

SAR Compliance Test Report

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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.		
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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2011-03-07 to 2011-04-28
SN, HW and SW numbers of tested device	SN: 008600/08/005367/0, HW: 0301, SW: 021.002, DUT: 51994
Batteries used in testing	BL-4D, DUT: 51998, 51997, 51996
Headsets used in testing	WH-205, DUT: 52003, 52002
Other accessories used in testing	Nokia Stylus SU-39, DUT52033
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)	Conducted power	Position	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
2-slot GPRS850	251 / 848.8	30.5 dBm	Right, Cheek	0.643 W/kg	0.72 W/kg	1.6 W/kg	PASSED
GSM1900	661 / 1880.0	30.5 dBm	Left, Cheek	0.619 W/kg	0.69 W/kg	1.6 W/kg	PASSED
WLAN2450	7 / 2442.0	16.0 dBm	Left, Tilt	0.503 W/kg	0.56 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 +WLAN2450	-	-	Right, Cheek	0.687 W/kg	0.77 W/kg	1.6 W/kg	PASSED
GSM1900 +WLAN2450	-	-	Left, Cheek	0.621 W/kg	0.70 W/kg	1.6 W/kg	PASSED

1.2.2 Body Worn Configuration

Mode	Ch / f (MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
2-slot GPRS850	251 / 848.8	30.5 dBm	1.5 cm	0.685 W/kg	0.77 W/kg	1.6 W/kg	PASSED
GSM1900	661 / 1880.0	30.5 dBm	1.5 cm	0.429 W/kg	0.48 W/kg	1.6 W/kg	PASSED
WLAN2450	7 / 2442.0	16.0 dBm	1.5 cm	0.072 W/kg	0.08 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 +WLAN2450	-	-	1.5 cm	0.715 W/kg	0.80 W/kg	1.6 W/kg	PASSED
GSM1900 +WLAN2450	-	-	1.5 cm	0.453 W/kg	0.51 W/kg	1.6 W/kg	PASSED

* SAR values are scaled up by 12% to cover measurement drift. As a consequence of this upwards correction of the SAR values, the contribution of measurement drift to the overall measurement uncertainty (Section 6) is reduced to zero.

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.49dB

1.2.4 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	± 25.8%
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2. DESCRIPTION OF THE DEVICE UNDER TEST

Device category	Portable
Exposure environment	General population / uncontrolled

Modes of Operation	Bands	Modulation Mode	Duty Cycle	Transmitter Frequency Range (MHz)
GSM	850 1900	GMSK	1/8	824 – 849 1850 – 1910
GPRS	850 1900	GMSK	1/8 to 4/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 4/8	824 – 849 1850 – 1910
BT	2450	GFSK	1	2402 – 2480
WLAN b-mode	2450	Up to 11Mbps QPSK	1	2412 – 2462
WLAN g-mode	2450	Up to 54Mbps 64QAM	1	2412 – 2462
WLAN n-mode 20MHz	2450	Up to 72.2Mbps 64QAM	1	2412 – 2462

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900, GSM/GPRS/EGPRS1800, TD-SCDMA1900 and TD-SCDMA2000 bands which are not part of this filing.

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

This is a BT Class 1 device; as its power tuning target is 5.0dBm (3.2mW), SAR testing was deemed unnecessary.

2.1 Description of the Antenna

The device has internal antennas for both cellular and WLAN use. The cellular antenna is located at the bottom underneath the back cover. The WLAN antenna is located at the top underneath the back cover.

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	20.5 - 22.5
Ambient humidity (RH %):	40 - 55

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.

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. The results are given in the EMC report supporting this application.

The transmission mode of the device in all WLAN b-mode tests was DSSS QPSK 11Mbps. This mode has the highest (or equal highest) time-averaged output power of all the WLAN b and g modulation modes in Nokia devices. In WLAN n-mode, BPSK 6.5Mbps with 20MHz bandwidth was used.

This report presents test details and results for Head and 15mm Body-worn SAR testing as well as for body SAR testing at 10.0mm separation distance (i.e. Wireless Router “Hotspot” mode); 10.0mm Body SAR test details and results are presented in Appendix E. The number of test cases reported in Appendix E has been minimised based on the testing results with 15mm separation distance. Specifically, as the Back-facing-phantom orientation gave higher results than Display-facing-phantom in the earlier reported testing, no measurements for Display-facing-phantom are presented in Appendix E of this report.

3.3 Test Cases and Test Minimisation

The tested device examined in this report may not incorporate all of the features described in the text that follows, but its SAR evaluation will have been subjected to the same considerations and test logic described below.

Whilst it's possible to identify the maximum SAR test cases from inspection of the conducted power levels given in the Results tables (Section 7), different modes in the same band and multi-slot transmit GSM/GPRS modes can create some difficulties. Therefore the sequence of the SAR tests made in evaluating this device has used test logic that is based on measured SAR values. Comparison of measured SAR values in this way, can also allow some test minimization (i.e. test elimination) to be made.

For example, when SAR testing multi-slot GSM/GPRS/EGPRS modes, it is an inefficient use of test resources to fully SAR test every test configuration in each of the different modes as these modes have a fixed power relationship between them that is the same, irrespective of the test configuration. In the case of multi-slot GSM/GPRS modes, a single comparative SAR test - using the same test channel and test configuration - is made in each of the n-slot modes; the mode with the highest measured SAR value is then subjected to full SAR testing in all test configurations. These comparative SAR tests (same frequency, same test configuration) are regarded as extremely accurate as they are relative tests in which the tested device changes neither its frequency nor its position between tests. For different modes that operate in the same band and use the same antenna e.g. GSM/GPRS850 and WCDMA850, full SAR testing is carried out in the GSM/GPRS850 mode but WCDMA850 testing is limited to 3 channel testing in the maximum SAR test configuration for GSM/GPRS850.

Multi-slot SAR testing against the Head is always performed whenever such a device offers Push to Talk over cellular with the internal earpiece active, Dual Transfer Mode (i.e. the ability to transmit voice and data simultaneously using the same transmitter) or has WLAN (which enables a Voice over IP call to take place whilst the device can simultaneously transmit data on a cellular band). Whenever a device has an intended multi-slot use against the head, it is also Head SAR tested in EGPRS mode. It should be noted that EGPRS transmit modes can have either GMSK or 8PSK modulation but, when tested, only 8PSK EGPRS will appear explicitly in the results tables, as GMSK EGPRS mode has identical time-averaged power to the reported GPRS mode.

Devices that have flips or slides are fully SAR tested in all device configurations consistent with their intended usage. For example, flip phones that can receive a call in closed mode are SAR tested against the head in both open and closed configurations. Similarly, slide phones are fully SAR tested in all slide configurations in which calls are intended to be made or received.

In the results tables in Section 7, the maximum SAR value for the 'basic' tests (i.e. left cheek, left tilt, right cheek and right tilt in Head SAR testing; with and without headset with the back &/or display side facing the flat phantom in Body SAR testing) is bolded for each band. In some cases, after full testing of the basic SAR test configurations has been completed, additional checking SAR tests are made. These checking tests are always based on the bolded result from the 'basic' testing. When the SAR value of a checking test exceeds the maximum value from the basic tests, it is also bolded and used as the basis for any further checking tests that might be needed.

Checking tests are largely voluntary and can cover optional batteries, different camera slide positions, optional covers, etc. In the case of optional batteries, if the construction of the optional battery is significantly different to the battery used in the full testing e.g. if the outer can is floating electrically rather than grounded, then the maximum SAR test configuration in each band is tested with the optional battery in 3 channels. For camera slides, if the slide material is metal, then checking tests in 3 channels are again run for the maximum SAR test configuration in each band. For plastic camera slides, SAR checking is only carried out in the channel that provided the maximum SAR value for the original. Optional front and back covers are tested if their shape differs significantly from the original or if their metallic content varies by more than 15% from the original; in the former case, the testing depends on the extent of the physical differences, whereas in the latter case, 3 channel SAR testing is performed in every band in the max SAR test configuration.

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	480	12 months	2011-10
DAE 4	860	12 months	2011-10
E-field Probe ET3DV6	1652	12 months	2011-10
E-field Probe EX3DV4	3574	12 months	2011-10
Dipole Validation Kit, D835V2	4d005	24 months	2012-03
Dipole Validation Kit, D1900V2	547	24 months	2011-09
Dipole Validation Kit, D2450V2	751	24 months	2012-03
Dipole Validation Kit, D2450V2	760	24 months	2013-03
DASY4 software	Version 4.7	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	8648C	3847M00258	12 months	2011-05
Call Tester	CMU200	835352/008	-	-
Amplifier	AR 5SIG4M3	302339	12 months	2011-05
RF Network Analyzer	8753ES	My40002096	12 months	2011-05
Dielectric Probe Kit	85070C	01033717	-	-
Power Meter	Agilent E4419B	My41291520	12 months	2011-05
Power Sensor	Agilent 8482A	US37295411	12 months	2011-05

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 EX3DV4

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to >6 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g, Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 10 mm Body diameter: 12 mm Tip diameter: 2.5 mm Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 6 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 at least 15.0 cm measured from the ear reference point during system checking and device measurements.

4.3.1 Tissue Simulant Recipes

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

800MHz band

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

1900MHz band

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

2450MHz band

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

4.3.2 System Checking

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

System checking, head tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.41	42.9	0.91	
	± 10% window	2.17 – 2.65			
	2011-03-29	2.47	41.3	0.88	21.4
1900	Reference result	10.4	40.8	1.45	
	± 10% window	9.4 – 11.4			
	2011-03-24	9.69	39.4	1.45	22.0
2450	Reference result	13.5	40.5	1.81	
	± 10% window	12.1 – 14.9			
	2011-03-07	13.9	39.2	1.81	22.0
	Reference result	13.3	38.7	1.72	
	± 10% window	12.0 – 14.6			
	2011-04-22	13.6	39.5	1.80	21.9

System checking, body tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.56	55.3	1.01	
	± 10% window	2.30 – 2.82			
	2011-04-26	2.66	54.2	0.98	21.3
1900	Reference result	10.2	53.9	1.57	
	± 10% window	9.2 – 11.2			
	2011-04-25	9.53	52.4	1.57	21.4
2450	Reference result	13.6	54.5	2.01	
	± 10% window	12.2 – 15.0			
	2011-03-17	12.7	53.8	1.99	22.0
	2011-04-01	12.5	54.1	1.93	21.4
	Reference result	13.3	51.7	1.93	
	± 10% window	11.9– 14.6			
	2011-04-07	12.6	53.2	1.93	21.8
	2011-04-28	13.2	53.1	1.93	21.8

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	
	2011-03-29	41.3	0.88	21.4
1880	Recommended value	40.0	1.40	
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2011-03-24	39.5	1.43	22.0
2442	Recommended value	39.2	1.79	
	$\pm 5\%$ window	37.3 – 41.2	1.70 – 1.88	
	2011-03-07	39.2	1.80	22.0
	2011-04-22	39.5	1.78	21.9

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	
	2011-03-29	53.8	0.97	21.4
	2011-03-30	54.3	0.98	22.0
	2011-04-26	54.2	0.97	21.3
1880	Recommended value	53.3	1.52	
	$\pm 5\%$ window	50.6 – 56.0	1.44 – 1.60	
	2011-03-24	51.6	1.56	22.0
	2011-03-25	51.4	1.52	21.4
	2011-04-25	52.5	1.55	21.4
2442	Recommended value	52.7	1.94	
	$\pm 5\%$ window	50.1 – 55.3	1.85 – 2.04	
	2011-03-07	53.5	1.94	22.0
	2011-03-17	53.9	1.98	22.0
	2011-03-18	53.2	1.91	22.1
	2011-04-01	54.1	1.91	21.4
	2011-04-07	53.3	1.91	21.8
	2011-04-22	53.7	1.97	21.6
	2011-04-28	53.1	1.92	21.8

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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



Device holder supplied by SPEAG

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



Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

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

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

5.2.2 Body Worn Configuration

The device was placed in the SPEAG holder using the Nokia spacer and placed below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance indicated in Section 1.2.2 using a separate flat spacer that was removed before the start of the measurements. The device was oriented with both front and back sides facing the phantom to find the highest results.

The effect of the plastic Stylus was evaluated by placing it touching the test device between the phantom and the test device and orienting it in two positions.

Nokia body-worn accessories are commonly available for the separation distance used in this testing.

5.2.2.1 Body Worn Configuration for WR testing

The device was placed in the SPEAG holder using the Nokia spacer and, in sequence, the Back and all 4 edges was positioned 10.0mm away from the flat phantom. The spacer was removed before the start of the measurements.

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	Conducted Power		-	32.5 dBm	-
	Left	Cheek	-	0.326	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Conducted Power		30.5 dBm	30.5 dBm	30.5 dBm
	Left	Cheek	-	0.397	-
		Tilt	-	0.307	-
	Right	Cheek	0.420	0.493	0.643
		Tilt	-	0.331	-
3-slot GPRS	Conducted Power		-	28.7 dBm	-
	Left	Cheek	-	0.397	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot GPRS	Conducted Power		-	27.5 dBm	-
	Left	Cheek	-	0.393	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot 8PSK EGPRS	Conducted Power		-	-	26.5 dBm
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.276
		Tilt	-	-	-

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	Conducted Power		30.5 dBm	30.5 dBm	30.5 dBm
	Left	Cheek	0.462	0.619	0.573
		Tilt	-	0.226	-
	Right	Cheek	-	0.402	-
		Tilt	-	0.191	-
2-slot GPRS	Conducted Power		-	27.5 dBm	-
	Left	Cheek	-	0.590	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Conducted Power		-	25.7 dBm	-
	Left	Cheek	-	0.565	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot GPRS	Conducted Power		-	24.5 dBm	-
	Left	Cheek	-	0.585	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
1-slot 8PSK EGPRS	Conducted Power		-	25.5 dBm	-
	Left	Cheek	-	0.180	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-

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 b-mode	Conducted Power		12.0 dBm	16.0 dBm	12.0 dBm
	Left	Cheek	-	0.499	-
		Tilt	0.203	0.503	0.399
	Right	Cheek	-	0.339	-
		Tilt	-	0.420	-
WLAN n-mode	Conducted Power		13.0 dBm	15.0 dBm	13.0 dBm
	Left	Cheek	-	-	-
		Tilt	0.402	0.488	0.291
	Right	Cheek	-	-	-
		Tilt		-	

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

850MHz Body SAR results

Mode	Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
				Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-Slot GPRS			Conducted Power	30.5 dBm	30.5 dBm	30.5 dBm
	Without Stylus	Display facing phantom	Without headset	-	0.463	-
			Headset WH-205	-	0.304	-
		Back facing phantom	Without headset	0.522	0.616	0.674
			Headset WH-205	-	0.425	-
	Stylus position 1	Back facing Phantom	Without headset	-	-	0.685
	Stylus position 2	Back facing Phantom	Without headset	-	-	0.654

1900MHz Body SAR results

Mode	Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
				Ch 512 1850.2 MHz	Ch 661 1880 MHz	Ch 810 1909.8 MHz
GSM			Conducted Power	30.5 dBm	30.5 dBm	30.5 dBm
	Without Stylus	Display facing phantom	Without headset	-	0.379	-
			Headset WH-205	-	0.415	-
		Back facing phantom	Without headset	-	0.415	-
			Headset WH-205	0.330	0.429	0.329
	Stylus position 1	Back facing Phantom	Headset WH-205	-	0.375	-
	Stylus position 2	Back facing Phantom	Headset WH-205	-	0.338	-

2450MHz Body SAR results

Mode	Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
				Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode			Conducted Power	12.0 dBm	16.0 dBm	12.0 dBm
	Without stylus	Display facing phantom	Without headset	-	0.046	-
			Headset WH-205	-	0.053	-
		Back facing phantom	Without headset	-	0.060	-
			Headset WH-205	0.025	0.072	0.049
	Stylus position 1	Back facing Phantom	Without headset	-	0.066	-
			Headset WH-205	-	0.065	-
	Stylus position 2	Back facing Phantom	Without headset	-	0.064	-
			Headset WH-205	-	0.066	-
WLAN n-mode			Conducted Power	13.0 dBm	15.0 dBm	13.0 dBm
	Without stylus	Display facing phantom	Without headset	-	-	-
			Headset WH-205	-	-	-
		Back facing phantom	Without headset	-	-	-
			Headset WH-205	0.050	0.068	0.043

**Simultaneous transmissions: Combined SAR results –
Individual band Max results**

Test configuration	Max. 1g SAR results		
	WLAN	2-slot GPRS 850	GSM1900
Head: Left, Cheek	0.499	0.397	0.619
Head: Left, Tilt	0.503	0.307	0.226
Head: Right, Cheek	0.339	0.643	0.402
Head: Right, Tilt	0.420	0.331	0.191
Body: Display facing phantom, Without Headset	0.046	0.463	0.379
Body: Display facing phantom, Headset WH-205	0.053	0.304	0.415
Body: Back facing phantom, Without Headset	0.060	0.674	0.415
Body: Back facing phantom, Headset WH-205	0.072	0.425	0.429
Body: Back facing phantom, Without Headset, Stylus position 1	0.066	0.685	-
Body: Back facing phantom, Headset WH-205, Stylus position 1	0.065	-	0.375
Body: Back facing phantom, Without Headset, Stylus position 2	0.064	0.654	-
Body: Back facing phantom, Headset WH-205, Stylus position 2	0.066	-	0.338

**Simultaneous transmissions: Combined SAR results –
Max + Max combined results**

Test configuration	Max. 1g SAR results	
	2-Slot GPRS 850 + WLAN	GSM1900 + WLAN
Head: Left, Cheek	0.896	1.118
Head: Left, Tilt	0.810	0.729
Head: Right, Cheek	0.982	0.741
Head: Right, Tilt	0.751	0.611
Body: Display facing phantom, Without Headset	0.509	0.425
Body: Display facing phantom, Headset WH-205	0.357	0.468
Body: Back facing phantom, Without Headset	0.734	0.475
Body: Back facing phantom, Headset WH-205	0.497	0.501
Body: Back facing phantom, Without Headset, Stylus position 1	0.751	-
Body: Back facing phantom, Headset WH-205, Stylus position 1	-	0.440
Body: Back facing phantom, Without Headset, Stylus position 2	0.718	-
Body: Back facing phantom, Headset WH-205, Stylus position 2	-	0.404

The following table gives a more accurate assessment of the SAR values for simultaneous transmission. These values have been calculated using the SPEAG Combined Multiband algorithm, which is based on area scans. It a) converts the 2D area scans into 3D volume scans by assuming frequency-dependent decay characteristics for the E-field, b) sums the SAR values for WLAN2450 and the cellular bands point-by-point and c) calculates the combined average SAR values. It is these values that appear in the Summary table in Section 1.2.

**Simultaneous transmissions: Combined SAR results –
SPEAG Combined Multiband algorithm results**

Test configuration	Max. 1g SAR results	
	2-Slot GPRS 850 + WLAN	GSM1900 + WLAN
Head: Left, Cheek	-	0.621
Head: Left, Tilt	-	-
Head: Right, Cheek	0.687	-
Head: Right, Tilt	-	-
Body: Display facing phantom, Without Headset	-	-
Body: Display facing phantom, Headset WH-205	-	-
Body: Back facing phantom, Without Headset	-	-
Body: Back facing phantom, Headset WH-205	-	0.453
Body: Back facing phantom, Without Headset, Stylus position 1	0.715	-
Body: Back facing phantom, Headset WH-205, Stylus position 1	-	-
Body: Back facing phantom, Without Headset, Stylus position 2	-	-
Body: Back facing phantom, Headset WH-205, Stylus position 2	-	-

Note: Simultaneous Transmission Procedures as described in KDB648474 are not required for this product. The Combined SAR data given in the tables above has been voluntarily calculated.

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2011-03-29 10:10:26

Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d005

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 835\text{ MHz}$; $\sigma = 0.877\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

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

Reference Value = 57.5 V/m

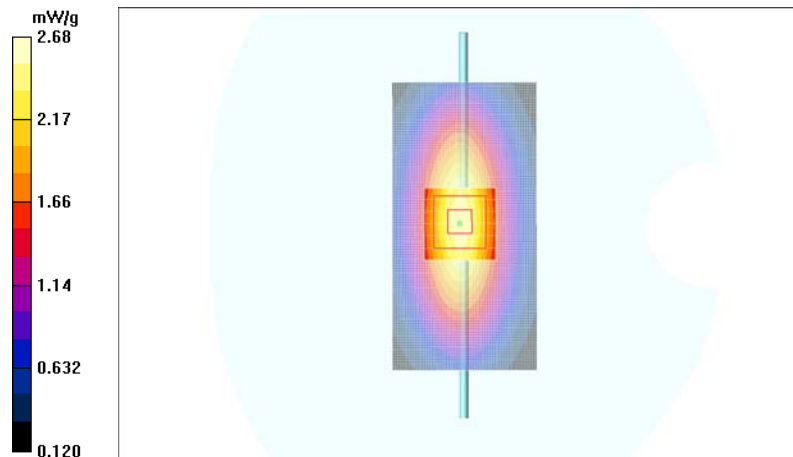
Peak SAR (extrapolated) = 3.63 W/kg

SAR(1 g) = 2.47 mW/g

SAR(10 g) = 1.61 mW/g

Power Drift = -0.064 dB

Maximum value of SAR (measured) = 2.67 mW/g



Date/Time: 2011-03-24 09:59:55

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 547

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ϵ_r = 39.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 11.2 mW/g

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

Reference Value = 93.4 V/m

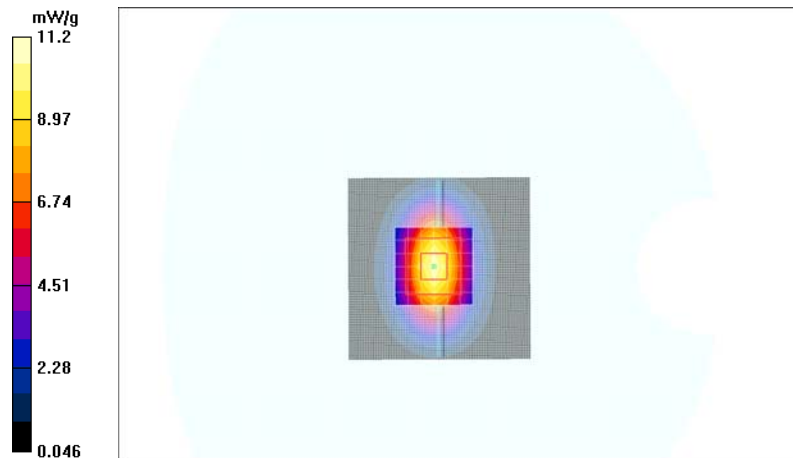
Peak SAR (extrapolated) = 16.9 W/kg

SAR(1 g) = 9.69 mW/g

SAR(10 g) = 5.07 mW/g

Power Drift = -0.147 dB

Maximum value of SAR (measured) = 11.0 mW/g



Date/Time: 2011-03-07 09:54:30

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:751

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2450 MHz; σ = 1.81 mho/m; ϵ_r = 39.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 94.1 V/m

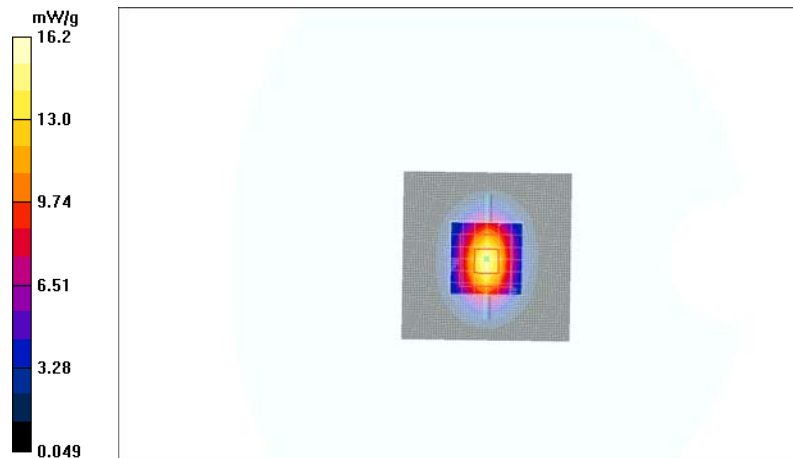
Peak SAR (extrapolated) = 29.9 W/kg

SAR(1 g) = 13.9 mW/g

SAR(10 g) = 6.32 mW/g

Power Drift = -0.059 dB

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



Date/Time: 2011-04-22 11:33:55

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:760

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: $t=21.9\text{ C}$

Medium parameters used: $f = 2450\text{ MHz}$; $\sigma = 1.8\text{ mho/m}$; $\epsilon_r = 39.5$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 92.1 V/m

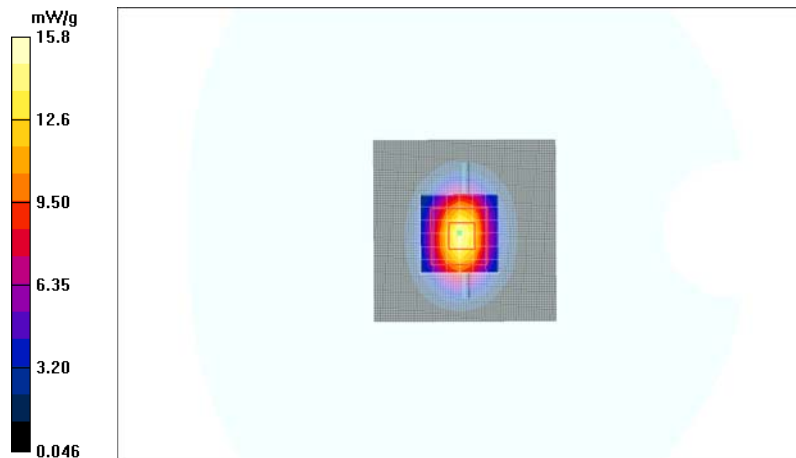
Peak SAR (extrapolated) = 28.9 W/kg

SAR(1 g) = 13.6 mW/g

SAR(10 g) = 6.21 mW/g

Power Drift = -0.068 dB

Maximum value of SAR (measured) = 15.4 mW/g



Date/Time: 2011-04-26 10:21:07

Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d005

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 835; Medium Notes: Medium Temperature: $t = 21.3\text{ C}$

Medium parameters used: $f = 835\text{ MHz}$; $\sigma = 0.976\text{ mho/m}$; $\epsilon_r = 54.2$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 2.89 mW/g

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

Reference Value = 56.8 V/m

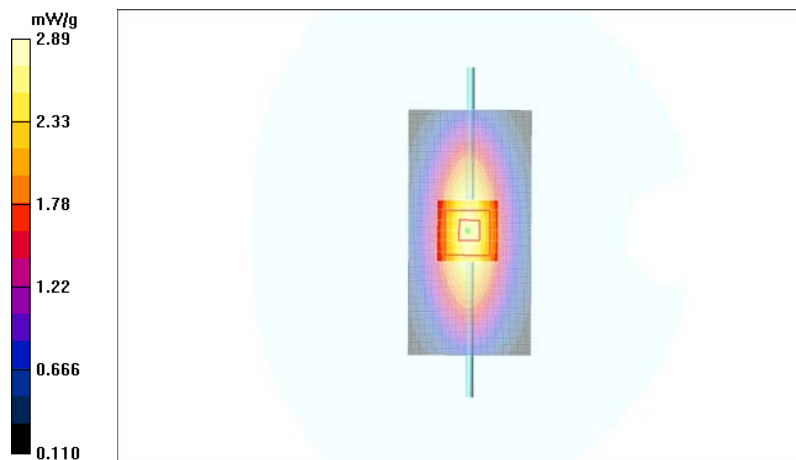
Peak SAR (extrapolated) = 3.84 W/kg

SAR(1 g) = 2.66 mW/g

SAR(10 g) = 1.75 mW/g

Power Drift = -0.057 dB

Maximum value of SAR (measured) = 2.89 mW/g



Date/Time: 2011-04-25 10:08:32

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 547

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Body 1900; Medium Notes: Medium Temperature: $t=21.4^{\circ}\text{C}$

Medium parameters used: $f = 1900\text{ MHz}$; $\sigma = 1.57\text{ mho/m}$; $\epsilon_r = 52.4$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 89.9 V/m

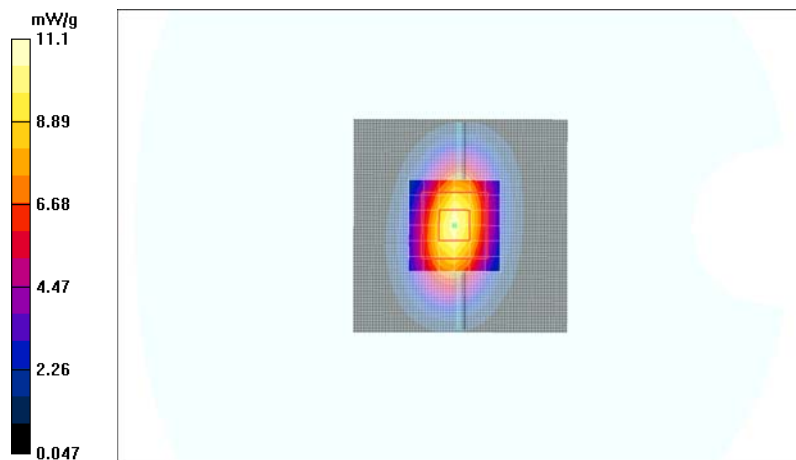
Peak SAR (extrapolated) = 15.4 W/kg

SAR(1 g) = 9.53 mW/g

SAR(10 g) = 5.13 mW/g

Power Drift = -0.049 dB

Maximum value of SAR (measured) = 10.9 mW/g



Date/Time: 2011-03-17 10:44:24

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:751

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: $t=22.1$ C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 14.9 mW/g

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

Reference Value = 86.7 V/m

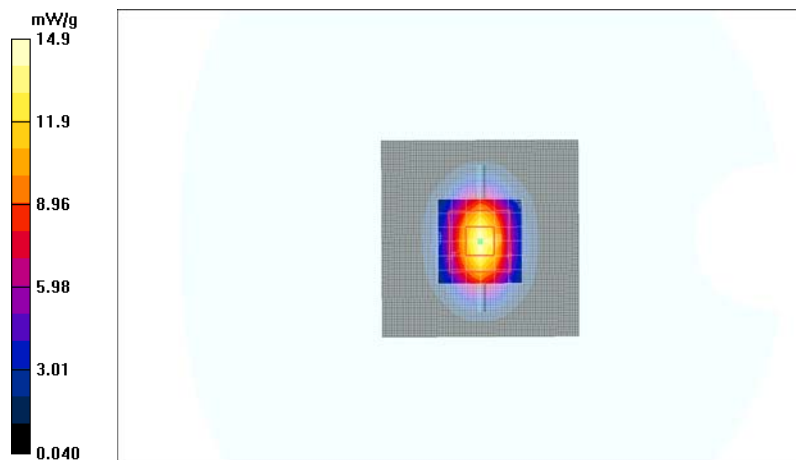
Peak SAR (extrapolated) = 25.5 W/kg

SAR(1 g) = 12.7 mW/g

SAR(10 g) = 5.92 mW/g

Power Drift = -0.064 dB

Maximum value of SAR (measured) = 14.8 mW/g



Date/Time: 2011-04-01 11:23:38

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:751

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: $t=21.4\text{ C}$

Medium parameters used: $f = 2450\text{ MHz}$; $\sigma = 1.93\text{ mho/m}$; $\epsilon_r = 54.1$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 14.7 mW/g

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

Reference Value = 87.0 V/m

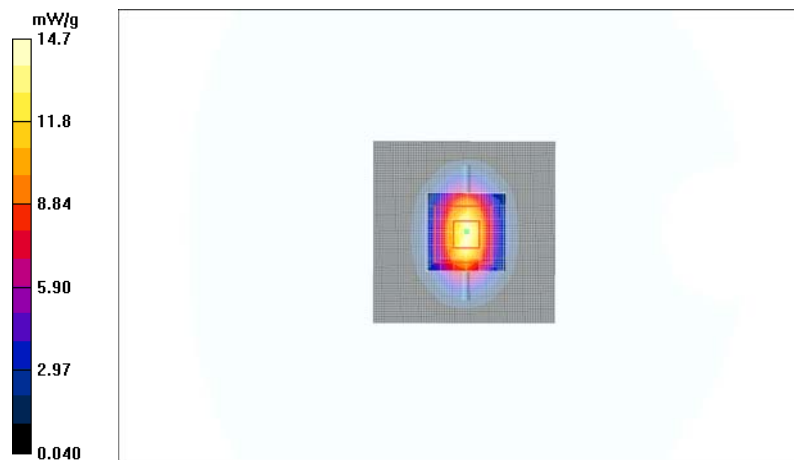
Peak SAR (extrapolated) = 24.9 W/kg

SAR(1 g) = 12.5 mW/g

SAR(10 g) = 5.86 mW/g

Power Drift = -0.031 dB

Maximum value of SAR (measured) = 14.4 mW/g



Date/Time: 2011-04-07 10:10:35

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:760

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2450 MHz; σ = 1.93 mho/m; ϵ_r = 53.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 15.0 mW/g

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

Reference Value = 86.6 V/m

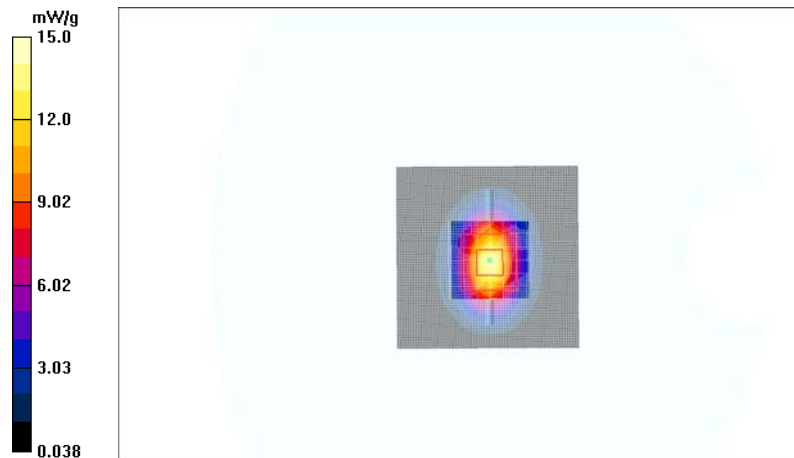
Peak SAR (extrapolated) = 25.2 W/kg

SAR(1 g) = 12.6 mW/g

SAR(10 g) = 5.88 mW/g

Power Drift = -0.017 dB

Maximum value of SAR (measured) = 14.6 mW/g



Date/Time: 2011-04-28 10:27:31

Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:760

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: $t=21.8\text{ C}$

Medium parameters used: $f = 2450\text{ MHz}$; $\sigma = 1.93\text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 89.5 V/m

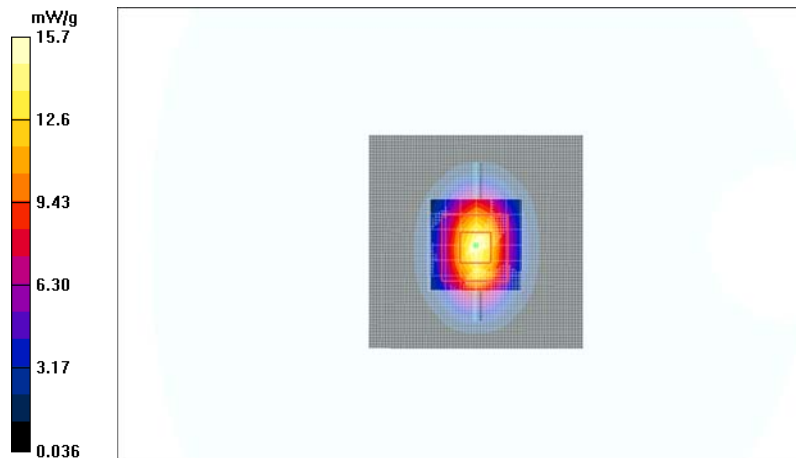
Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 13.2 mW/g

SAR(10 g) = 6.14 mW/g

Power Drift = -0.077 dB

Maximum value of SAR (measured) = 15.3 mW/g



APPENDIX B: MEASUREMENT SCANS

Date/Time: 2011-03-29 10:35:30

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.878\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.345 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 = 7.18 V/m

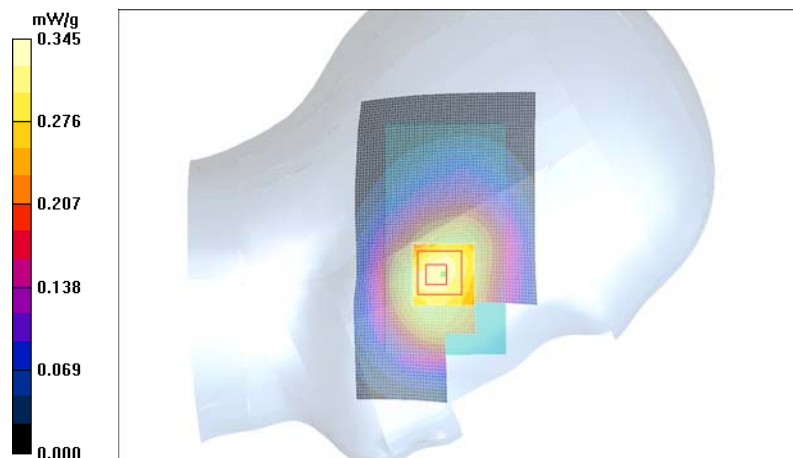
Peak SAR (extrapolated) = 0.405 W/kg

SAR(1 g) = 0.326 mW/g

SAR(10 g) = 0.245 mW/g

Power Drift = -0.243 dB

Maximum value of SAR (measured) = 0.346 mW/g



Date/Time: 2011-03-29 11:39:26

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.878\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.419 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 = 7.81 V/m

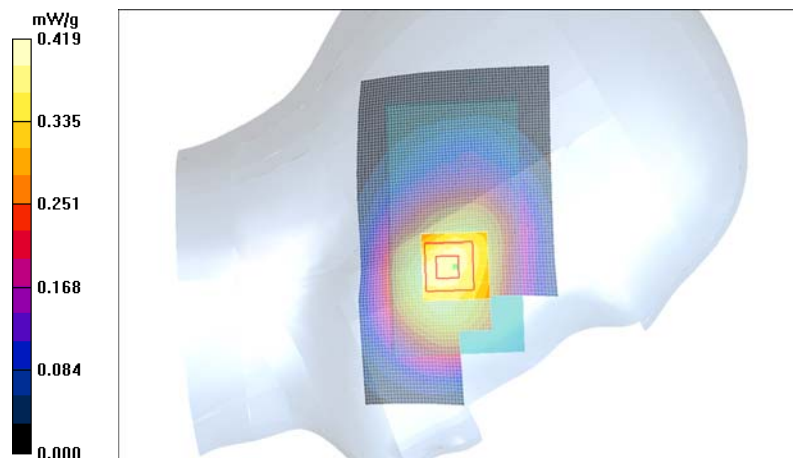
Peak SAR (extrapolated) = 0.492 W/kg

SAR(1 g) = 0.397 mW/g

SAR(10 g) = 0.300 mW/g

Power Drift = 0.178 dB

Maximum value of SAR (measured) = 0.417 mW/g



Date/Time: 2011-03-29 12:53:41

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.878\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.327 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 = 15.3 V/m

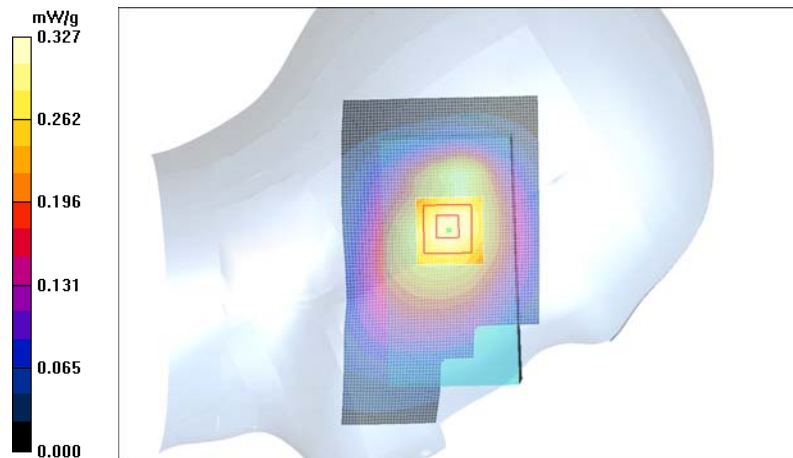
Peak SAR (extrapolated) = 0.371 W/kg

SAR(1 g) = 0.307 mW/g

SAR(10 g) = 0.232 mW/g

Power Drift = 0.039 dB

Maximum value of SAR (measured) = 0.324 mW/g



Date/Time: 2011-03-29 13:37:55

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ }^{\circ}\text{C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.887\text{ mho/m}$; $\epsilon_r = 41$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - High/Area Scan (61x101x1): Measurement grid: $dx=15\text{ mm}$, $dy=15\text{ mm}$

Maximum value of SAR (interpolated) = 0.681 mW/g

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

Reference Value = 10.3 V/m

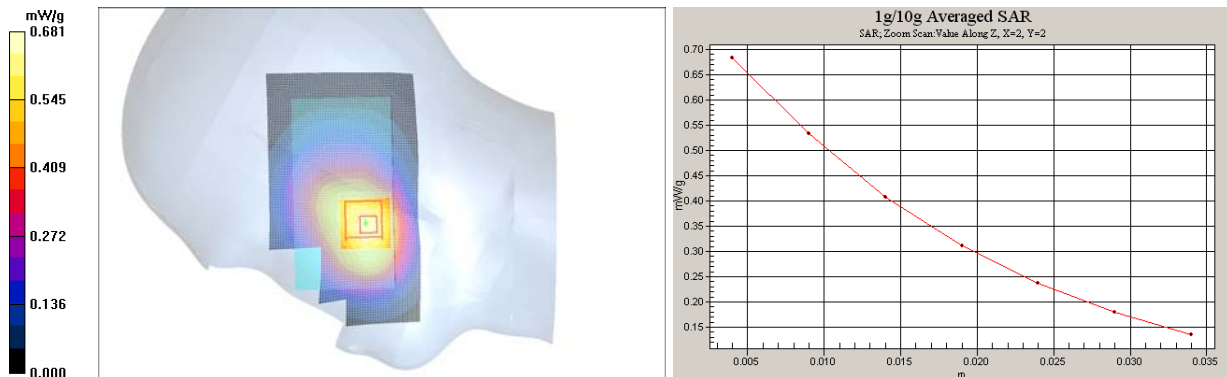
Peak SAR (extrapolated) = 0.843 W/kg

SAR(1 g) = 0.643 mW/g

SAR(10 g) = 0.470 mW/g

Power Drift = 0.111 dB

Maximum value of SAR (measured) = 0.683 mW/g



Date/Time: 2011-03-29 13:50:05

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4$ C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.878$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.352 mW/g

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

Reference Value = 16.4 V/m

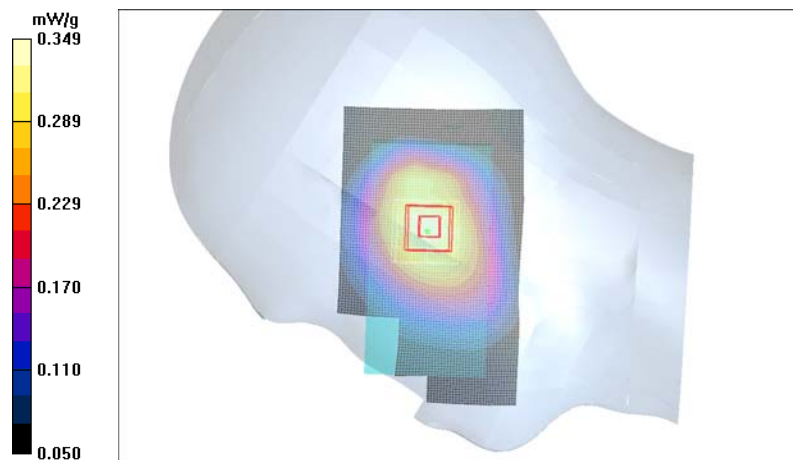
Peak SAR (extrapolated) = 0.398 W/kg

SAR(1 g) = 0.331 mW/g

SAR(10 g) = 0.254 mW/g

Power Drift = -0.067 dB

Maximum value of SAR (measured) = 0.349 mW/g



Date/Time: 2011-03-29 12:22:11

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.878\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.414 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 = 7.97 V/m

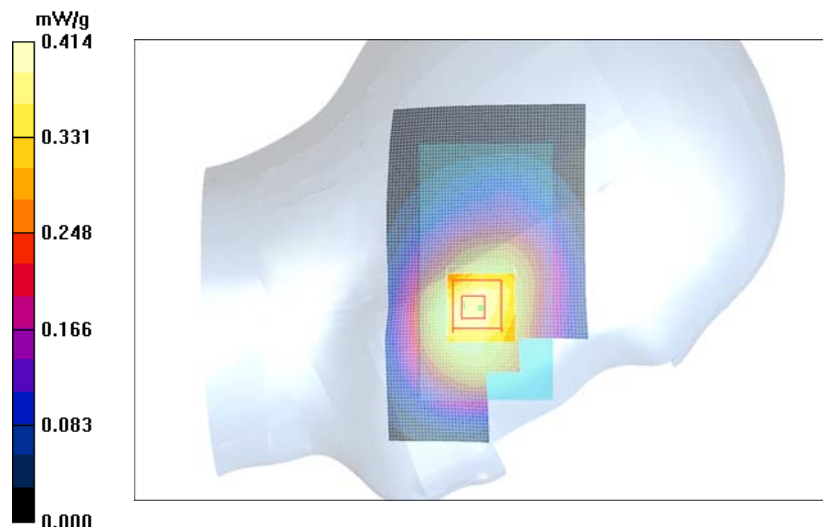
Peak SAR (extrapolated) = 0.494 W/kg

SAR(1 g) = 0.397 mW/g

SAR(10 g) = 0.299 mW/g

Power Drift = -0.044 dB

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



Date/Time: 2011-03-29 12:36:42

Test Laboratory: TCC Nokia
Type: RM-679; Serial: 008600/08/005367/0

Communication System: 4-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.08

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.878\text{ mho/m}$; $\epsilon_r = 41.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.411 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 = 8.01 V/m

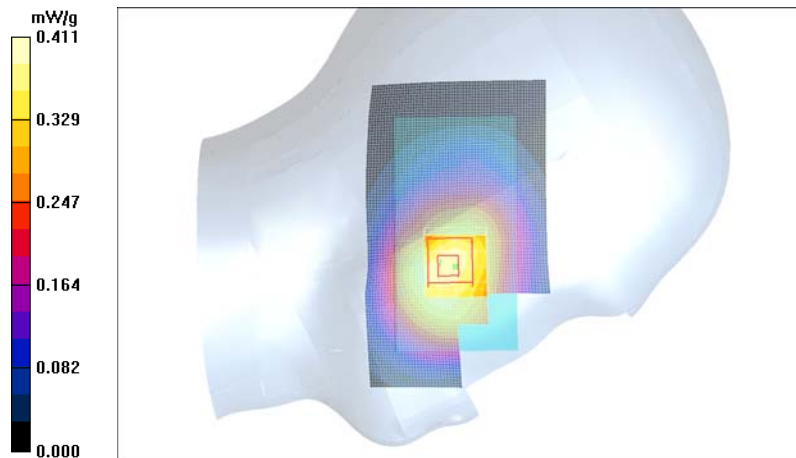
Peak SAR (extrapolated) = 0.485 W/kg

SAR(1 g) = 0.393 mW/g

SAR(10 g) = 0.297 mW/g

Power Drift = 0.021 dB

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



Date/Time: 2011-03-29 14:35:10

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot 8PSK EGPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Head 835; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.887\text{ mho/m}$; $\epsilon_r = 41$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.04, 6.04, 6.04); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - High/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.291 mW/g

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

Reference Value = 7.23 V/m

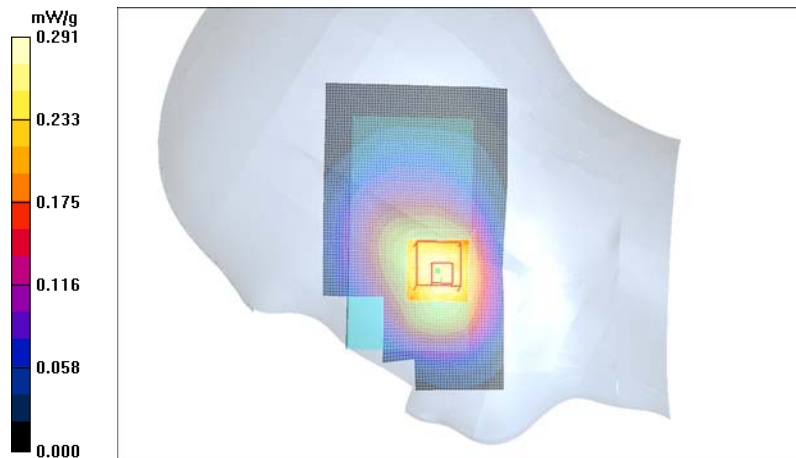
Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.276 mW/g

SAR(10 g) = 0.203 mW/g

Power Drift = -0.422 dB

Maximum value of SAR (measured) = 0.288 mW/g



Date/Time: 2011-03-24 10:25:02

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.654 mW/g

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

Reference Value = 5.92 V/m

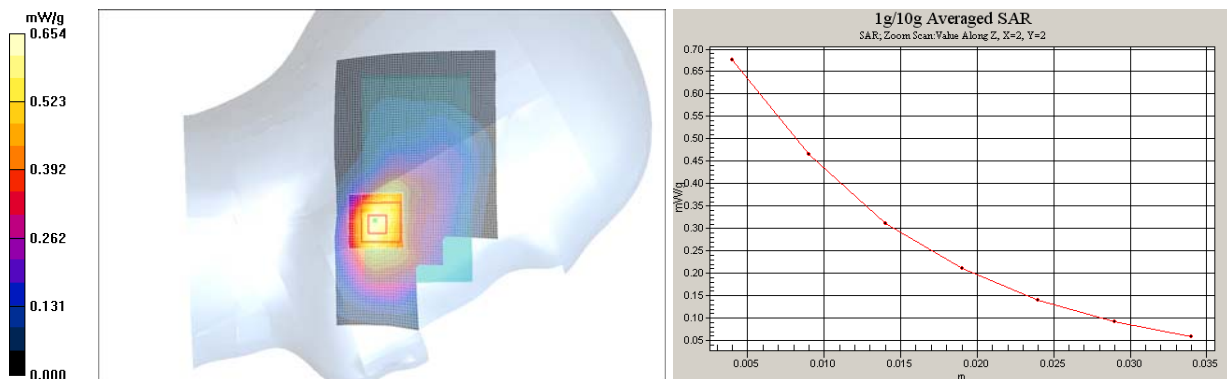
Peak SAR (extrapolated) = 0.891 W/kg

SAR(1 g) = 0.619 mW/g

SAR(10 g) = 0.383 mW/g

Power Drift = 0.003 dB

Maximum value of SAR (measured) = 0.675 mW/g



Date/Time: 2011-03-24 11:38:51

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.273 mW/g

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

Reference Value = 10.5 V/m

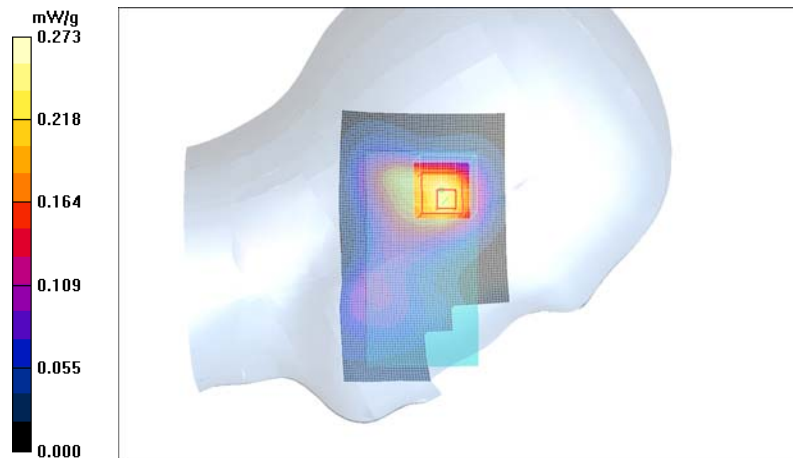
Peak SAR (extrapolated) = 0.328 W/kg

SAR(1 g) = 0.226 mW/g

SAR(10 g) = 0.144 mW/g

Power Drift = -0.411 dB

Maximum value of SAR (measured) = 0.242 mW/g



Date/Time: 2011-03-24 11:55:08

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.436 mW/g

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

Reference Value = 6.00 V/m

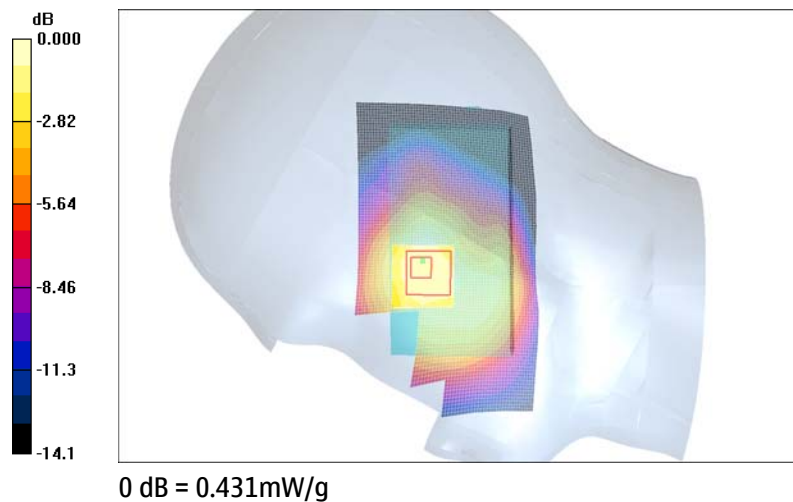
Peak SAR (extrapolated) = 0.565 W/kg

SAR(1 g) = 0.402 mW/g

SAR(10 g) = 0.270 mW/g

Power Drift = -0.109 dB

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



Date/Time: 2011-03-24 12:18:24

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 9.23 V/m

Peak SAR (extrapolated) = 0.281 W/kg

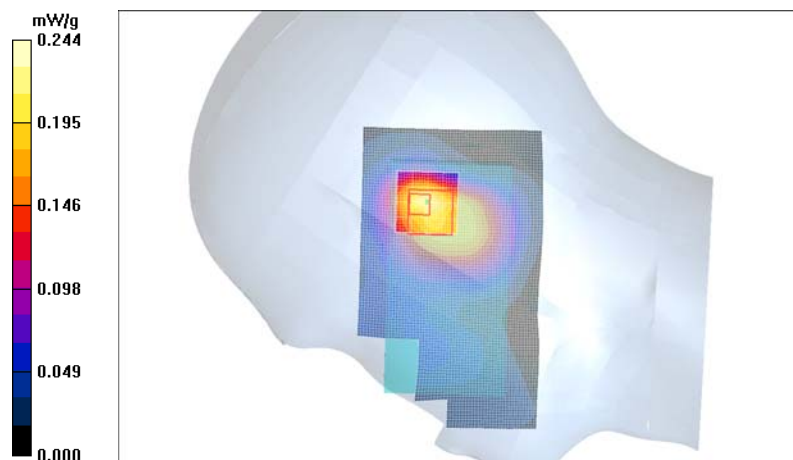
SAR(1 g) = 0.191 mW/g

SAR(10 g) = 0.125 mW/g

Power Drift = -0.321 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) = 0.206 mW/g



Date/Time: 2011-03-24 10:45:17

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.612 mW/g

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

Reference Value = 5.81 V/m

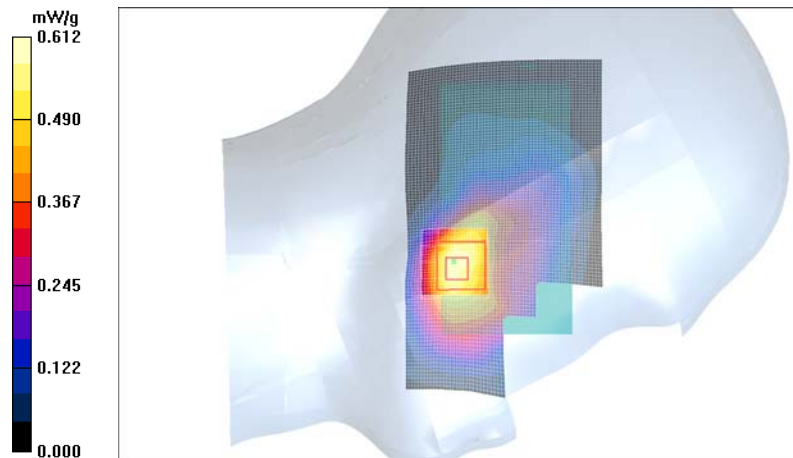
Peak SAR (extrapolated) = 0.840 W/kg

SAR(1 g) = 0.590 mW/g

SAR(10 g) = 0.369 mW/g

Power Drift = -0.058 dB

Maximum value of SAR (measured) = 0.647 mW/g



Date/Time: 2011-03-24 11:02:42

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 3-slot EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn480; Calibrated: 2006-09-19
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.597 mW/g

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

Reference Value = 5.71 V/m

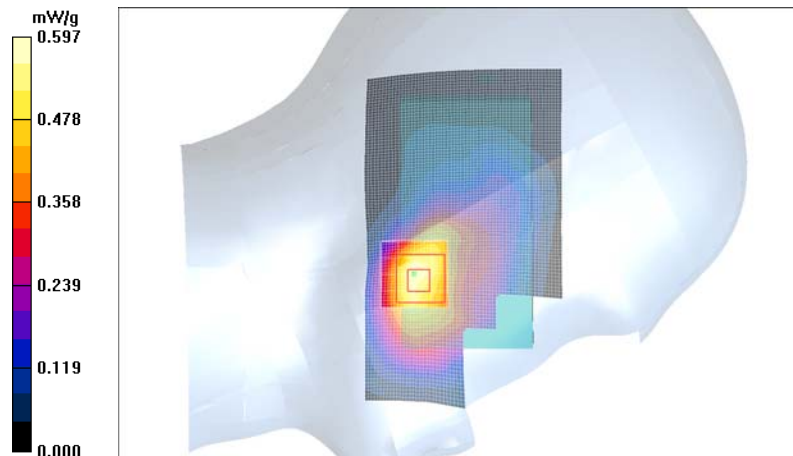
Peak SAR (extrapolated) = 0.784 W/kg

SAR(1 g) = 0.565 mW/g

SAR(10 g) = 0.357 mW/g

Power Drift = -0.245 dB

Maximum value of SAR (measured) = 0.624 mW/g



Date/Time: 2011-03-24 11:18:05

Test Laboratory: TCC Nokia
Type: RM-679; Serial: 008600/08/005367/0

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.08

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn480; Calibrated: 2006-09-19
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.614 mW/g

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

Reference Value = 5.64 V/m

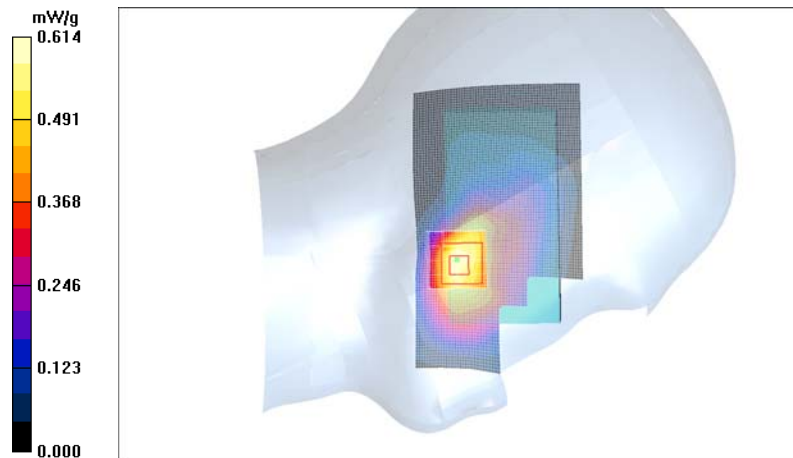
Peak SAR (extrapolated) = 0.814 W/kg

SAR(1 g) = 0.585 mW/g

SAR(10 g) = 0.370 mW/g

Power Drift = 0.066 dB

Maximum value of SAR (measured) = 0.642 mW/g



Date/Time: 2011-03-24 14:13:29

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 1-slot EGPRS 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=22.0C

Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.91, 4.91, 4.91); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM4; Type: SAM; Serial: TP - 1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.186 mW/g

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

Reference Value = 4.52 V/m

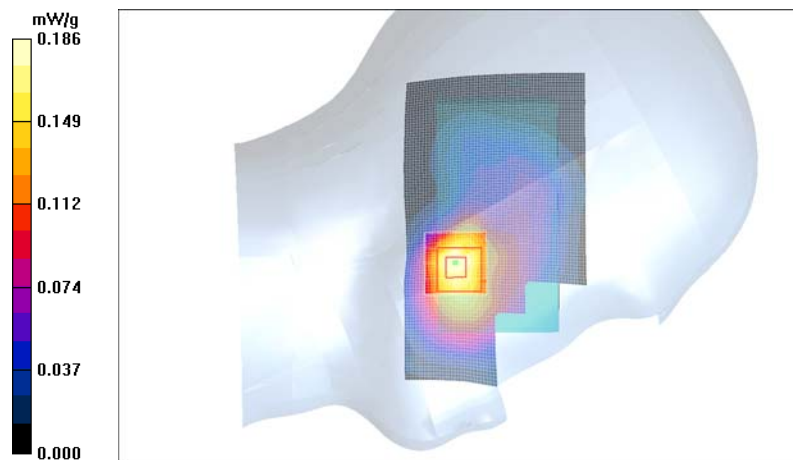
Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.180 mW/g

SAR(10 g) = 0.114 mW/g

Power Drift = -0.252 dB

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



Date/Time: 2011-03-07 10:58:26

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: $t=22.0\text{ C}$

Medium parameters used: $f = 2442\text{ MHz}$; $\sigma = 1.8\text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle - Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.529 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 = 14.8 V/m

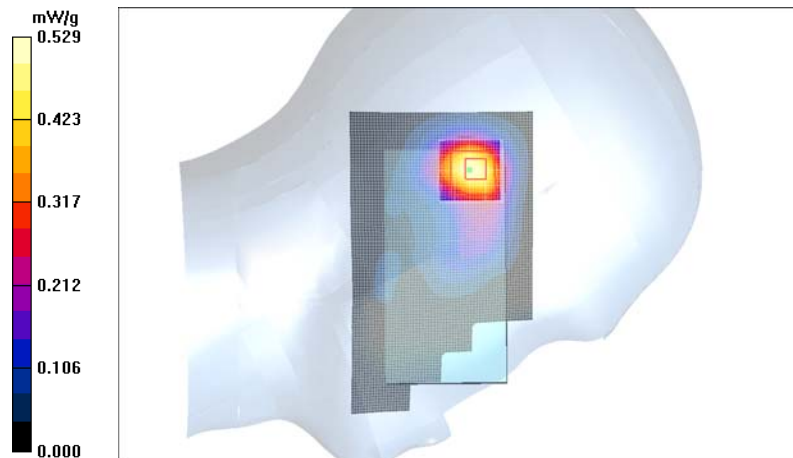
Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.499 mW/g

SAR(10 g) = 0.240 mW/g

Power Drift = -0.160 dB

Maximum value of SAR (measured) = 0.536 mW/g



Date/Time: 2011-03-07 11:14:22

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 15.7 V/m

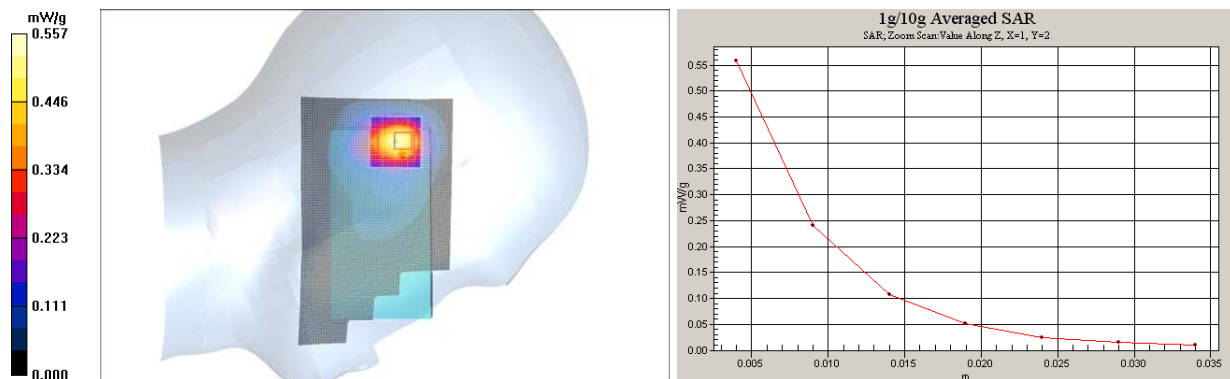
Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.503 mW/g

SAR(10 g) = 0.234 mW/g

Power Drift = -0.021 dB

Maximum value of SAR (measured) = 0.559 mW/g



Date/Time: 2011-03-07 11:39:37

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; σ = 1.8 mho/m; ϵ_r = 39.2; ρ = 1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek position - Middle - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.387 mW/g

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

Reference Value = 14.5 V/m

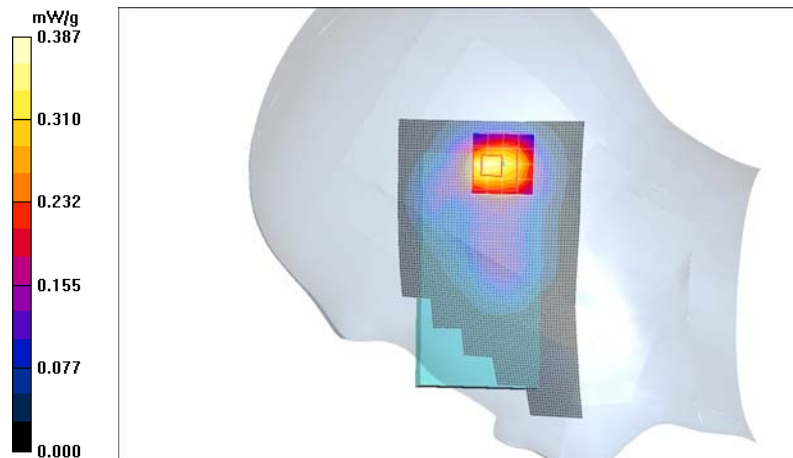
Peak SAR (extrapolated) = 0.644 W/kg

SAR(1 g) = 0.339 mW/g

SAR(10 g) = 0.179 mW/g

Power Drift = 0.050 dB

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



Date/Time: 2011-03-07 11:54:32

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; σ = 1.8 mho/m; ϵ_r = 39.2; ρ = 1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.428 mW/g

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

Reference Value = 15.5 V/m

Peak SAR (extrapolated) = 0.821 W/kg

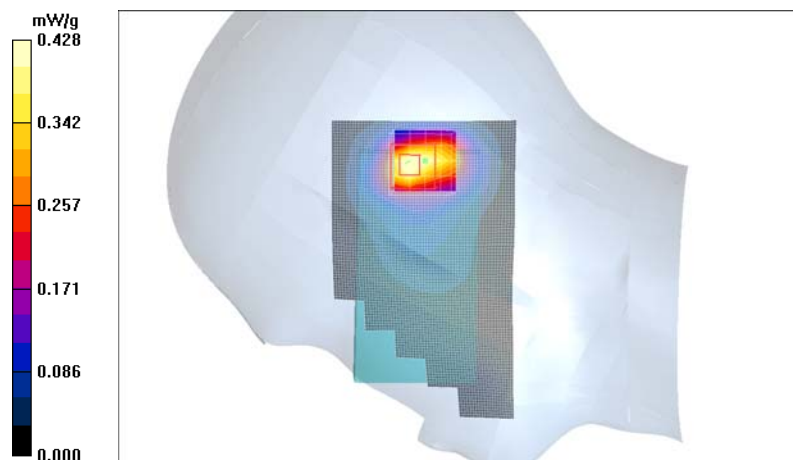
SAR(1 g) = 0.420 mW/g

SAR(10 g) = 0.208 mW/g

Power Drift = -0.067 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) = 0.472 mW/g



Date/Time: 2011-03-07 15:14:00

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 n-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 2450; Medium Notes: Medium Temperature: $t=22.0\text{ }^{\circ}\text{C}$

Medium parameters used: $f = 2442\text{ MHz}$; $\sigma = 1.8\text{ mho/m}$; $\epsilon_r = 39.2$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM5; Type: SAM; Serial: TP - 1178
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle - Area Scan (61x101x1): Measurement grid: $dx=15\text{ mm}$, $dy=15\text{ mm}$

Maximum value of SAR (interpolated) = 0.552 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 = 14.3 V/m

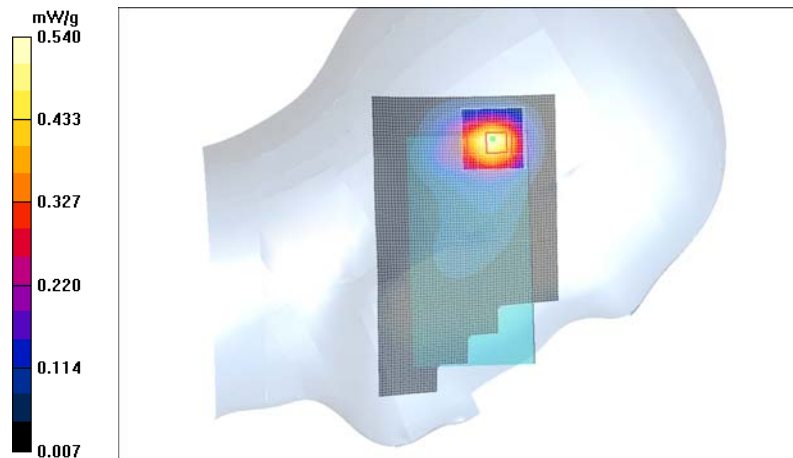
Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.488 mW/g

SAR(10 g) = 0.225 mW/g

Power Drift = 0.134 dB

Maximum value of SAR (measured) = 0.540 mW/g



Date/Time: 2011-03-29 14:55:07

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.972\text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display facing phantom/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.481 mW/g

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

$dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.62 V/m

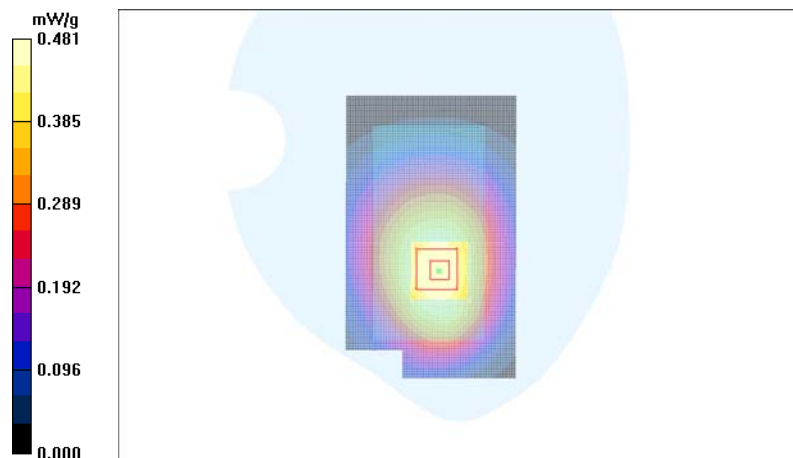
Peak SAR (extrapolated) = 0.574 W/kg

SAR(1 g) = 0.463 mW/g

SAR(10 g) = 0.350 mW/g

Power Drift = -0.115 dB

Maximum value of SAR (measured) = 0.485 mW/g



Date/Time: 2011-03-29 15:08:35

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.972\text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Display facing phantom/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Body - Middle - WH-205 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.7 V/m

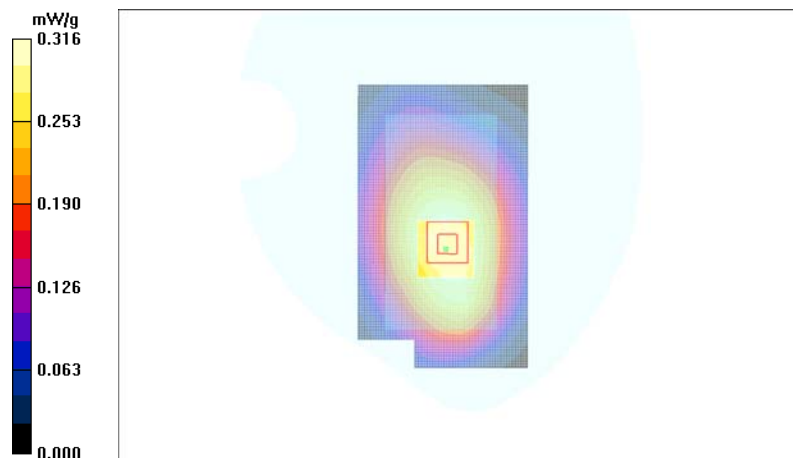
Peak SAR (extrapolated) = 0.368 W/kg

SAR(1 g) = 0.304 mW/g

SAR(10 g) = 0.231 mW/g

Power Drift = -0.055 dB

Maximum value of SAR (measured) = 0.319 mW/g



Date/Time: 2011-03-29 15:42:38

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.983\text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back facing phantom/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.713 mW/g

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

Reference Value = 12.1 V/m

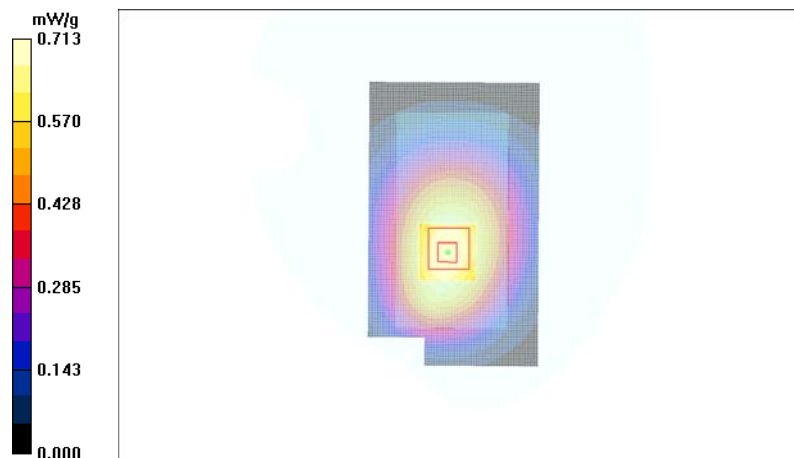
Peak SAR (extrapolated) = 0.830 W/kg

SAR(1 g) = 0.674 mW/g

SAR(10 g) = 0.505 mW/g

Power Drift = 0.005 dB

Maximum value of SAR (measured) = 0.712 mW/g



Date/Time: 2011-03-29 15:31:29

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: t= 21.4 C

Medium parameters used: f = 837 MHz; σ = 0.972 mho/m; ϵ_r = 53.8; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - WH-205 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.4 V/m

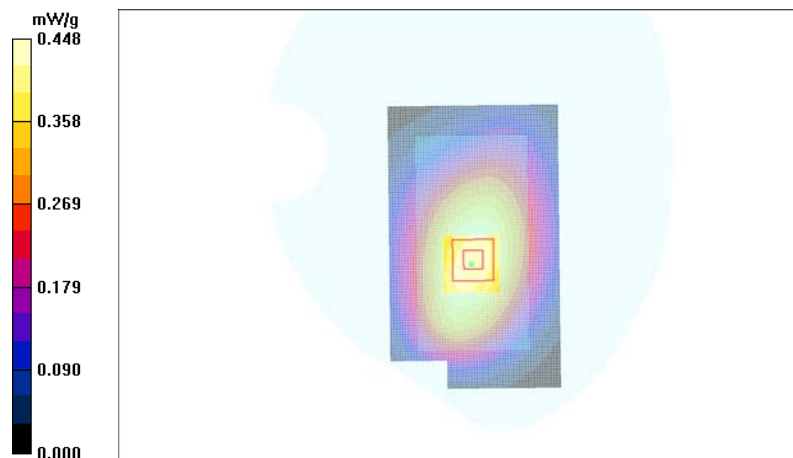
Peak SAR (extrapolated) = 0.515 W/kg

SAR(1 g) = 0.425 mW/g

SAR(10 g) = 0.321 mW/g

Power Drift = -0.083 dB

Maximum value of SAR (measured) = 0.447 mW/g



Date/Time: 2011-03-29 16:03:59

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.4\text{ }^{\circ}\text{C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.983\text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back facing phantom - with stylus position1/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.721 mW/g

Body - High - No Accessory - Back facing phantom - with stylus position1/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

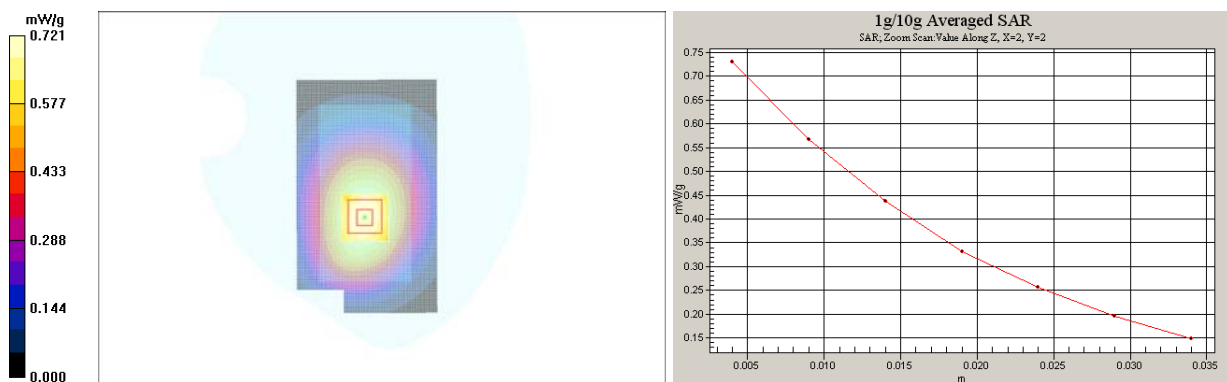
Peak SAR (extrapolated) = 0.849 W/kg

SAR(1 g) = 0.685 mW/g

SAR(10 g) = 0.512 mW/g

Power Drift = -0.021 dB

Maximum value of SAR (measured) = 0.726 mW/g



SAR Report

FCC_RM-679_03

Applicant: Nokia Corporation

Type: RM-679

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Date/Time: 2011-03-29 16:14:09

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.4\text{ C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.983\text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back facing phantom - with stylus position2/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.684 mW/g

Body - High - No Accessory - Back facing phantom - with stylus position2/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

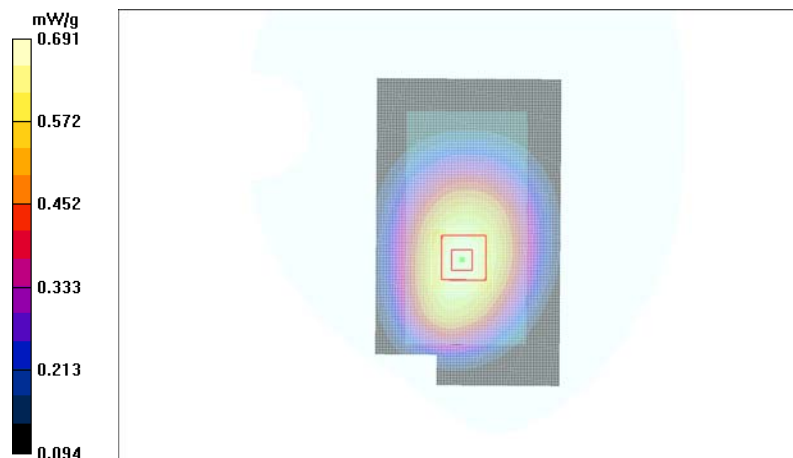
Peak SAR (extrapolated) = 0.808 W/kg

SAR(1 g) = 0.654 mW/g

SAR(10 g) = 0.488 mW/g

Power Drift = -0.042 dB

Maximum value of SAR (measured) = 0.691 mW/g



Date/Time: 2011-03-24 14:33:42

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ϵ_r = 51.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.413 mW/g

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

Reference Value = 9.40 V/m

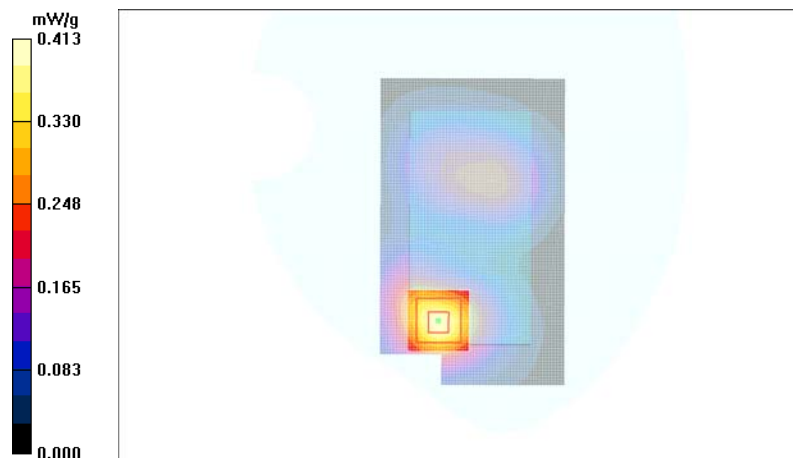
Peak SAR (extrapolated) = 0.598 W/kg

SAR(1 g) = 0.379 mW/g

SAR(10 g) = 0.230 mW/g

Power Drift = 0.040 dB

Maximum value of SAR (measured) = 0.416 mW/g



Date/Time: 2011-03-24 14:47:48

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ϵ_r = 51.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Display facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.456 mW/g

Body - Middle - WH-205 - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.14 V/m

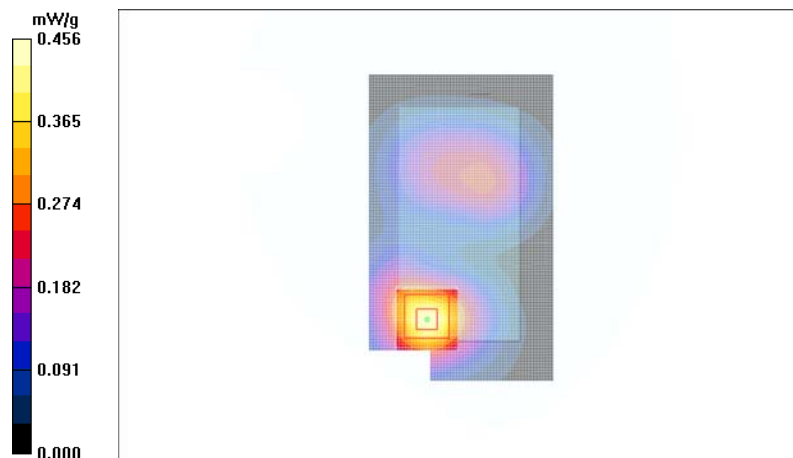
Peak SAR (extrapolated) = 0.645 W/kg

SAR(1 g) = 0.415 mW/g

SAR(10 g) = 0.250 mW/g

Power Drift = -0.021 dB

Maximum value of SAR (measured) = 0.458 mW/g



Date/Time: 2011-03-24 15:05:18

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: $t = 22.0\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.56\text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Back facing phantom/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.460 mW/g

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

$dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.0 V/m

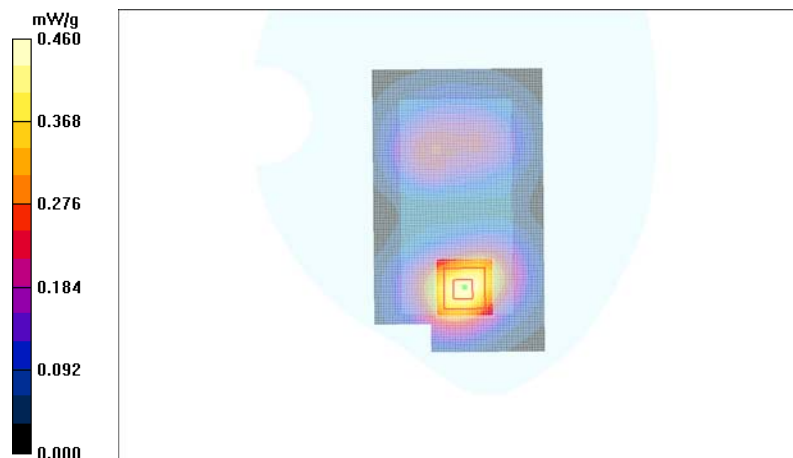
Peak SAR (extrapolated) = 0.625 W/kg

SAR(1 g) = 0.415 mW/g

SAR(10 g) = 0.259 mW/g

Power Drift = -0.030 dB

Maximum value of SAR (measured) = 0.449 mW/g



Date/Time: 2011-03-24 15:20:26

Test Laboratory: TCC Nokia
Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: $t = 22.0\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.56\text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.470 mW/g

Body - Middle - WH-205 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.5 V/m

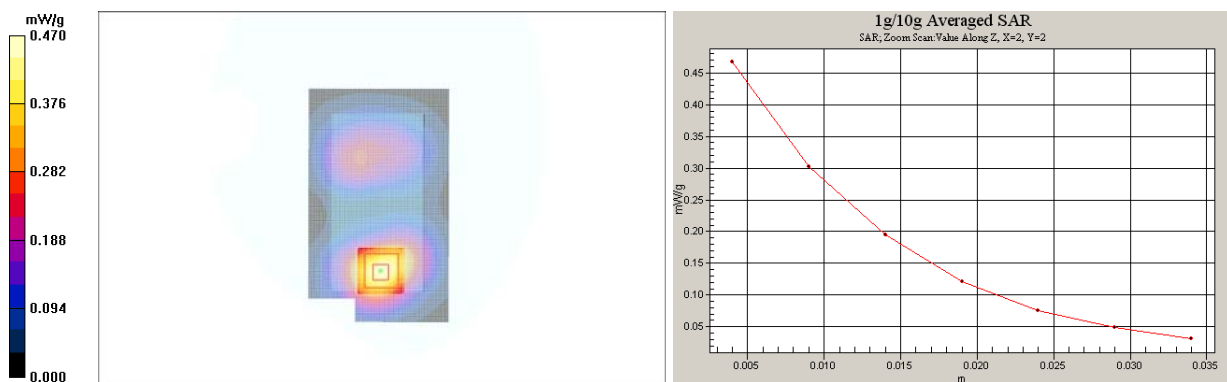
Peak SAR (extrapolated) = 0.650 W/kg

SAR(1 g) = 0.429 mW/g

SAR(10 g) = 0.265 mW/g

Power Drift = 0.070 dB

Maximum value of SAR (measured) = 0.467 mW/g



Date/Time: 2011-03-24 17:00:02

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ϵ_r = 51.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - with stylus position1/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.413 mW/g

Body - Middle - WH-205 - Back facing phantom - with stylus position1/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 9.15 V/m

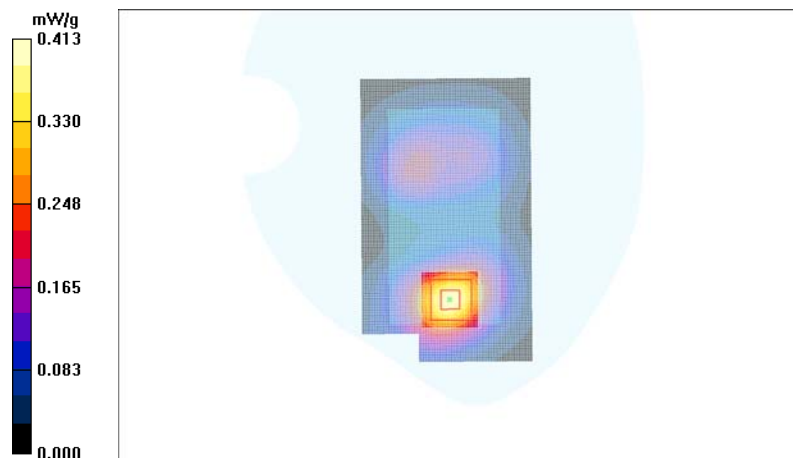
Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.375 mW/g

SAR(10 g) = 0.230 mW/g

Power Drift = 0.075 dB

Maximum value of SAR (measured) = 0.413 mW/g



Date/Time: 2011-03-24 17:11:05

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ϵ_r = 51.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - with stylus position2/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - WH-205 - Back facing phantom - with stylus position2/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 9.46 V/m

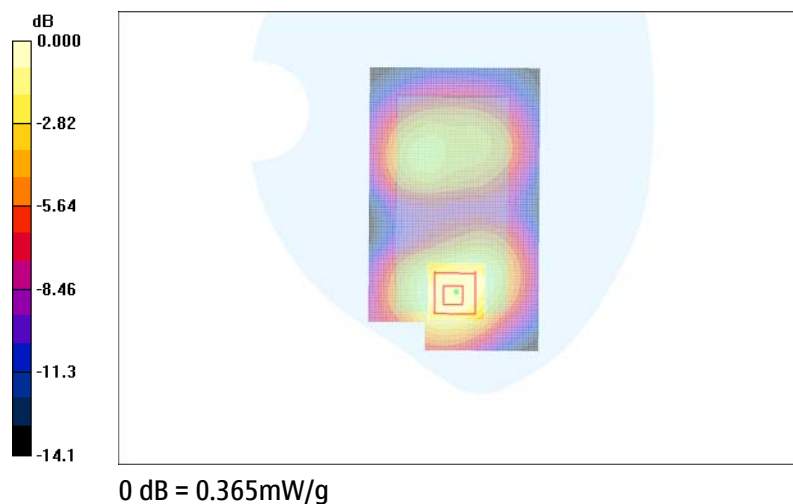
Peak SAR (extrapolated) = 0.503 W/kg

SAR(1 g) = 0.338 mW/g

SAR(10 g) = 0.215 mW/g

Power Drift = 0.031 dB

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



Date/Time: 2011-03-07 15:59:24

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: $t=22.0\text{ }^{\circ}\text{C}$

Medium parameters used: $f = 2442\text{ MHz}$; $\sigma = 1.94\text{ mho/m}$; $\epsilon_r = 53.5$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display facing phantom - Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.051 mW/g

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

Reference Value = 4.85 V/m

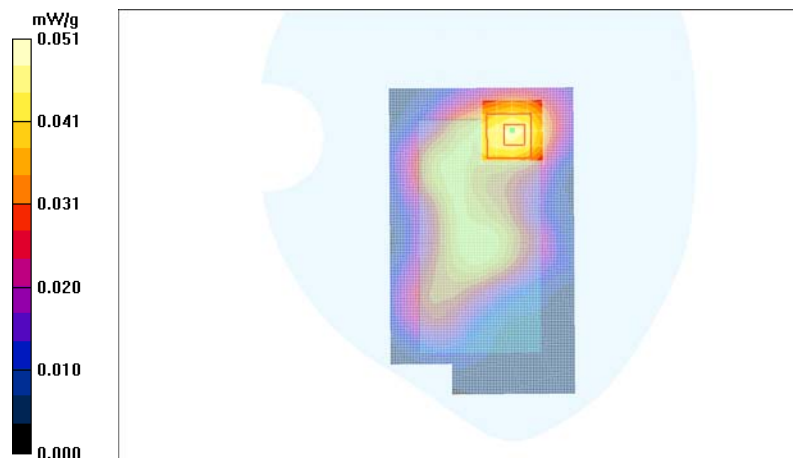
Peak SAR (extrapolated) = 0.075 W/kg

SAR(1 g) = 0.046 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = 0.013 dB

Maximum value of SAR (measured) = 0.049 mW/g



Date/Time: 2011-03-07 16:18:40

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; σ = 1.94 mho/m; ϵ_r = 53.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Display facing phantom - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.062 mW/g

Body - Middle - WH-205 - Display facing phantom - Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 3.23 V/m

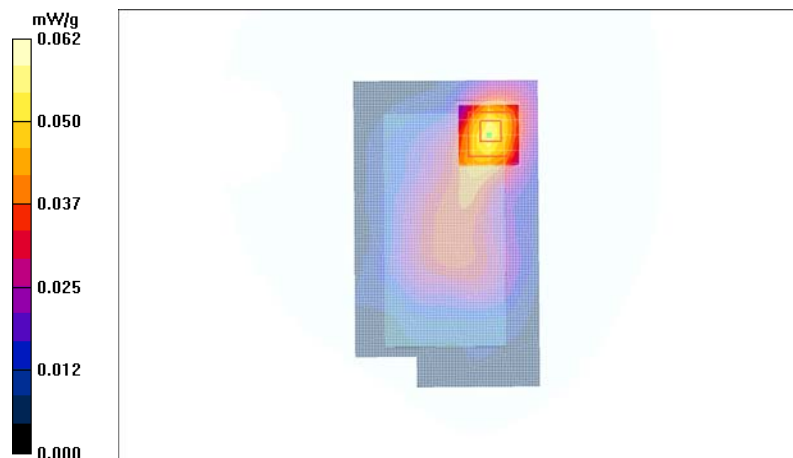
Peak SAR (extrapolated) = 0.089 W/kg

SAR(1 g) = 0.053 mW/g

SAR(10 g) = 0.031 mW/g

Power Drift = 0.309 dB

Maximum value of SAR (measured) = 0.059 mW/g



Date/Time: 2011-03-07 16:44:15

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; σ = 1.94 mho/m; ϵ_r = 53.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Back facing phantom - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

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

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

Reference Value = 5.75 V/m

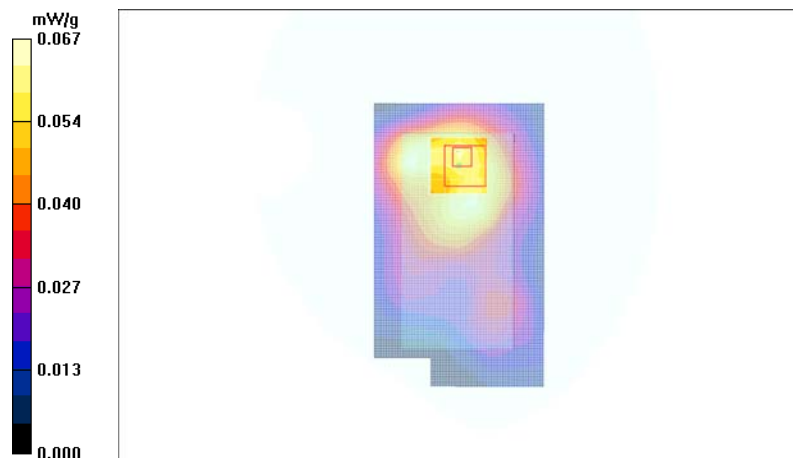
Peak SAR (extrapolated) = 0.104 W/kg

SAR(1 g) = 0.060 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = 0.072 dB

Maximum value of SAR (measured) = 0.064 mW/g



Date/Time: 2011-03-07 16:33:47

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 2442 MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - WH-205 - Back facing phantom - Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 3.81 V/m

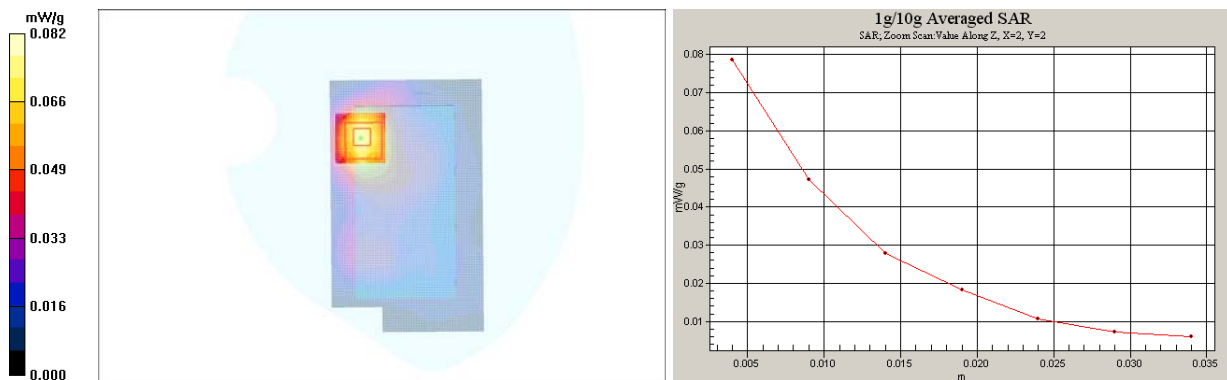
Peak SAR (extrapolated) = 0.124 W/kg

SAR(1 g) = 0.072 mW/g

SAR(10 g) = 0.042 mW/g

Power Drift = 0.366 dB

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



Date/Time: 2011-04-07 11:26:51

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Back facing phantom - with stylus position1/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.076 mW/g

Body - Middle - No Accessory - Back facing phantom - with stylus position1/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.73 V/m

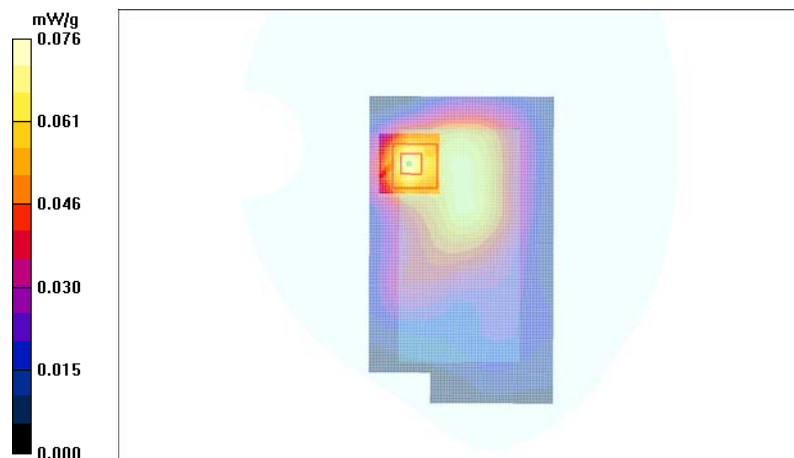
Peak SAR (extrapolated) = 0.120 W/kg

SAR(1 g) = 0.066 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = 0.116 dB

Maximum value of SAR (measured) = 0.073 mW/g



Date/Time: 2011-03-17 15:14:43

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.1 C

Medium parameters used: f = 2442 MHz; σ = 1.98 mho/m; ϵ_r = 53.9; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - with stylus position1/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.077 mW/g

Body - Middle - WH-205 - Back facing phantom - with stylus position1/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.49 V/m

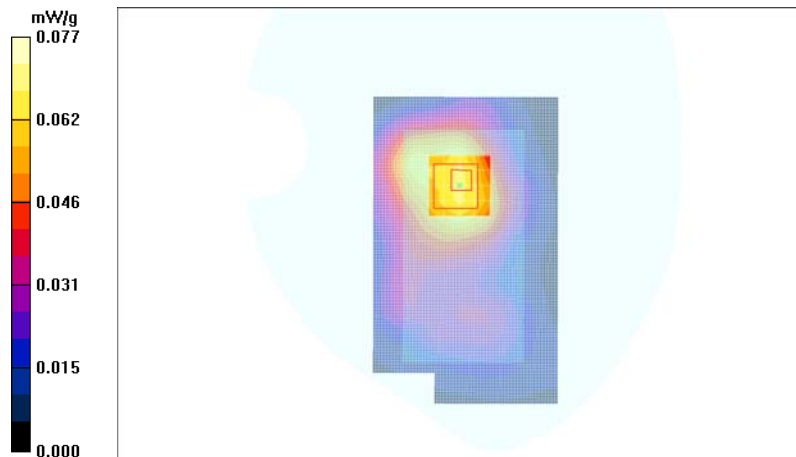
Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.065 mW/g

SAR(10 g) = 0.041 mW/g

Power Drift = -0.076 dB

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



Date/Time: 2011-04-07 11:38:30

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Back facing phantom - with stylus position2/Area Scan (61x101x1):

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

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

Body - Middle - No Accessory - Back facing phantom - with stylus position2/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.69 V/m

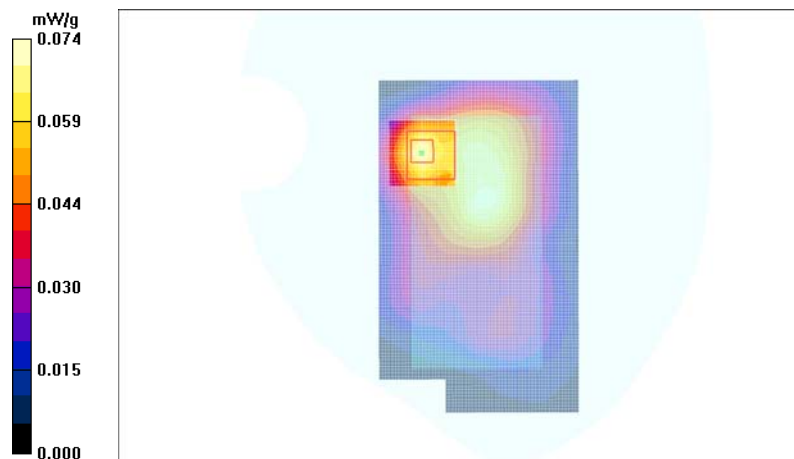
Peak SAR (extrapolated) = 0.110 W/kg

SAR(1 g) = 0.064 mW/g

SAR(10 g) = 0.037 mW/g

Power Drift = 0.285 dB

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



Date/Time: 2011-03-17 15:28:44

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.1 C

Medium parameters used: f = 2442 MHz; σ = 1.98 mho/m; ϵ_r = 53.9; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - with stylus position2/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

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

Body - Middle - WH-205 - Back facing phantom - with stylus position2/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.45 V/m

Peak SAR (extrapolated) = 0.108 W/kg

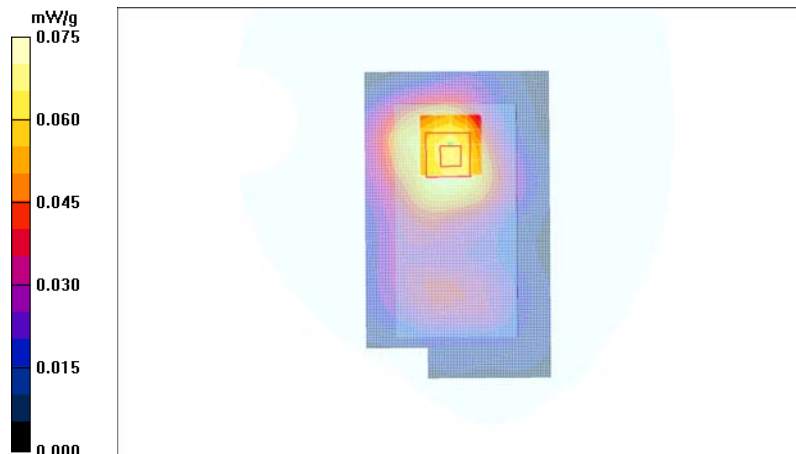
SAR(1 g) = 0.066 mW/g

SAR(10 g) = 0.041 mW/g

Power Drift = 0.180 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) = 0.070 mW/g



Date/Time: 2011-03-17 13:57:39

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 n-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=22.1 C

Medium parameters used: f = 2442 MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - WH-205 - Back facing phantom - Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - WH-205 - Back facing phantom - Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.75 V/m

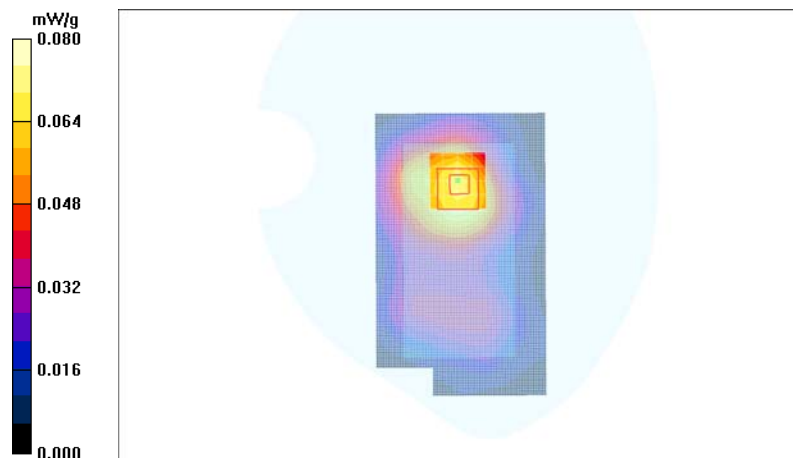
Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.068 mW/g

SAR(10 g) = 0.043 mW/g

Power Drift = -0.009 dB

Maximum value of SAR (measured) = 0.073 mW/g



Date/Time: 2011-03-29 1:37:55 PM, Date/Time: 2011-03-07 11:39:37 AM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850, Communication System: WLAN2450 b-mode

Frequency: 848.8 MHz, Frequency: 2442 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: Head 835, Medium: Head 2450; Medium Notes: Medium Temperature: $t = 21.4$ C, Medium Notes: Medium Temperature: $t = 22.0$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 2442$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(6.04, 6.04, 6.04), ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM1, Phantom: SAM5; Type: SAM; Serial: TP - 01097, Serial: TP - 1178
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

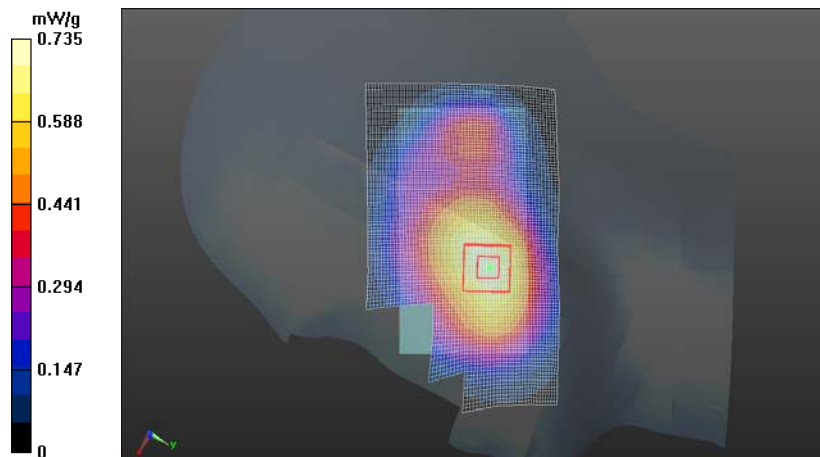
Configuration/Cheek position -High/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Cheek position - Middle - Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.687 mW/g

SAR(10 g) = 0.469 mW/g

Maximum value of SAR (measured) = 0.735 mW/g



Date/Time: 2011-03-24 10:25:02 AM, Date/Time: 2011-03-07 10:58:26 AM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900, Communication System: WLAN2450 b-mode

Frequency: 1880 MHz, Frequency: 2442 MHz; Duty Cycle: 1:8.3, Duty Cycle: 1:1

Medium: Head 1900, Medium: Head 2450; Medium Notes: Medium Temperature: t=22.0C, Medium Notes: Medium Temperature: t=22.0 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³, Medium parameters used: f = 2442 MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 39.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(4.91, 4.91, 4.91), ConvF(6.37, 6.37, 6.37); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM4, Phantom: SAM5; Type: SAM; Serial: TP - 1427, Serial: TP - 1178
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

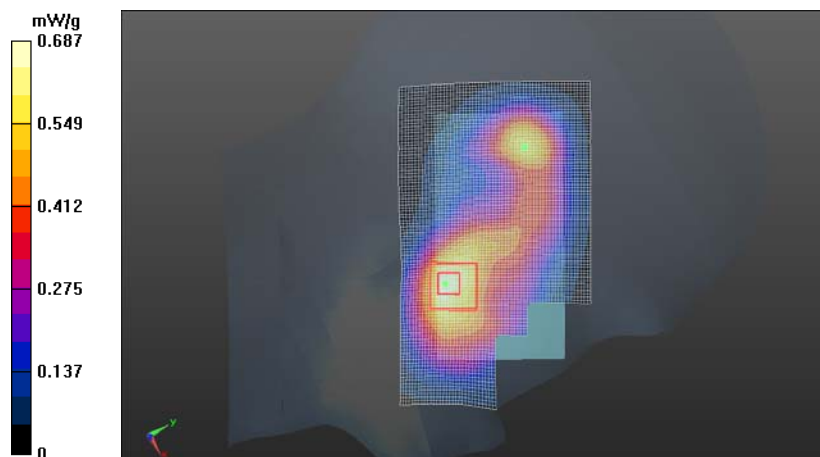
Configuration/Cheek position - Middle/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Cheek position - Middle - Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.621 mW/g

SAR(10 g) = 0.365 mW/g

Maximum value of SAR (measured) = 0.687 mW/g



Date/Time: 2011-03-29 4:03:59 PM, Date/Time: 2011-04-07 11:26:51 AM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850, Communication System: WLAN2450 b-mode

Frequency: 848.8 MHz, Frequency: 2442 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: Body 850, Medium: Body 2450; Medium Notes: Medium Temperature: t= 21.4 C, Medium Notes:

Medium Temperature: t=21.8 C

Medium parameters used: f = 849 MHz; σ = 0.983 mho/m; ϵ_r = 53.6; ρ = 1000 kg/m³, Medium parameters used:

f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(5.9, 5.9, 5.9), ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM2, Phantom: SAM6; Type: SAM; Serial: TP - 1508, Serial: TP - 1426
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/Body - High - No Accessory - Back facing phantom - with stylus position1/Area Scan (7x11x1):

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

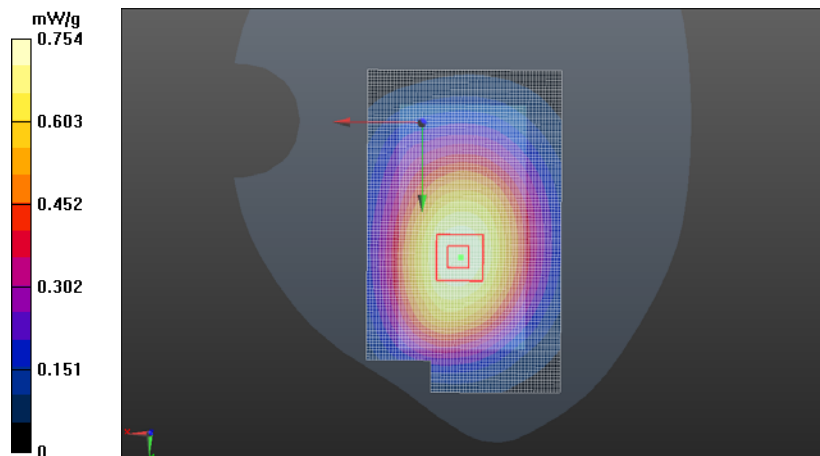
Configuration/Body - Middle - No Accessory - Back facing phantom - with stylus position1/Area Scan (7x11x1):

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

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.715 mW/g

SAR(10 g) = 0.506 mW/g

Maximum value of SAR (measured) = 0.754 mW/g



Date/Time: 2011-03-24 3:20:26 PM, Date/Time: 2011-03-07 4:33:47 PM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900, Communication System: WLAN2450 b-mode

Frequency: 1880 MHz, Frequency: 2442 MHz; Duty Cycle: 1:8.3, Duty Cycle: 1:1

Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: $t = 22.0$ C, Medium Notes: Medium Temperature: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 2442$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(4.33, 4.33, 4.33), ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM3, Phantom: SAM6; Type: SAM; Serial: TP-1427, Serial: TP - 1426
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

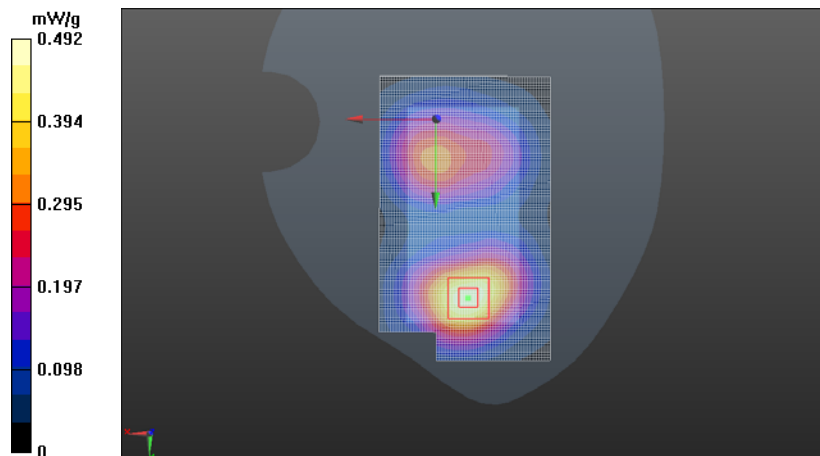
Configuration/Body - Middle - WH-205 - Back facing phantom/Area Scan (7x11x1): Measurement grid: $dx = 15$ mm, $dy = 15$ mm

Configuration/Body - Middle - WH-205 - Back facing phantom - Area Scan (7x11x1): Measurement grid: $dx = 15$ mm, $dy = 15$ mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.453 mW/g

SAR(10 g) = 0.268 mW/g

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



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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Client **Nokia Beijing TCC**

Certificate No: **ET3-1652_Oct10**

CALIBRATION CERTIFICATE

Object **ET3DV6 - SN:1652**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2
 Calibration procedure for dosimetric E-field probes**

Calibration date: **October 21, 2010**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Claudio Leubler** **Laboratory Technician**

Signature

Approved by: **Katja Pokovic** **Technical Manager**

Issued: October 21, 2010

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

DASY/EASY - Parameters of Probe: ET3DV6 SN:1652

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V/m})^2$) ^A	2.00	2.06	2.00	± 10.1%
DCP (mV) ^B	91.7	93.3	92.5	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc ^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the maximum deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ET3DV6 SN:1652

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	6.04	6.04	6.04	0.52	2.09 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.15	5.15	5.15	0.54	2.71 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.91	4.91	4.91	0.69	2.30 ± 11.0%

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

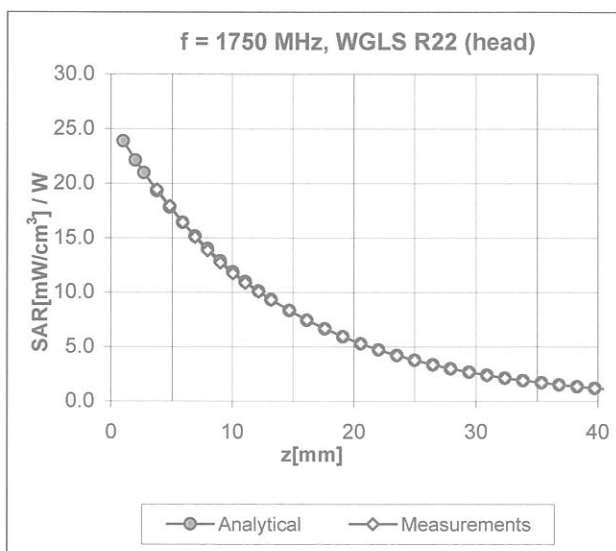
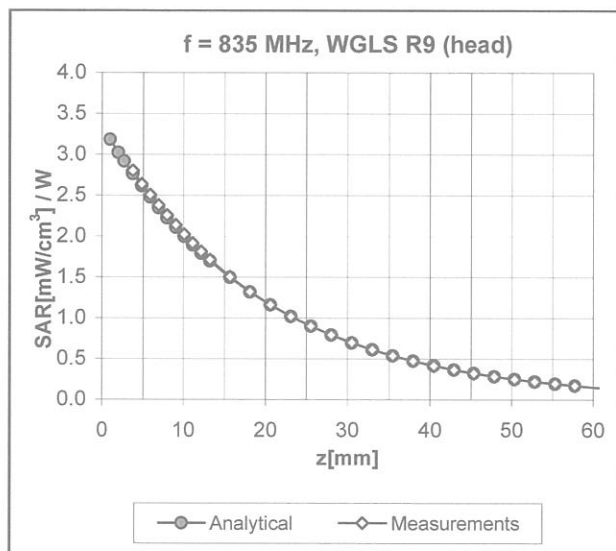
DASY/EASY - Parameters of Probe: ET3DV6 SN:1652

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.90	5.90	5.90	0.50	2.25 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.57	4.57	4.57	0.65	2.93 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.33	4.33	4.33	0.93	2.28 ± 11.0%

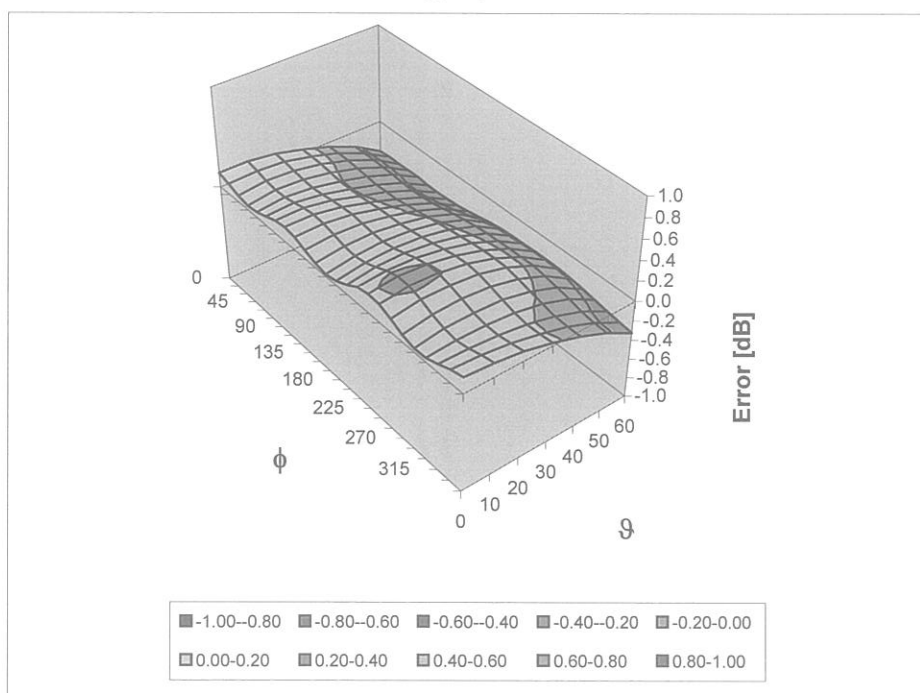
^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

Conversion Factor Assessment



Deviation from Isotropy in HSL

Error (ϕ , ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ (k=2)



Accredited by the Swiss Accreditation Service (SAS)
 The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Nokia Beijing TCC**

Certificate No: **EX3-3574_Oct10**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3574**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2**
Calibration procedure for dosimetric E-field probes

Calibration date: **October 19, 2010**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Claudio Leubler** **Laboratory Technician**

Approved by: **Katja Poković** **Technical Manager**

Signature

Issued: October 21, 2010

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

DASY/EASY - Parameters of Probe: EX3DV4 SN:3574**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.52	0.49	0.44	$\pm 10.1\%$
DCP (mV) ^B	95.2	93.3	92.2	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc ^E (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	$\pm 1.5\%$
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter; uncertainty not required.

^E Uncertainty is determined using the maximum deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 SN:3574

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	8.29	8.29	8.29	0.66	0.67 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	7.43	7.43	7.43	0.45	0.79 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.08	7.08	7.08	0.67	0.64 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	6.82	6.82	6.82	0.50	0.73 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	6.37	6.37	6.37	0.28	0.99 ± 11.0%

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

DASY/EASY - Parameters of Probe: EX3DV4 SN:3574

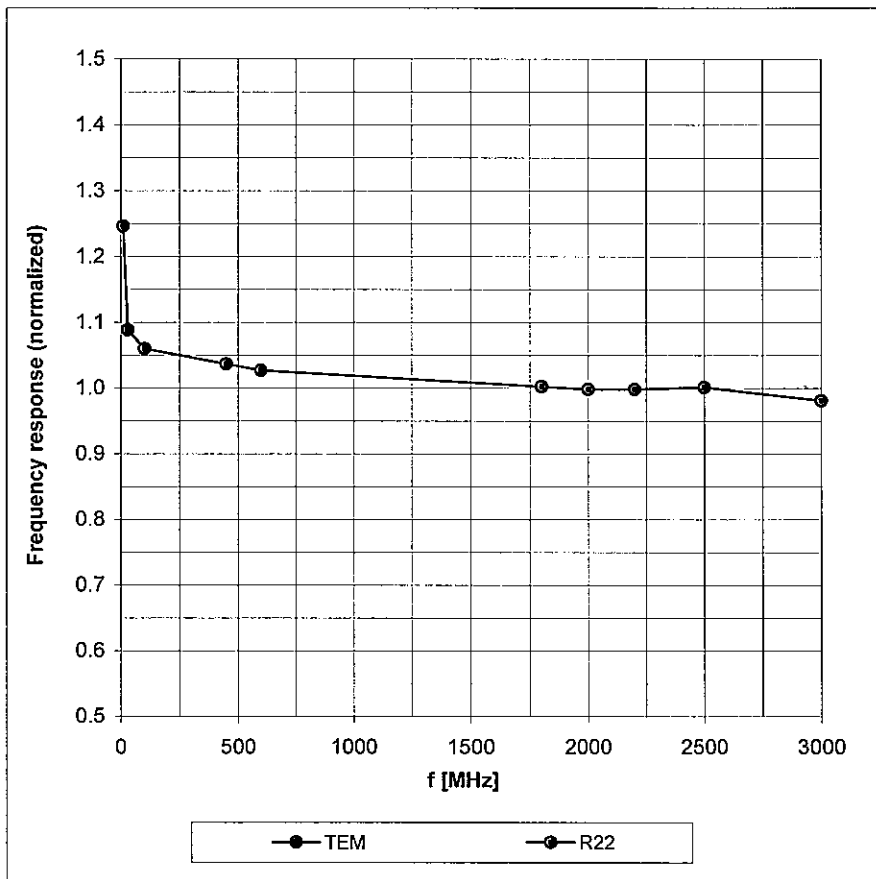
Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	8.42	8.42	8.42	0.66	0.70 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	6.83	6.83	6.83	0.88	0.59 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	6.62	6.62	6.62	0.55	0.74 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	6.81	6.81	6.81	0.70	0.64 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	6.45	6.45	6.45	0.41	0.85 ± 11.0%

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

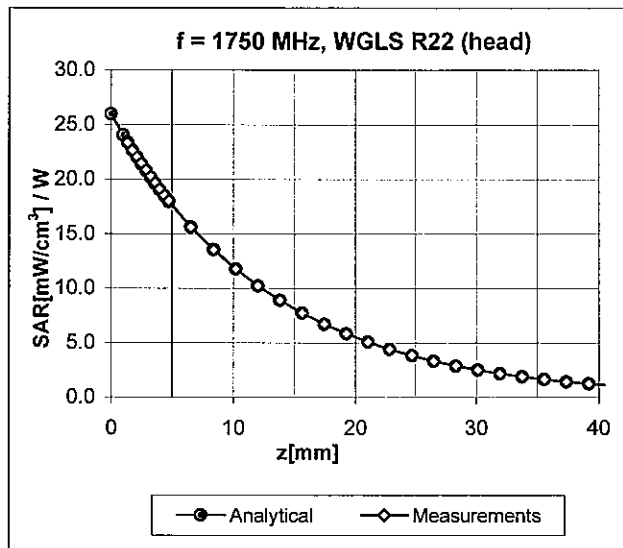
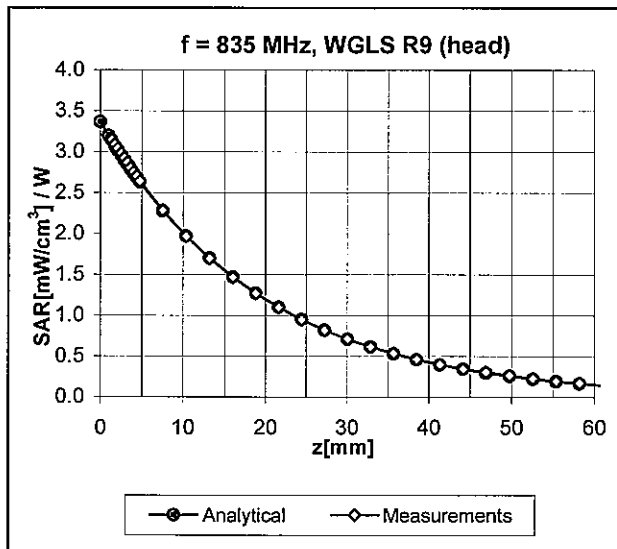
Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



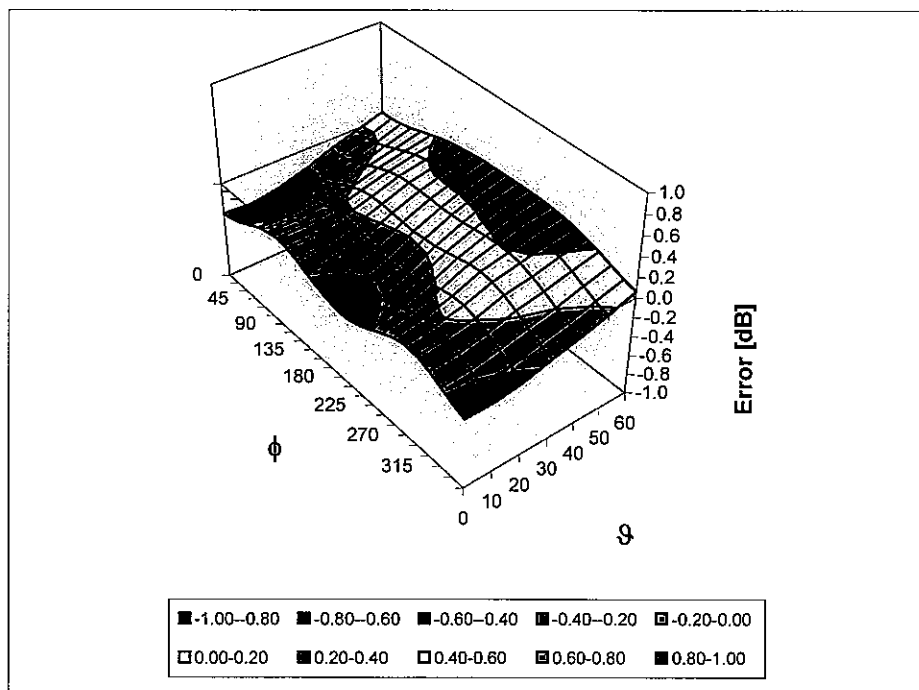
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in HSL

Error (ϕ , ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ (k=2)

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

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Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Nokia Beijing TCC**

Certificate No: **D835V2-4d005_Mar10**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 4d005**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **March 15, 2010**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV3	SN: 3205	26-Jun-09 (No. ES3-3205_Jun09)	Jun-10
DAE4	SN: 601	02-Mar-10 (No. DAE4-601_Mar10)	Mar-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	

Approved by:	Katja Pokovic	Technical Manager
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Issued: March 15, 2010

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DASY5 Validation Report for Head TSL

Date/Time: 08.03.2010 10:09:46

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d005

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

Medium: HSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 42.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.04, 6.04, 6.04); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

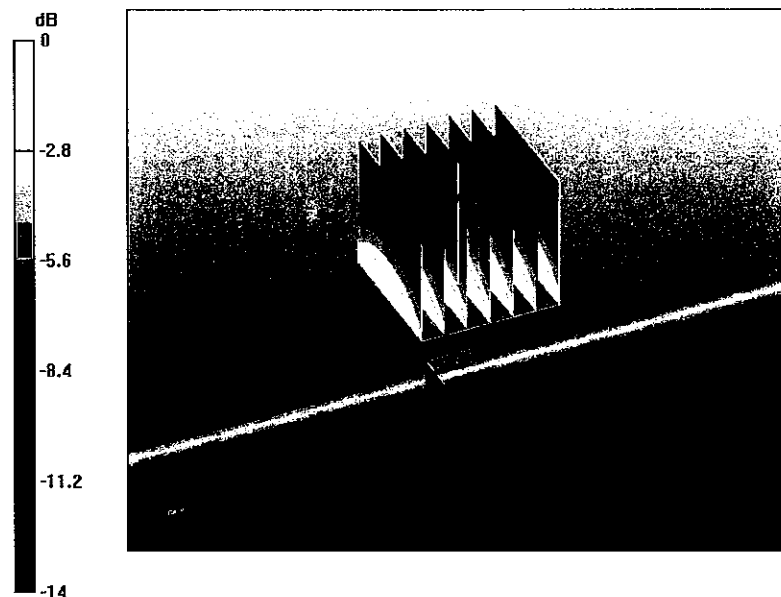
Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.1 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 3.61 W/kg

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

Maximum value of SAR (measured) = 2.81 mW/g



0 dB = 2.81mW/g

DASY5 Validation Report for Body

Date/Time: 15.03.2010 10:35:39

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d005

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

Medium: MSL900

Medium parameters used: $f = 835$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.97, 5.97, 5.97); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

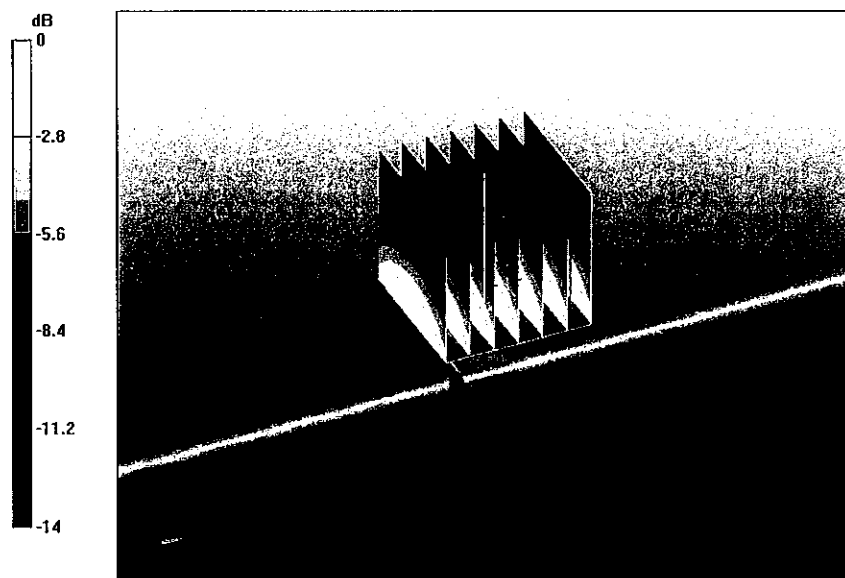
Pin250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 3.78 W/kg

SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.67 mW/g

Maximum value of SAR (measured) = 2.99 mW/g



0 dB = 2.99mW/g



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Accreditation No.: **SCS 108**

Client **Nokia Beijing TCC**

Certificate No: **D1900V2-547-Sep09**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 547**

Calibration procedure(s) **QA CAL-05.v7**
Calibration procedure for dipole validation kits

Calibration date: **September 15, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV3	SN: 3205	26-Jun-09 (No. ES3-3205_Jun09)	Jun-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by: **Name** Jeton Kastrati **Function** Laboratory Technician

Approved by: **Name** Katja Pokovic **Function** Technical Manager

Signature

Issued: September 18, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

DASY5 Validation Report for Head TSL

Date/Time: 08.09.2009 12:19:44

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:547

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

Medium: HSL U11 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.09, 5.09, 5.09); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY 5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Pin = 250 mW; dip = 10 mm/Zoom Scan (dist=3.0 mm, probe 0deg) (7x7x7)/Cube 0:

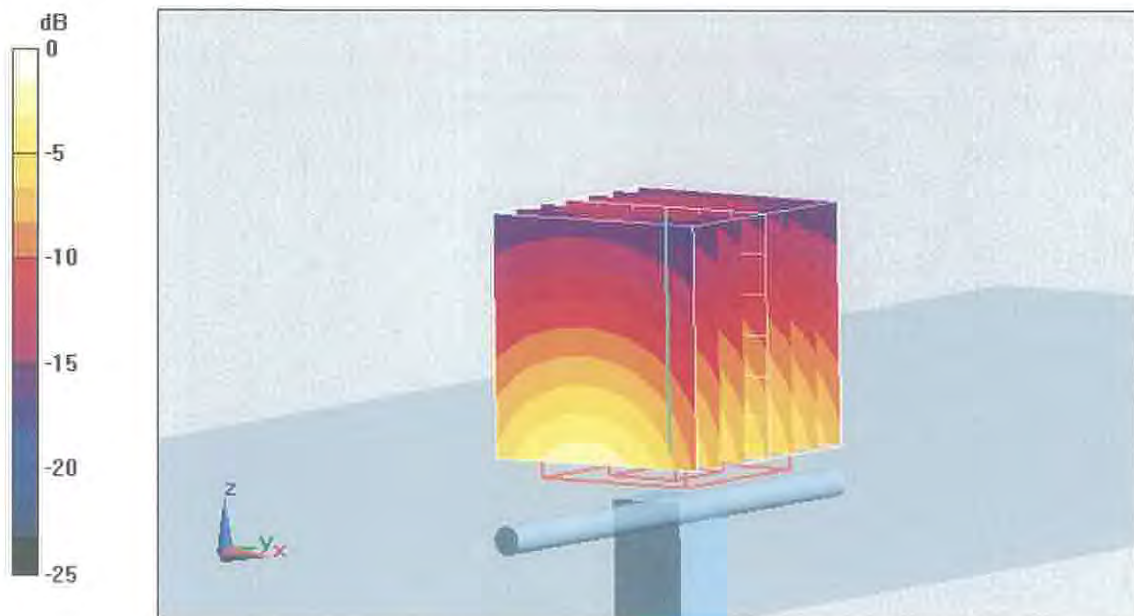
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.7 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 19.1 W/kg

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.41 mW/g

Maximum value of SAR (measured) = 13 mW/g



0 dB = 13mW/g

DASY5 Validation Report for Body TSL

Date/Time: 15.09.2009 12:45:32

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:547

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

Medium: MSL U10 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.59, 4.59, 4.59); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY 5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Pin = 250 mW; dip = 10 mm/Zoom Scan (dist=3.0mm, probe 0deg) (7x7x7)/Cube 0:

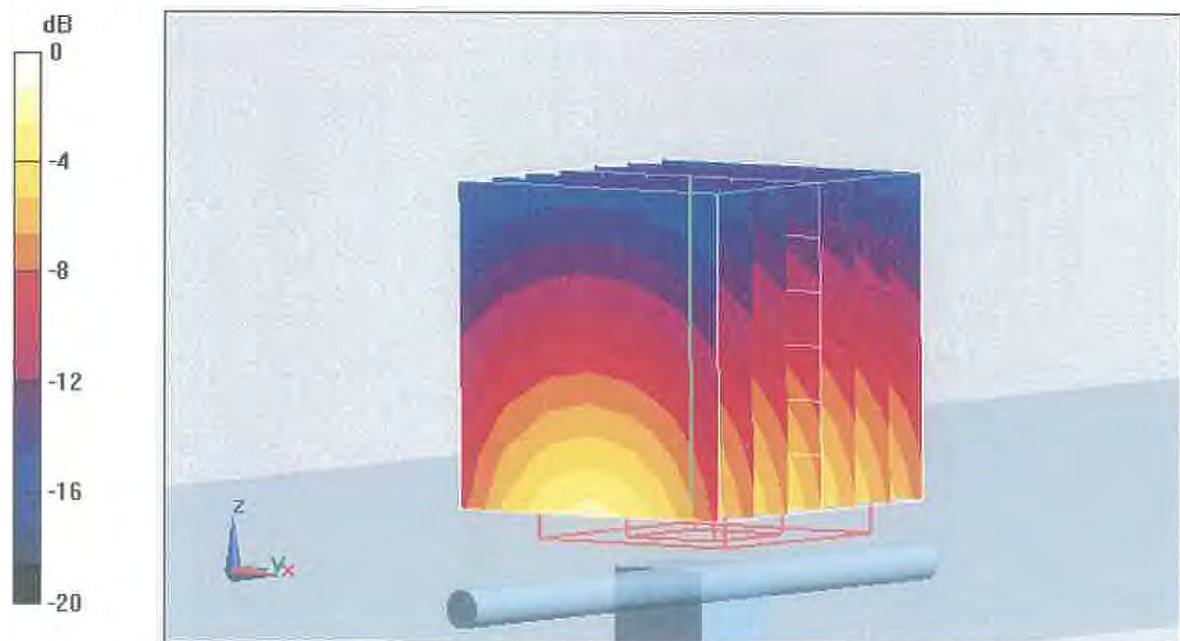
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.7 V/m; Power Drift = 0.00524 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.34 mW/g

Maximum value of SAR (measured) = 12.9 mW/g



0 dB = 12.9mW/g



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client

Nokia Beijing TCC

Certificate No: **D2450V2-751_Mar10**

CALIBRATION CERTIFICATE

Object

D2450V2 - SN: 751

Calibration procedure(s)

**QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date:

March 12, 2010

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV3	SN: 3205	26-Jun-09 (No. ES3-3205_Jun09)	Jun-10
DAE4	SN: 601	02-Mar-10 (No. DAE4-601_Mar10)	Mar-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

	Name	Function	Signature
Calibrated by:	Mike Meili	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued:

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DASY5 Validation Report for Head TSL

Date/Time: 12.03.2010 13:04:33

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:751

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

Medium: HSL U11 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.81$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Head/d=10mm, Pin=250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

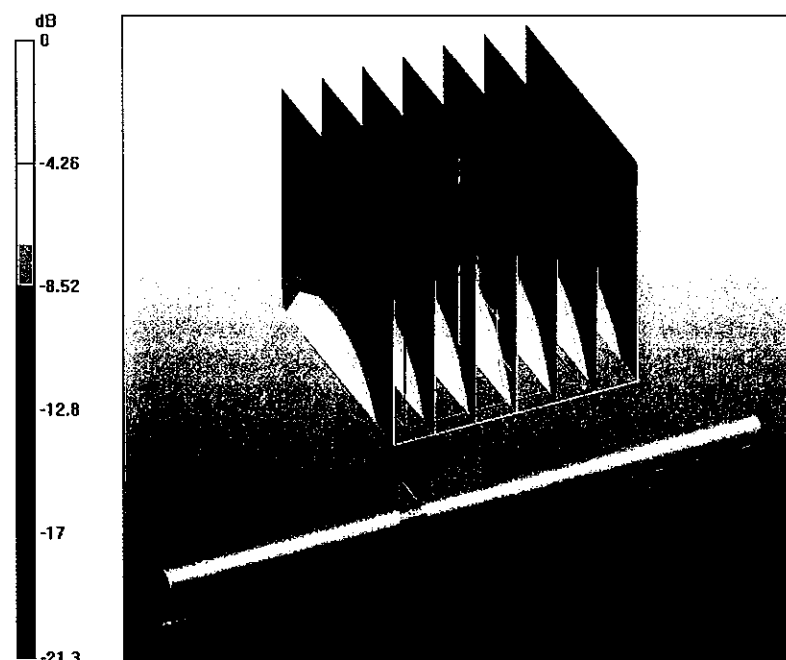
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.0 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 27.7 W/kg

SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.34 mW/g

Maximum value of SAR (measured) = 17.7 mW/g



0 dB = 17.7mW/g

DASY5 Validation Report for Body

Date/Time: 12.03.2010 15:04:27

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:751

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

Medium: MSL U10 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.01$ mho/m; $\epsilon_r = 54.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.31, 4.31, 4.31); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Body/d=10mm, Pin250 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

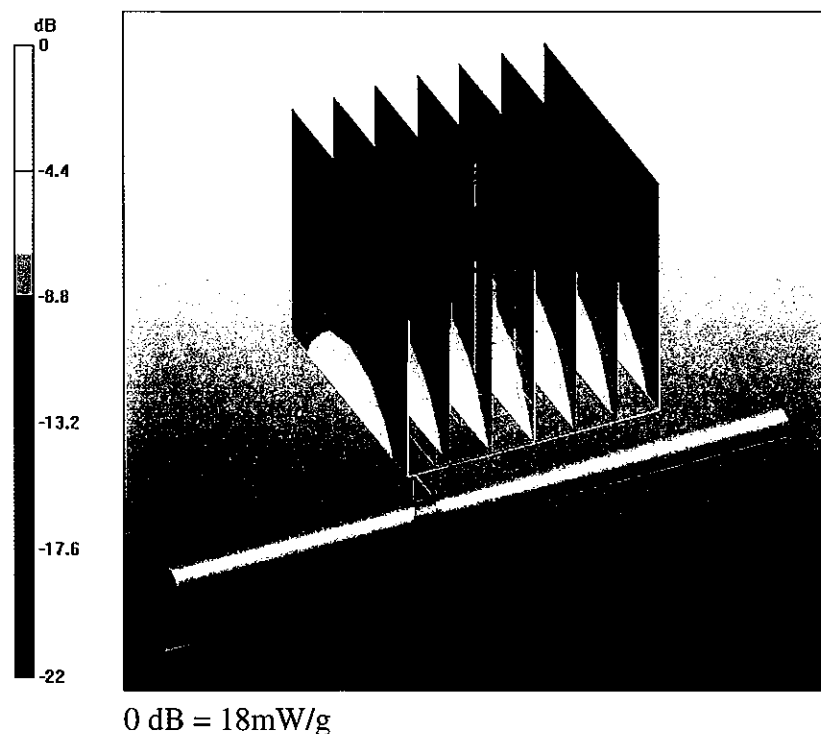
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97 V/m; Power Drift = -0.00803 dB

Peak SAR (extrapolated) = 28.3 W/kg

SAR(1 g) = 13.6 mW/g; SAR(10 g) = 6.31 mW/g

Maximum value of SAR (measured) = 18 mW/g





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Accreditation No.: **SCS 108**

Client **Nokia Beijing TCC**

Certificate No: **D2450V2-760_Mar11**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 760**

Calibration procedure(s) **QA CAL-05.v8
Calibration procedure for dipole validation kits**

Calibration date: **March 17, 2011**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	30-Mar-10 (No. 217-01158)	Mar-11
Type-N mismatch combination	SN: 5047.2 / 06327	30-Mar-10 (No. 217-01162)	Mar-11
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 17, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

DASY5 Validation Report for Head TSL

Date/Time: 17.03.2011 12:48:58

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:760

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

Medium: HSL U12 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.72$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

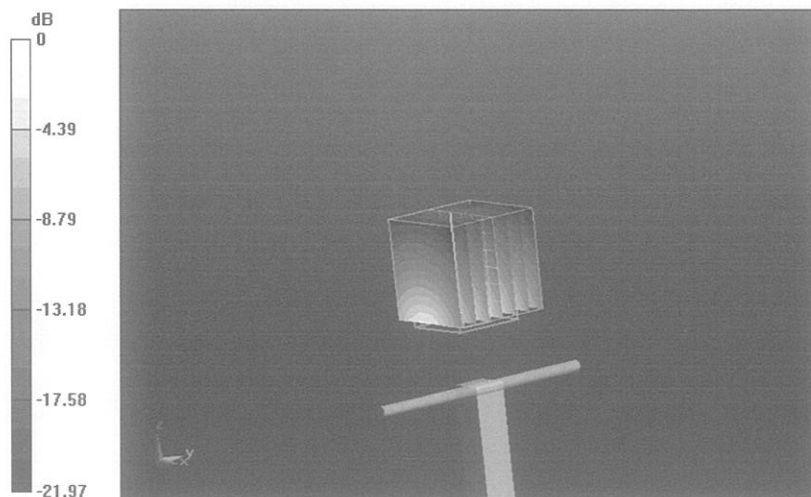
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.2 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 27.253 W/kg

SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.25 mW/g

Maximum value of SAR (measured) = 17.126 mW/g



0 dB = 17.130mW/g

DASY5 Validation Report for Body TSL

Date/Time: 08.03.2011 14:08:11

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:760

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

Medium: MSL U12 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.31, 4.31, 4.31); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

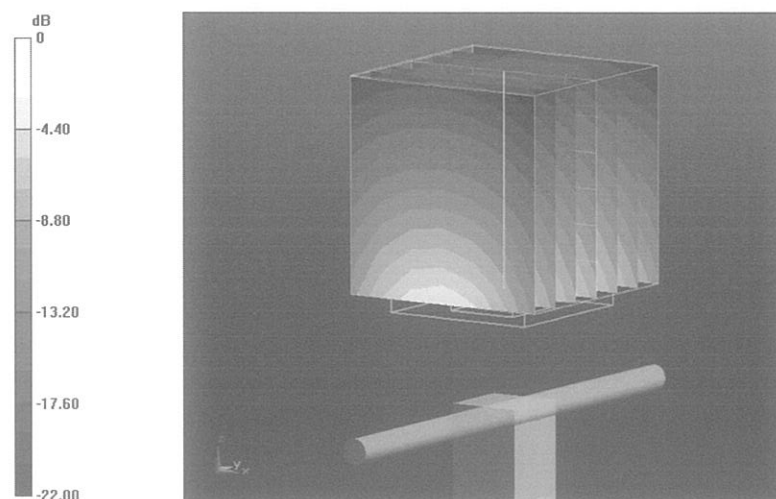
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.844 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 27.853 W/kg

SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.14 mW/g

Maximum value of SAR (measured) = 17.439 mW/g



0 dB = 17.440mW/g

APPENDIX E: WIRELESS ROUTER MODE EVALUATION

E.1 Body SAR assessment of Wireless Router mode at 10.0mm separation distance

850MHz Body SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS	Conducted Power	30.5 dBm	30.5 dBm	30.5 dBm
	Display facing phantom	-	-	-
	Back facing phantom	0.744	0.874	0.954
	Top edge facing phantom	-	0.032	-
	Bottom edge facing phantom	-	0.246	-
	Left edge facing phantom	-	0.412	-
	Right edge facing phantom	0.725	0.817	0.884

1900MHz Body SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM	Conducted Power	30.5 dBm	30.5 dBm	30.5 dBm
	Display facing phantom	-	-	-
	Back facing phantom	0.630	0.685	0.625
	Top edge facing phantom	-	0.037	-
	Bottom edge facing phantom	-	0.416	-
	Left edge facing phantom	-	0.314	-
	Right edge facing phantom	-	0.136	-

2450MHz Body SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode	Conducted Power	12.0 dBm	16.0 dBm	12.0 dBm
	Display facing phantom	-	-	-
	Back facing phantom	-	0.114	-
	Top edge facing phantom	0.042	0.124	0.046
	Bottom edge facing phantom	-	0.006	-
	Left edge facing phantom	-	0.042	-
	Right edge facing phantom	-	0.120	-

Simultaneous transmissions: Combined SAR results – Individual band Max results

Test configuration	Max. 1g SAR results		
	WLAN	2-slot GPRS850	GSM1900
Display facing phantom	-	-	-
Back facing phantom	0.114	0.954	0.685
Top edge facing phantom	0.124	0.032	0.037
Bottom edge facing phantom	0.006	0.246	0.416
Left edge facing phantom	0.042	0.412	0.314
Right edge facing phantom	0.120	0.884	0.136

Simultaneous transmissions: Combined SAR results – Max + Max combined results

Test configuration	Max. 1g SAR results	
	2-slot GPRS850 + WLAN	GSM1900 + WLAN
Display facing phantom	-	-
Back facing phantom	1.068	0.799
Top edge facing phantom	0.156	0.161
Bottom edge facing phantom	0.252	0.422
Left edge facing phantom	0.454	0.356
Right edge facing phantom	1.004	0.256

The following table gives a more accurate assessment of the SAR values for simultaneous transmission. These values have been calculated using the SPEAG Combined Multiband algorithm, which is based on area scans. It a) converts the 2D area scans into 3D volume scans by assuming frequency-dependent decay characteristics for the E-field, b) sums the SAR values for WLAN2450 and the cellular bands point-by-point and c) calculates the combined average SAR values. It is these values that appear in the Summary table in Appendix E.2.”

**Simultaneous transmissions: Combined SAR results –
SPEAG Combined Multiband algorithm results**

Test configuration	Max. 1g SAR results	
	2-slot GPRS850 + WLAN	GSM1900 + WLAN
Display facing phantom	-	-
Back facing phantom	0.975	0.739
Top edge facing phantom	-	-
Bottom edge facing phantom	-	-
Left edge facing phantom	-	-
Right edge facing phantom	-	-

Note: Simultaneous Transmission Procedures as described in KDB648474 are not required for this product. The Combined SAR data given in the tables above has been voluntarily calculated.

E.2 Summary of Maximum Results for Wireless Router mode at 10.0mm

Mode	Ch / f (MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	SAR limit (1g avg)	Result
2-slot GPRS850	251 / 848.8	30.5 dBm	10.0mm	0.954 W/kg	1.6 W/kg	PASSED
GSM1900	661 / 1880.0	30.5 dBm	10.0mm	0.685 W/kg	1.6 W/kg	PASSED
WLAN2450	7 / 2442.0	16.0 dBm	10.0mm	0.124 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	10.0mm	0.975 W/kg	1.6 W/kg	PASSED
GSM1900 + WLAN2450	-	-	10.0mm	0.739 W/kg	1.6 W/kg	PASSED

E.3 SAR plots corresponding to the Wireless Router mode results given above

Date/Time: 2011-04-26 11:17:53

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 835; Medium Notes: Medium Temperature: t= 21.3 C

Medium parameters used: f = 849 MHz; σ = 0.99 mho/m; ϵ_r = 54.1; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - Spacer 10mm - Back facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.01 mW/g

Body - High - Spacer 10mm - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.6 V/m

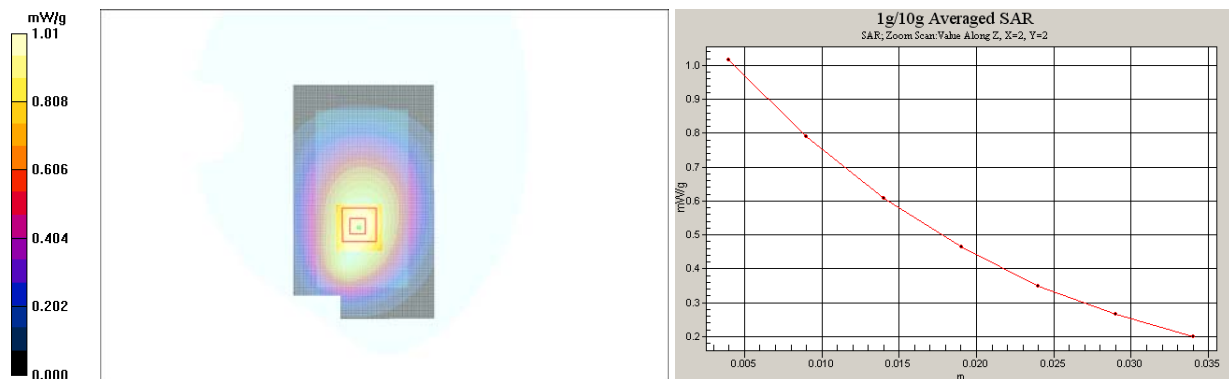
Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.954 mW/g

SAR(10 g) = 0.713 mW/g

Power Drift = -0.033 dB

Maximum value of SAR (measured) = 1.01 mW/g



Date/Time: 2011-04-26 12:50:02

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 835; Medium Notes: Medium Temperature: $t = 21.3$ C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.977$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Top Edge facing phantom/Area Scan (31x61x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

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

Body - Middle - Spacer 10mm - Top Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 4.43 V/m

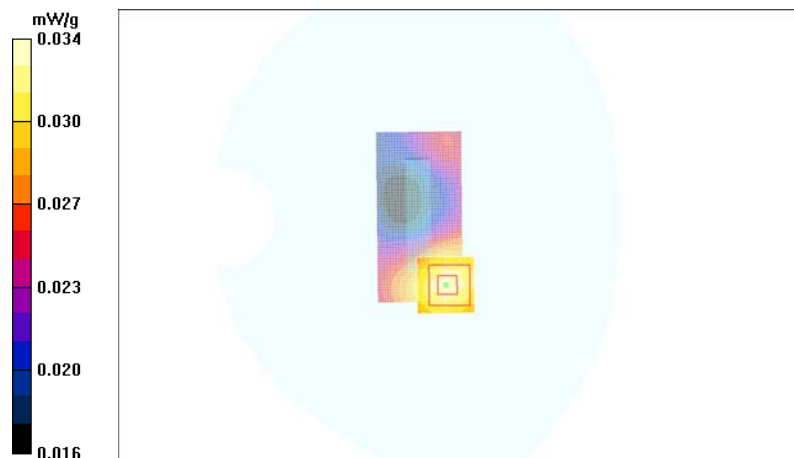
Peak SAR (extrapolated) = 0.040 W/kg

SAR(1 g) = 0.032 mW/g

SAR(10 g) = 0.024 mW/g

Power Drift = 0.005 dB

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



Date/Time: 2011-04-26 12:40:32

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 835; Medium Notes: Medium Temperature: $t = 21.3\text{ C}$

Medium parameters used: $f = 837\text{ MHz}$; $\sigma = 0.977\text{ mho/m}$; $\epsilon_r = 54.2$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Area Scan (31x61x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.280 mW/g

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

$dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.5 V/m

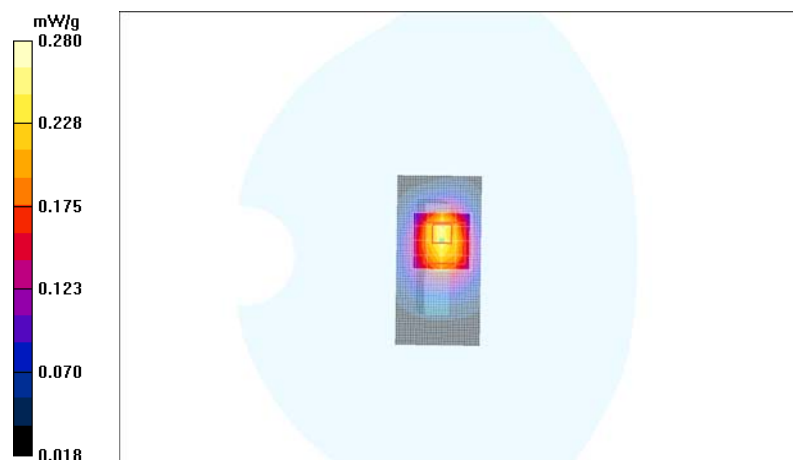
Peak SAR (extrapolated) = 0.482 W/kg

SAR(1 g) = 0.246 mW/g

SAR(10 g) = 0.142 mW/g

Power Drift = -0.022 dB

Maximum value of SAR (measured) = 0.267 mW/g



Date/Time: 2011-04-26 12:28:45

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.2

Medium: Body 835; Medium Notes: Medium Temperature: $t = 21.3$ C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.977$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Left Edge facing phantom/Area Scan (31x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.444 mW/g

Body - Middle - Spacer 10mm - Left Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.7 V/m

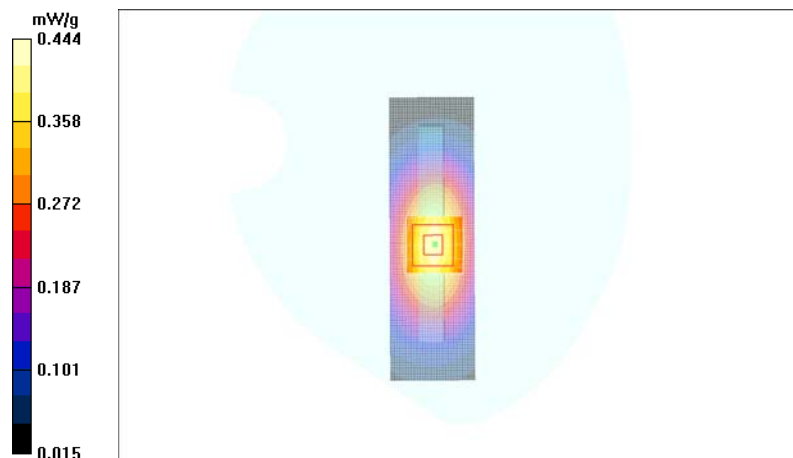
Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.412 mW/g

SAR(10 g) = 0.283 mW/g

Power Drift = -0.133 dB

Maximum value of SAR (measured) = 0.442 mW/g



Date/Time: 2011-04-26 11:51:22

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 835; Medium Notes: Medium Temperature: $t = 21.3\text{ C}$

Medium parameters used: $f = 849\text{ MHz}$; $\sigma = 0.99\text{ mho/m}$; $\epsilon_r = 54.1$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.9, 5.9, 5.9); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM2; Type: SAM; Serial: TP - 1508
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - Spacer 10mm - Right Edge facing phantom/Area Scan (31x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.946 mW/g

Body - High - Spacer 10mm - Right Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.4 V/m

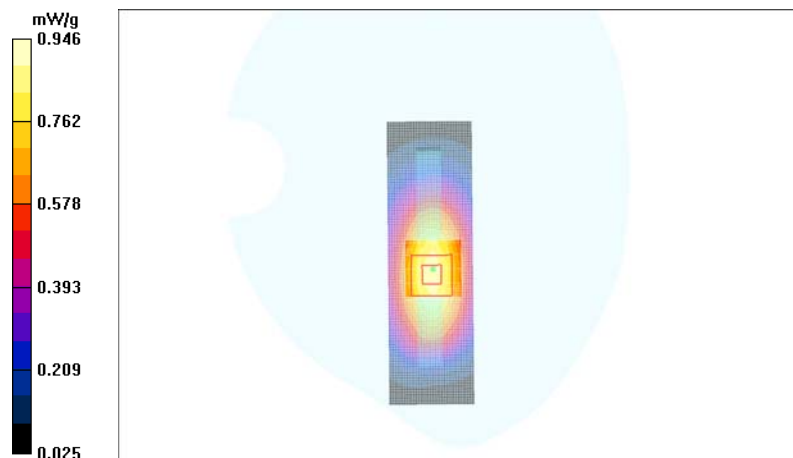
Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.884 mW/g

SAR(10 g) = 0.606 mW/g

Power Drift = 0.022 dB

Maximum value of SAR (measured) = 0.949 mW/g



Date/Time: 2011-04-25 10:37:59

Test Laboratory: TCC Nokia
Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.4C

Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ϵ_r = 52.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Back facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.799 mW/g

Body - Middle - Spacer 10mm - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 12.5 V/m

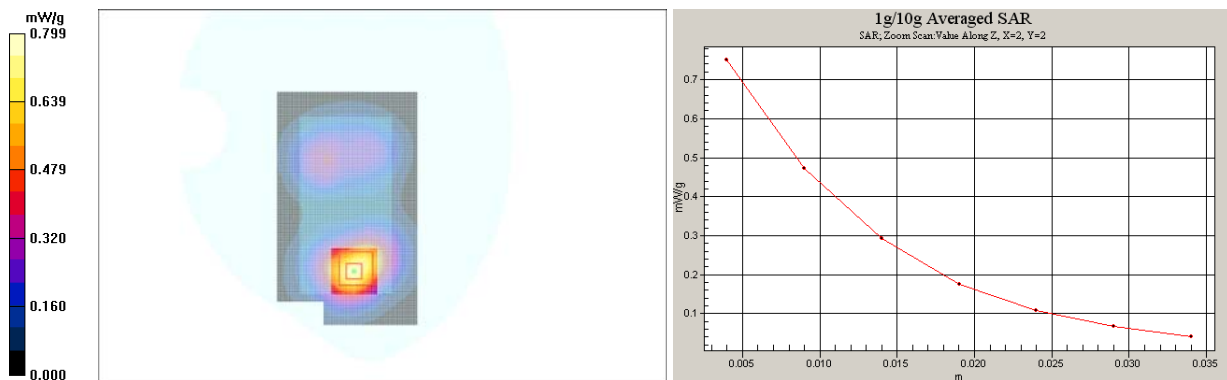
Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.685 mW/g

SAR(10 g) = 0.414 mW/g

Power Drift = -0.012 dB

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



Date/Time: 2011-04-25 11:20:42

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.4C

Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ϵ_r = 52.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Top Edge facing phantom/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.039 mW/g

Body - Middle - Spacer 10mm - Top Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 3.98 V/m

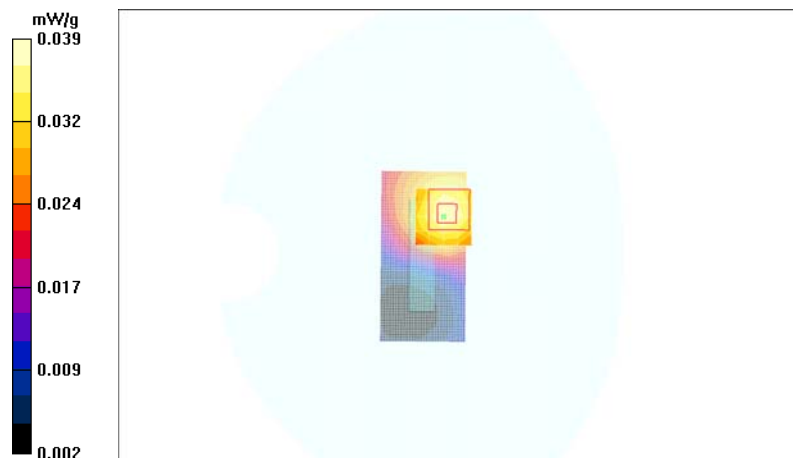
Peak SAR (extrapolated) = 0.052 W/kg

SAR(1 g) = 0.037 mW/g

SAR(10 g) = 0.024 mW/g

Power Drift = 0.038 dB

Maximum value of SAR (measured) = 0.040 mW/g



Date/Time: 2011-04-25 11:31:37

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.4C

Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ϵ_r = 52.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Area Scan (31x61x1): Measurement grid:

dx=15mm, dy=15mm

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

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 17.9 V/m

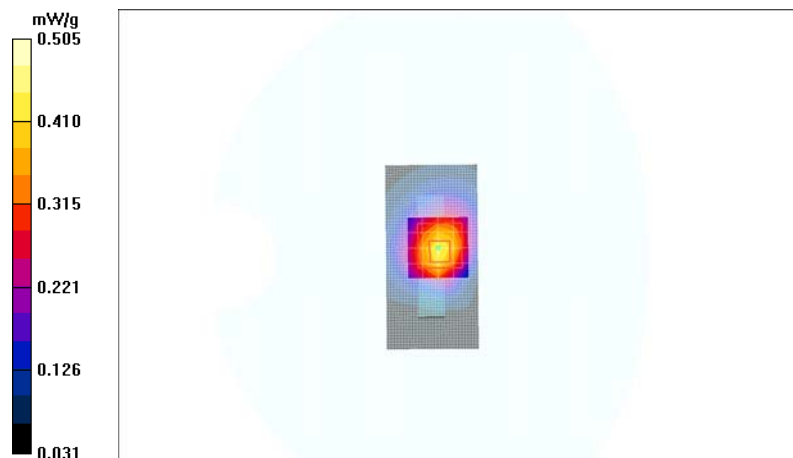
Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.416 mW/g

SAR(10 g) = 0.236 mW/g

Power Drift = 0.079 dB

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



Date/Time: 2011-04-25 11:06:30

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.4C

Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ϵ_r = 52.5; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Left Edge facing phantom/Area Scan (31x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.352 mW/g

Body - Middle - Spacer 10mm - Left Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.5 V/m

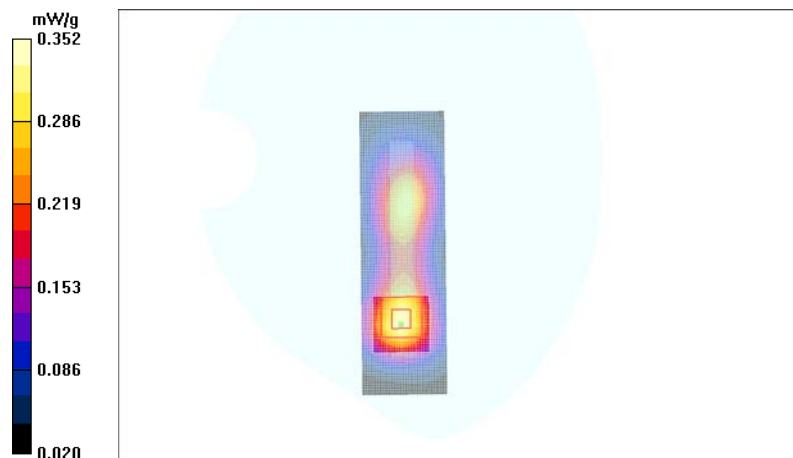
Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.314 mW/g

SAR(10 g) = 0.189 mW/g

Power Drift = 0.018 dB

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



Date/Time: 2011-04-25 10:54:28

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.4C

Medium parameters used: f = 1880 MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(4.33, 4.33, 4.33); Calibrated: 2010-10-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2010-10-25
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Right Edge facing phantom/Area Scan (31x101x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.159 mW/g

Body - Middle - Spacer 10mm - Right Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.62 V/m

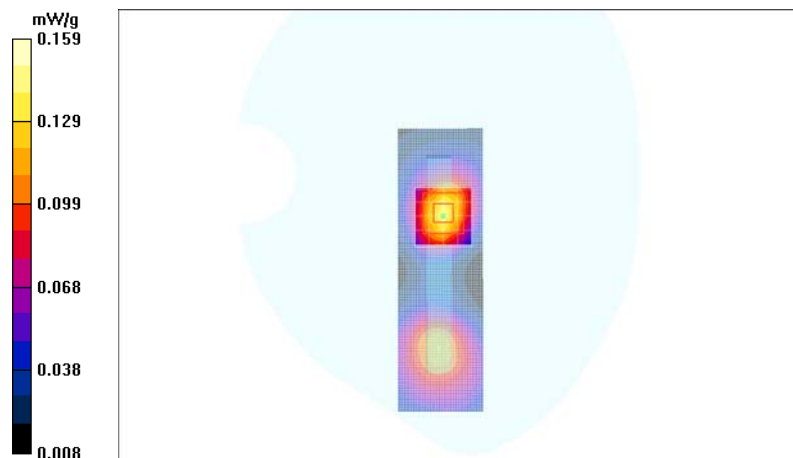
Peak SAR (extrapolated) = 0.205 W/kg

SAR(1 g) = 0.136 mW/g

SAR(10 g) = 0.081 mW/g

Power Drift = 0.020 dB

Maximum value of SAR (measured) = 0.149 mW/g



Date/Time: 2011-04-28 11:20:55

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Back facing phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - Spacer 10mm - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.07 V/m

Peak SAR (extrapolated) = 0.207 W/kg

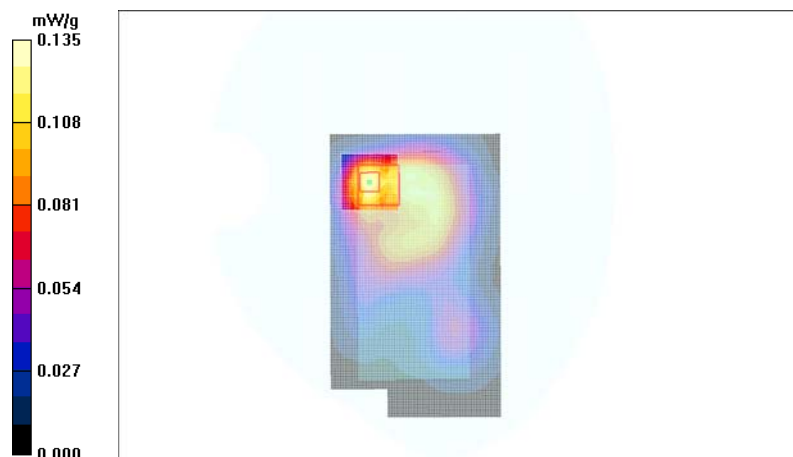
SAR(1 g) = 0.114 mW/g

SAR(10 g) = 0.063 mW/g

Power Drift = -0.138 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) = 0.127 mW/g



Date/Time: 2011-04-28 13:18:03

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Top Edge facing phantom/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.141 mW/g

Body - Middle - Spacer 10mm - Top Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.23 V/m

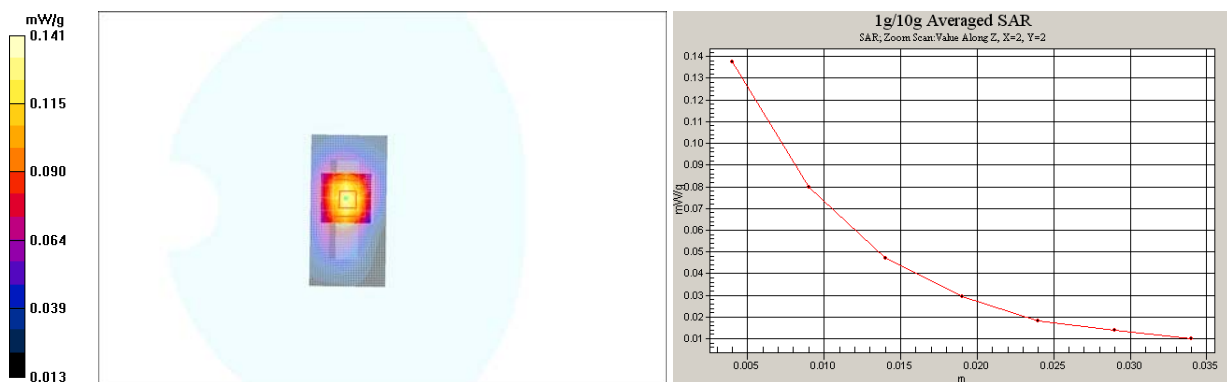
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.124 mW/g

SAR(10 g) = 0.070 mW/g

Power Drift = 0.119 dB

Maximum value of SAR (measured) = 0.137 mW/g



Date/Time: 2011-04-28 13:05:17

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Area Scan (31x61x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.006 mW/g

Body - Middle - Spacer 10mm - Bottom Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 1.88 V/m

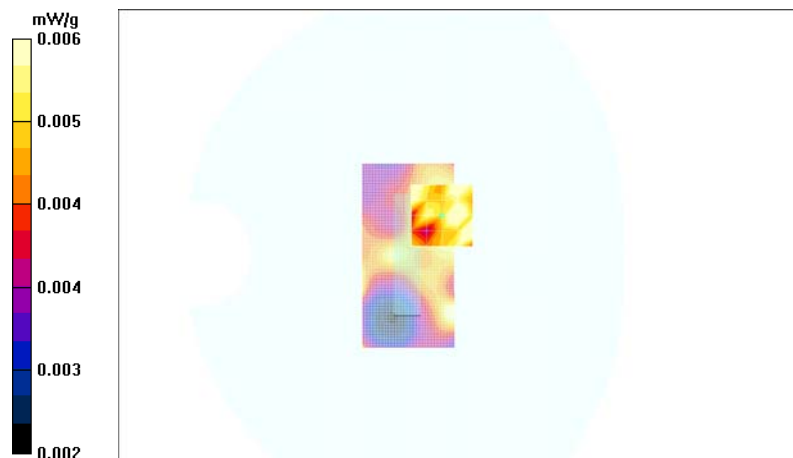
Peak SAR (extrapolated) = 0.012 W/kg

SAR(1 g) = 0.00602 mW/g

SAR(10 g) = 0.0054 mW/g

Power Drift = 0.472 dB

Maximum value of SAR (measured) = 0.008 mW/g



Date/Time: 2011-04-28 12:50:30

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Left Edge facing phantom/Area Scan (31x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - Middle - Spacer 10mm - Left Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.16 V/m

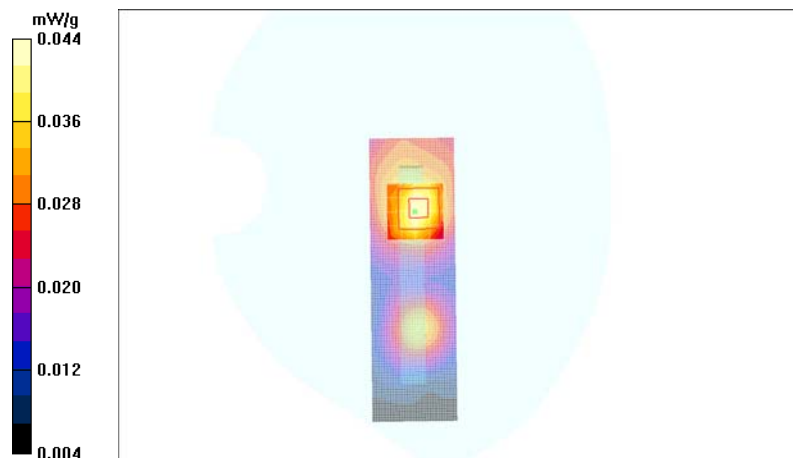
Peak SAR (extrapolated) = 0.067 W/kg

SAR(1 g) = 0.042 mW/g

SAR(10 g) = 0.026 mW/g

Power Drift = 0.433 dB

Maximum value of SAR (measured) = 0.046 mW/g



Date/Time: 2011-04-28 11:46:05

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Body 2450; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 2442 MHz; σ = 1.92 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3574; Probe Notes:
- ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM6; Type: SAM; Serial: TP - 1426
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - Spacer 10mm - Right Edge facing phantom/Area Scan (31x101x1): Measurement grid:

dx=15mm, dy=15mm

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

Body - Middle - Spacer 10mm - Right Edge facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.82 V/m

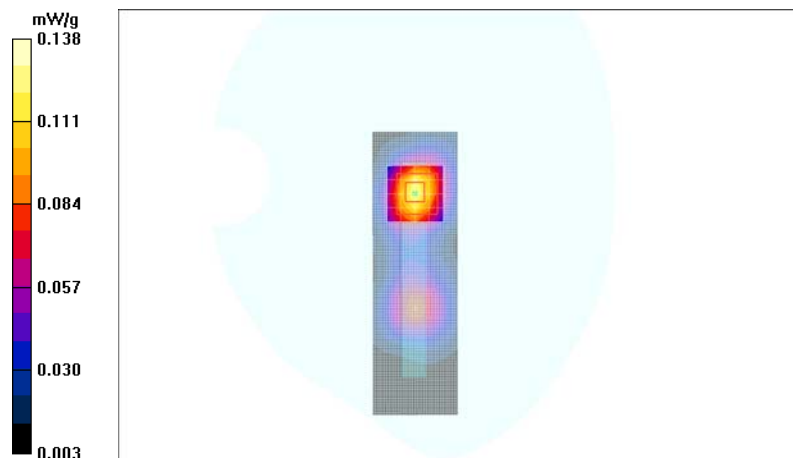
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.120 mW/g

SAR(10 g) = 0.064 mW/g

Power Drift = -0.002 dB

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



Date/Time: 2011-04-26 11:17:53 AM, Date/Time: 2011-04-28 11:20:55 AM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: 2-slot GPRS850, Communication System: WLAN2450 b-mode

Frequency: 848.8 MHz, Frequency: 2442 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: Body 835, Medium: Body 2450; Medium Notes: Medium Temperature: $t = 21.3$ C, Medium Notes: Medium Temperature: $t = 21.8$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 2442$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

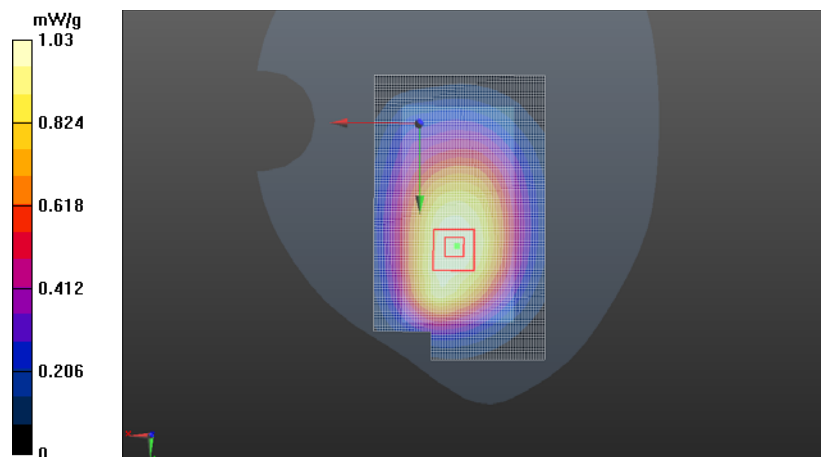
- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(5.9, 5.9, 5.9), ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM2, Phantom: SAM6; Type: SAM; Serial: TP - 1508, Serial: TP - 1426
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/Body - High - Spacer 10mm - Back facing phantom/Area Scan (7x11x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Configuration/Body - Middle - Spacer 10mm - Back facing phantom/Area Scan (7x11x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.975 mW/g
SAR(10 g) = 0.696 mW/g

Maximum value of SAR (measured) = 1.03 mW/g



Date/Time: 2011-04-25 10:37:59 AM, Date/Time: 2011-04-28 11:20:55 AM

Test Laboratory: TCC Nokia

Type: RM-679; Serial: 008600/08/005367/0

Communication System: GSM1900, Communication System: WLAN2450 b-mode

Frequency: 1880 MHz, Frequency: 2442 MHz; Duty Cycle: 1:8.3, Duty Cycle: 1:1

Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: t=21.4C, Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³, Medium parameters used: f = 2442 MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1652, Probe: EX3DV4 - SN3574
- ConvF(4.33, 4.33, 4.33), ConvF(6.45, 6.45, 6.45); Calibrated: 2010-10-21, Calibrated: 2010-10-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480, Electronics: DAE4 Sn860; Calibrated: 2010-10-25
- Phantom: SAM3, Phantom: SAM6; Type: SAM; Serial: TP-1427, Serial: TP - 1426
- ; Postprocessing SW: SEMCAD X, V14.2 Build 2Version 14.2.2 (1685) (Deployment Build)

Configuration/Body - Middle - Spacer 10mm - Back facing phantom/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.739 mW/g
SAR(10 g) = 0.424 mW/g

Maximum value of SAR (measured) = 0.826 mW/g

