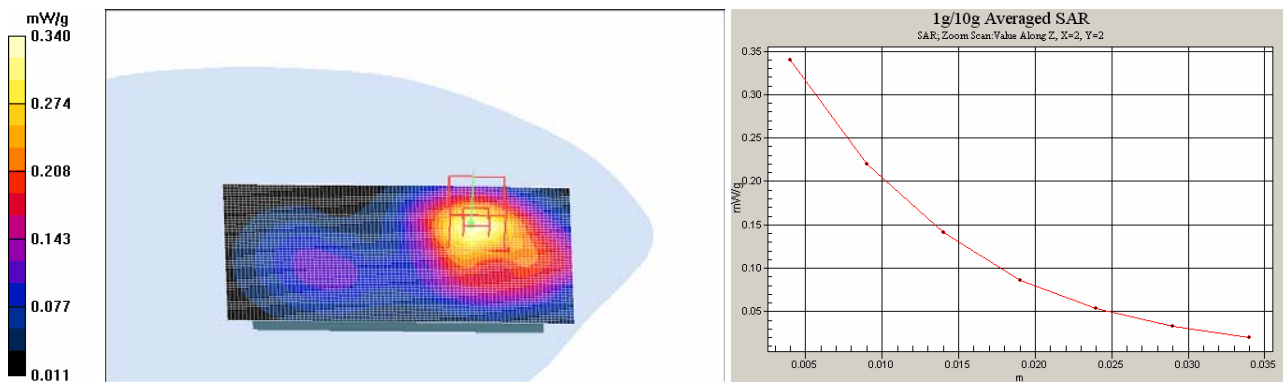
Peak SAR (extrapolated) = 0.495 W/kg

SAR(1 g) = 0.314 mW/g

SAR(10 g) = 0.186 mW/g

Power Drift = 0.010 dB

Maximum value of SAR (measured) = 0.340 mW/g



Date/Time: 2008-01-17 17:40:10

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: BSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(4.7, 4.7, 4.7); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.325 mW/g

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

Reference Value = 7.05 V/m

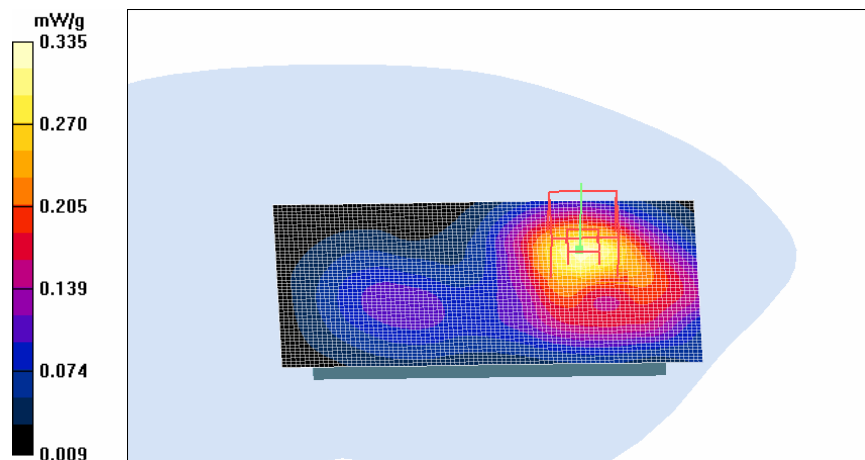
Peak SAR (extrapolated) = 0.487 W/kg

SAR(1 g) = 0.306 mW/g

SAR(10 g) = 0.180 mW/g

Power Drift = -0.071 dB

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



Date/Time: 2008-01-07 11:14:39

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: M1900; Medium Notes: 21.5C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(4.7, 4.7, 4.7); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, Low, No accessory/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.310 mW/g

Body Measurement, Low, No accessory/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.49 V/m

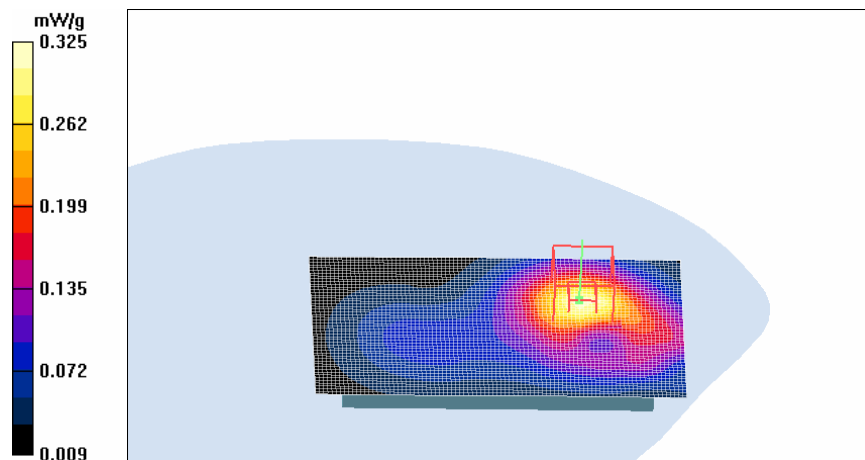
Peak SAR (extrapolated) = 0.466 W/kg

SAR(1 g) = 0.297 mW/g

SAR(10 g) = 0.176 mW/g

Power Drift = 0.034 dB

Maximum value of SAR (measured) = 0.325 mW/g



Date/Time: 2008-01-07 11:30:34

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: M1900; Medium Notes: 21.5C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(4.7, 4.7, 4.7); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 0.298 mW/g

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

Reference Value = 6.02 V/m

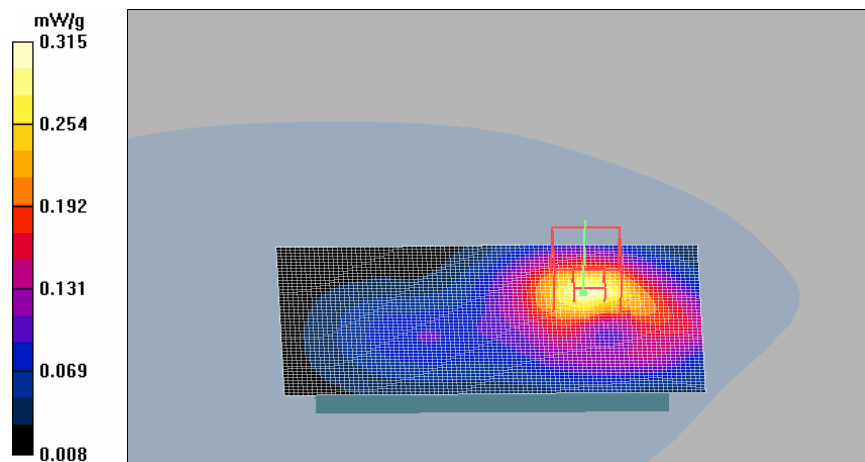
Peak SAR (extrapolated) = 0.446 W/kg

SAR(1 g) = 0.285 mW/g

SAR(10 g) = 0.169 mW/g

Power Drift = 0.007 dB

Maximum value of SAR (measured) = 0.315 mW/g



Date/Time: 2008-01-17 18:23:51

Test Laboratory: TCC Nokia

Type: RM-342; Serial: 004401/01/562433/7

Communication System: GSM1900

Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: BSL1900; Medium Notes: 21.3C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1396
- ConvF(4.7, 4.7, 4.7); Calibrated: 2007-02-12
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2007-02-13
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, High, No accessory, BT/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.333 mW/g

Body Measurement, High, No accessory, BT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.48 V/m

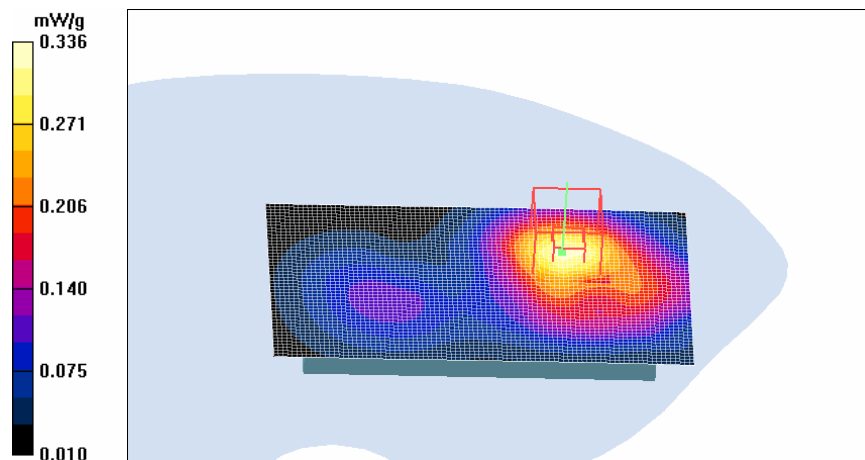
Peak SAR (extrapolated) = 0.489 W/kg

SAR(1 g) = 0.308 mW/g

SAR(10 g) = 0.183 mW/g

Power Drift = -0.048 dB

Maximum value of SAR (measured) = 0.336 mW/g



Date/Time: 2008-01-13 12:51:29

Test Laboratory: TCC Nokia
Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t=20.6C

Medium parameters used: f = 2462 MHz; σ = 2.02 mho/m; ϵ_r = 51.7; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.1, 4.1, 4.1); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Measurement, High, No Accessory/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.262 mW/g

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

Reference Value = 10.3 V/m

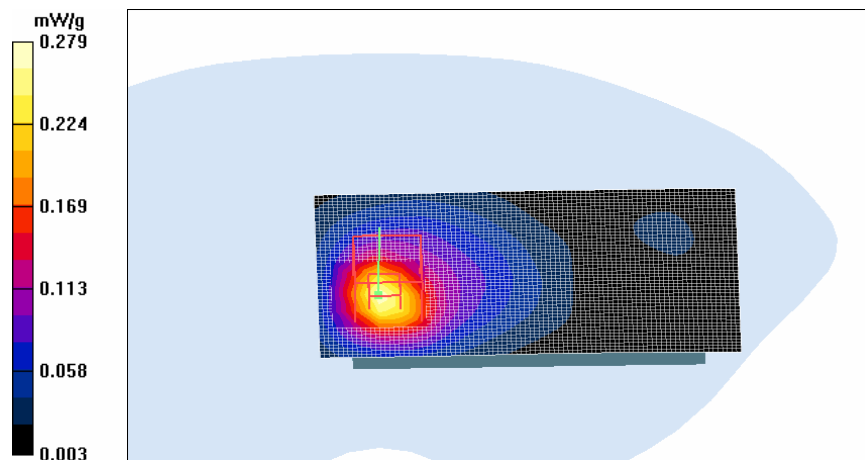
Peak SAR (extrapolated) = 0.462 W/kg

SAR(1 g) = 0.248 mW/g

SAR(10 g) = 0.128 mW/g

Power Drift = 0.056 dB

Maximum value of SAR (measured) = 0.279 mW/g



Date/Time: 2008-01-13 12:38:50

Test Laboratory: TCC Nokia
Type: RM-342; Serial: 004401/01/562356/0

Communication System: WLAN2450

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t=20.6C

Medium parameters used: f = 2462 MHz; σ = 2.02 mho/m; ϵ_r = 51.7; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(4.1, 4.1, 4.1); Calibrated: 2007-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2007-03-15
- Phantom: SAM 3; Type: SAM 4.0; Serial: 1272
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 10.2 V/m

Peak SAR (extrapolated) = 0.470 W/kg

SAR(1 g) = 0.251 mW/g

SAR(10 g) = 0.130 mW/g

Power Drift = 0.090 dB

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

