TCC
Nokia

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Finnish Accreditation Service
T117 (EN ISO/IEC 17025)

SAR Compliance Test Report

Test report no.:	FCC_RM-697_10	**Date of report:**	2011-05-24
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Tested device:	RM-697		
FCC ID:	QTKRM-697	**IC:**	-
Supplement reports:	SAR_Photo_RM-697_11, FCC_RM-697_02		

Testing has been carried out in accordance with:

47CFR §2.1093
Radiofrequency Radiation Exposure Evaluation: Portable Devices

FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)
Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

RSS-102
Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields

IEEE 1528 - 2003
IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique

Documentation: The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.

Test results: **The tested device complies with the requirements in respect of all parameters subject to the test.** The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.

Date and signatures:

For the contents:

Leif Funch Klysner
Test System Manager

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2011-04-26 to 2011-05-23
SN, HW and SW numbers of tested device	SN: 357022/04/775109/7, HW: 9024, SW: V12.0.023, DUT: 23690
Batteries used in testing	BL-4U, DUT: 23987, 23981, 24083, 14984
Headsets used in testing	-
Other accessories used in testing	-
State of sample	Prototype unit
Notes	-

1.2 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration are given in section 1.2.1 and 1.2.2 respectively. The device conforms to the requirements of the standard(s) when the maximum measured SAR value is less than or equal to the limit.

1.2.1 Head Configuration

Mode	Ch / *f* (MHz)	Conducted power	Position	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
2-slot GPRS850	251 / 848.8	30.0 dBm	Right, Cheek	0.524W/kg	**0.59 W/kg**	1.6 W/kg	PASSED
3-slot GPRS1900	512 / 1850.2	24.4 dBm	Left, Cheek	1.07W/kg	**1.20 W/kg**	1.6 W/kg	PASSED
WCDMA 1900	9262 / 1852.4	19.7 dBm	Left, Cheek	1.22 W/kg	**1.37 W/kg**	1.6 W/kg	PASSED
WLAN2450**	11 / 2462.0	16.0dBm	Left, Cheek	0.226 W/kg	**0.25 W/kg**	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	Right, Cheek	0.556 W/kg	**0.62 W/kg**	1.6 W/kg	PASSED
3-slot GPRS1900 + WLAN2450	-	-	Left, Cheek	1.13 W/kg	**1.27 W/kg**	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	Left, Cheek	1.25 W/kg	**1.40 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	30.0 dBm	1.5 cm	0.652 W/kg	**0.73 W/kg**	1.6 W/kg	**PASSED**
3-slot GPRS1900	810 / 1909.8	24.4 dBm	1.5 cm	0.455 W/kg	**0.51 W/kg**	1.6 W/kg	**PASSED**
WCDMA1900	9538 / 1907.6	19.7 dBm	1.5 cm	0.474 W/kg	**0.53 W/kg**	1.6 W/kg	**PASSED**
WLAN2450**	11 / 2462.0	16.0 dBm	1.5 cm	0.076 W/kg	**0.09 W/kg**	1.6 W/kg	**PASSED**
2-slot GPRS850 + WLAN2450	-	-	1.5 cm	0.688 W/kg	**0.77 W/kg**	1.6 W/kg	**PASSED**
3-slot GPRS1900 + WLAN2450	-	-	1.5 cm	0.460 W/kg	**0.52 W/kg**	1.6 W/kg	**PASSED**
WCDMA1900 + WLAN2450	-	-	1.5 cm	0.482 W/kg	**0.54 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.
** SAR values taken from FCC_RM-697_02.

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.43 dB

1.2.4 Measurement Uncertainty

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

2. DESCRIPTION OF THE DEVICE UNDER TEST

Device category	Portable
Exposure environment	General population / uncontrolled

Modes of Operation	Bands	Modulation Mode	Duty Cycle	Transmitter Frequency Range (MHz)
GSM	850 1900	GMSK	1/8	824 – 849 1850 – 1910
GPRS	850 1900	GMSK	1/8 to 3/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 3/8	824 – 849 1850 – 1910
WCDMA	1900 (Band II)		1	1852 – 1908
HSUPA	1900 (Band II)		1	1852 – 1908
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

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900, GSM/GPRS/EGPRS1800, WCDMA900 and WCDMA2100 bands which are not part of this filing.

This device has Wireless Router “Hotspot” mode capability.

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 %):	35 - 55

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester. Communication between the device and the call tester was established by air link.

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

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

In all operating bands the measurements were performed on lowest, middle and highest channels.

The radiated output power of the device was measured by a separate test laboratory on the same unit(s) as used for SAR testing. The results are given in the EMC report supporting this application.

The number of test cases reported in this document has been minimised based on the earlier testing in FCC_RM-697_02. Some of the results presented in this report have been taken from the same earlier 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
DAE4	682	12 months	2011-07
DAE 4	501	12 months	2012-02
DAE4	710	12 months	2011-09
E-field Probe EX3DV4	3581	12 months	2011-07
E-field Probe ES3DV3	3116	12 months	2012-02
E-field Probe ES3DV3	3117	12 months	2011-07
Dipole Validation Kit, D835V2	4d042	24 months	2012-07
Dipole Validation Kit, D1900V2	5d063	24 months	2012-02
DASY4 software	Version 4.7	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SME06	848650/011	36 months	2011-08
Signal Generator	SMIQ03	826046/034	36 months	2011-08
Amplifier	ZHL-42W	E012903	-	-
Amplifier	ZHL-4240W	E060204/1	-	-
Power Meter	NRP	100808	24 months	2012-04
Power Meter	NRVD	833696/030	24 months	2013-03
Power Sensor	NRP-Z51	100410	24 months	2012-04
Power Sensor	NRV-Z51	100184	24 months	2013-03
Call Tester	CMU200	105900	-	-
Call Tester	CMU200	831593	-	-
Vector Network Analyzer	AT8753ES	MY40001091	12 months	2011-08
Dielectric Probe Kit	HP85070B	US33020403	-	-

4.1.1 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 µW/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

4.1.2 Isotropic E-field Probe Type ES3DV3

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

4.2 Phantoms

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

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

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

4.3 Tissue Simulants

Recommended values for the dielectric parameters of the tissue simulants are given in IEEE 1528 - 2003 and FCC Supplement C to OET Bulletin 65. All tests were carried out using simulants whose dielectric parameters were within ± 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

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]	
	Reference result	2.38	42.1	0.90	
	± 10% window	2.14 - 2.62			
835	2011-04-26	2.55	41.0	0.90	21.2
	Reference result	9.98	39.2	1.42	
	± 10% window	8.89 - 10.98			
1900	2011-04-26	10.5	38.2	1.46	20.7
	2011-05-02	10.8	38.1	1.49	21.0
	2011-05-23	10.4	39.0	1.45	21.1

System checking, body tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ε_r	σ [S/m]	
	Reference result	2.56	55.0	1.01	
	± 10% window	2.30 - 2.82			
835	2011-05-17	2.40	53.1	0.96	22.3
	Reference result	12.9	51.8	2.01	
	± 10% window	11.6 – 14.2			
2450	2011-05-18	13.5	50.2	1.95	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]	
	Recommended value	41.5	0.90	
	± 5% window	39.4 – 43.6	0.86 – 0.95	
836	2011-04-26	40.9	0.90	21.2
	Recommended value	40.0	1.40	
	± 5% window	38.0 – 42.0	1.33 – 1.47	
1880	2011-04-26	38.3	1.44	20.7

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ε_r	σ [S/m]	
	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
836	2011-04-26	54.2	0.97	21.3
	2011-05-17	53.1	0.96	22.3
	Recommended value	53.3	1.52	
	± 5% window	50.6 – 56.0	1.44 – 1.60	
1880	2011-05-02	50.9	1.58	21.0
	2011-05-23	51.1	1.56	21.5
	Recommended value	52.7	1.94	
	± 5% window	50.1 – 55.3	1.85 – 2.04	
2442	2011-05-18	50.2	1.95	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” position 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.

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

5.2.2.1 Wireless Router Configuration

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

7. RESULTS

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

850 MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS	Conducted Power		30.0 dBm	30.0 dBm	30.0 dBm
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	0.355	0.432	**0.524**
		Tilt	-	-	-

1900 MHz 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
3-slot GPRS	Conducted Power		24.4 dBm	24.4 dBm	24.4 dBm
	Left	Cheek	**1.07**	1.06	1.05
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Conducted Power		19.7 dBm	19.7 dBm	19.7 dBm
	Left	Cheek	**1.22**	1.18	1.21
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-

2450 MHz 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**		**16.0 dBm**	**16.0 dBm**	**16.0 dBm**
	Left	Cheek	0.198	0.213	**0.226**
		Tilt	-	0.202	-
	Right	Cheek	-	0.192	-
		Tilt	-	0.200	-

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

850 MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS		Conducted Power	30.0 dBm	30.0 dBm	30.0 dBm
	Display facing phantom	Without headset	-	-	-
		With headset	-	-	-
	Back facing phantom	Without headset	0.380	0.492	**0.652**
		With headset	-	-	-

1900 MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
3-slot GPRS		Conducted Power	24.4 dBm	24.4 dBm	24.4 dBm
	Display facing phantom	Without headset	-	-	-
		With headset	-	-	-
	Back facing phantom	Without headset	0.390	0.417	**0.455**
		With headset	-	-	-
Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA		Conducted Power	19.7 dBm	19.7 dBm	19.7 dBm
	Display facing phantom	Without headset	-	-	-
		With headset	-	-	-
	Back facing phantom	Without headset	0.411	0.433	**0.474**
		With headset	-	-	-

2450 MHz Body SAR results**

Mode	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**	**16.0 dBm**	**16.0 dBm**	**16.0 dBm**
	Display facing phantom	Without headset	-	0.057	-
		Headset HS-125	-	0.052	-
	Back facing phantom	Without headset	0.068	0.076	**0.076**
		Headset HS-125	-	0.070	-

** SAR results taken from FCC_RM-697_02.

Simultaneous transmissions: Combined SAR results – Individual band Max results

Test configuration	Max. 1g SAR results			
	WLAN**	2-slot GPRS850	3-slot GPRS1900	WCDMA1900
Head: Left, Cheek	**0.226**	-	**1.07**	**1.22**
Head: Left, Tilt	0.202	-	-	-
Head: Right, Cheek	0.192	**0.524**	-	-
Head: Right, Tilt	0.200	-	-	-
Body: Display facing phantom, Without Headset	0.057	-	-	-
Body: Display facing phantom, Headset WH-102	0.052	-	-	-
Body: Back facing phantom, Without Headset	**0.076**	**0.652**	**0.455**	**0.474**
Body: Back facing phantom, Headset WH-102	0.070	-	-	-

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

Test configuration	Combined 1g SAR values		
	2-slot GPRS850 + WLAN2450	3-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Head: Left, Cheek	-	**1.296**	**1.446**
Head: Left, Tilt	-	-	-
Head: Right, Cheek	**0.716**	-	-
Head: Right, Tilt	-	-	-
Body: Display facing phantom, Without Headset	-	-	-
Body: Display facing phantom, Headset WH-102	-	-	-
Body: Back facing phantom, Without Headset	**0.728**	**0.531**	**0.550**
Body: Back facing phantom, Headset WH-102	-	-	-

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	Combined 1g SAR values		
	2-slot GPRS850 + WLAN2450	3-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Head: Left, Cheek	-	**1.13**	**1.25**
Head: Left, Tilt	-	**-**	**-**
Head: Right, Cheek	**0.556**	-	-
Head: Right, Tilt	-	-	-
Body: Display facing phantom, Without Headset	-	-	-
Body: Display facing phantom, Headset HS-125	-	-	-
Body: Back facing phantom, Without Headset	**0.688**	**0.460**	**0.482**
Body: Back facing phantom, Headset HS-125	**-**	-	-

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

See the following pages.

Date/Time: 2011-04-26 09:39:12

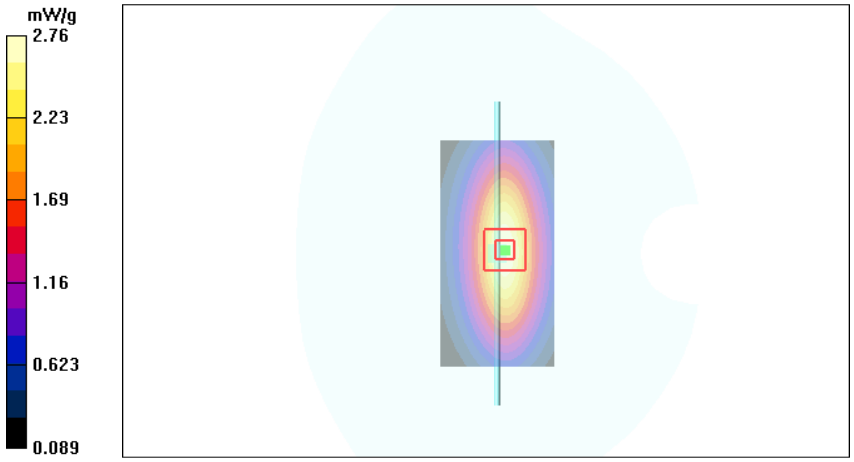
Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: Head 850; Medium Notes: Medium Temperature: 21.2 C
Medium parameters used: f = 835 MHz; σ = 0.897 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.44, 8.44, 8.44); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.76 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.7 V/m
Peak SAR (extrapolated) = 3.86 W/kg
SAR(1 g) = 2.55 mW/g
SAR(10 g) = 1.66 mW/g
Power Drift = -0.126 dB
Maximum value of SAR (measured) = 2.75 mW/g



Date/Time: 2011-04-26 10:43:51

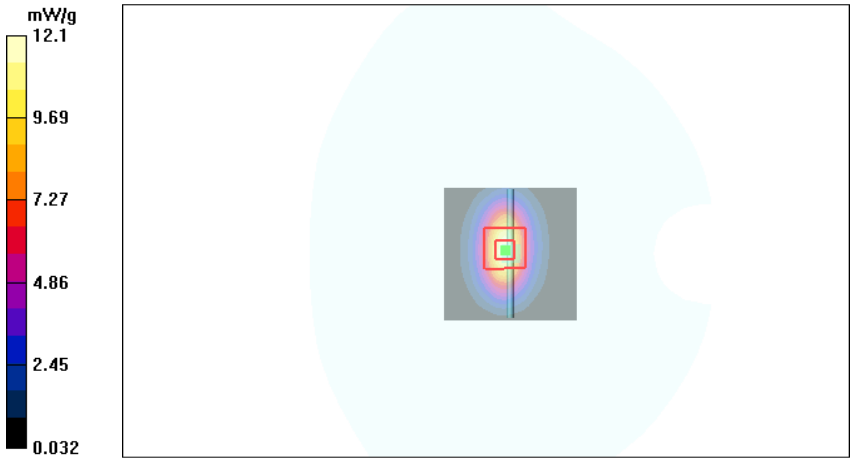
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 20.7 C
Medium parameters used: f = 1900 MHz; σ = 1.46 mho/m; ε_r = 38.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.71, 4.71, 4.71); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; 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) = 12.1 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.4 V/m
Peak SAR (extrapolated) = 19.5 W/kg
SAR(1 g) = 10.5 mW/g
SAR(10 g) = 5.39 mW/g
Power Drift = -0.107 dB
Maximum value of SAR (measured) = 11.9 mW/g



Date/Time: 2011-05-02 12:28:11

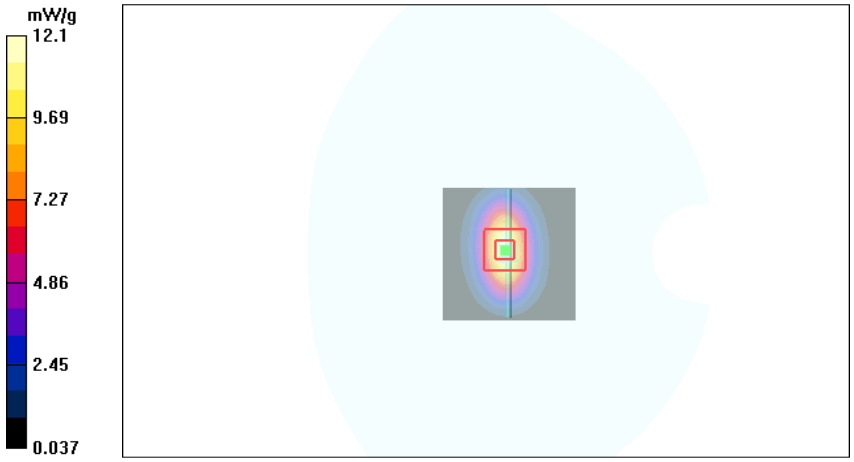
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 21.0 C
Medium parameters used: f = 1900 MHz; σ = 1.49 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.71, 4.71, 4.71); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; 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) = 12.1 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.6 V/m
Peak SAR (extrapolated) = 20.3 W/kg
SAR(1 g) = 10.8 mW/g
SAR(10 g) = 5.57 mW/g
Power Drift = -0.026 dB
Maximum value of SAR (measured) = 12.3 mW/g



Date/Time: 2011-05-23 11:44:30

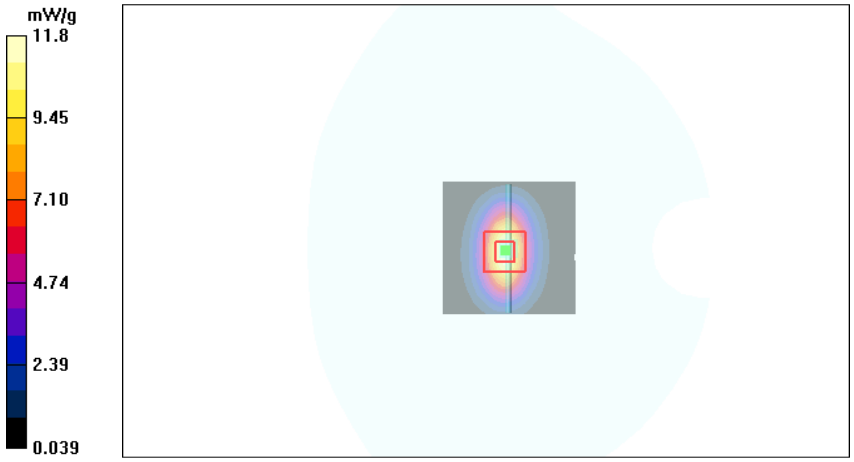
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 21.1 C
Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 39; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.71, 4.71, 4.71); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; 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) = 11.8 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.1 V/m
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 10.4 mW/g
SAR(10 g) = 5.35 mW/g
Power Drift = -0.027 dB
Maximum value of SAR (measured) = 11.6 mW/g



Date/Time: 2011-05-17 14:24:17

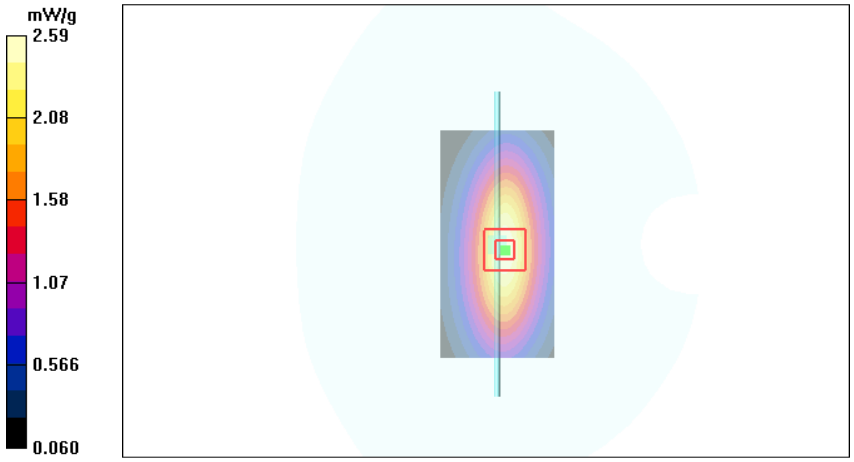
Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: Body 850; Medium Notes: Medium Temperature: 22.3 C
Medium parameters used: f = 835 MHz; σ = 0.964 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.59 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.6 V/m
Peak SAR (extrapolated) = 3.56 W/kg
SAR(1 g) = 2.4 mW/g
SAR(10 g) = 1.59 mW/g
Power Drift = 0.001 dB
Maximum value of SAR (measured) = 2.59 mW/g



Date/Time: 2011-05-18 13:52:52

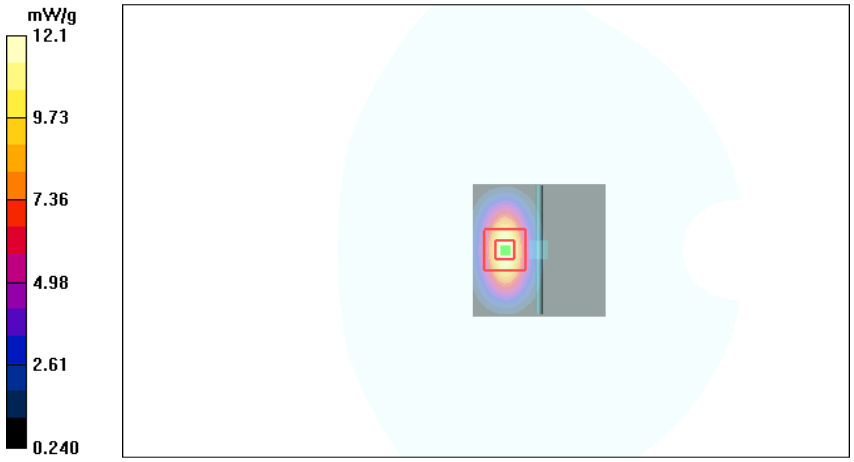
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C
Medium parameters used: f = 1900 MHz; σ = 1.59 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; 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) = 12.0 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.6 V/m
Peak SAR (extrapolated) = 18.9 W/kg
SAR(1 g) = 10.6 mW/g
SAR(10 g) = 5.54 mW/g
Power Drift = 0.045 dB
Maximum value of SAR (measured) = 12.1 mW/g



APPENDIX B: MEASUREMENT SCANS

See the following pages.

Date/Time: 2011-04-26 10:51:08

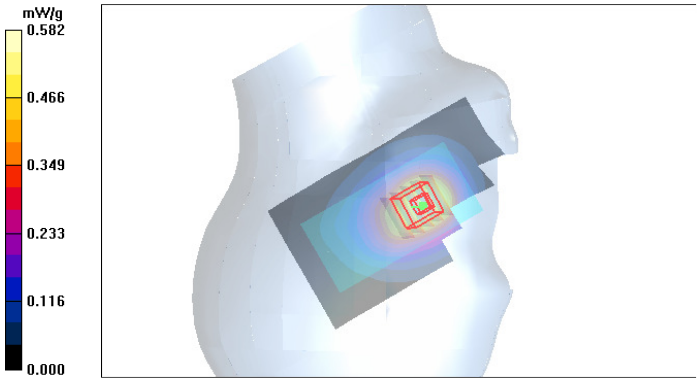
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

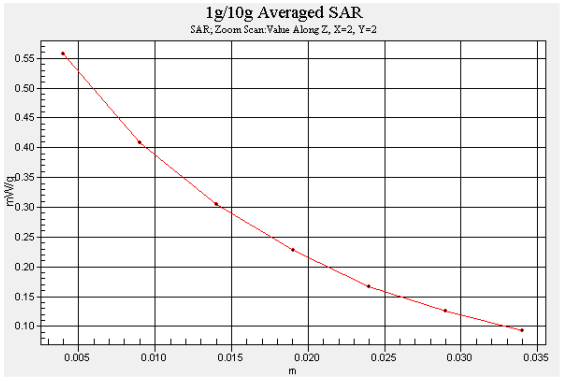
Communication System: 2-slot GPRS850
Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium: Head 850; Medium Notes: Medium Temperature: 21.2 C
Medium parameters used: f = 849 MHz; σ = 0.912 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.44, 8.44, 8.44); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.582 mW/g

Cheek - High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.01 V/m
Peak SAR (extrapolated) = 0.718 W/kg
SAR(1 g) = 0.524 mW/g
SAR(10 g) = 0.362 mW/g
Power Drift = -0.113 dB
Maximum value of SAR (measured) = 0.557 mW/g





Date/Time: 2011-04-26 12:13:29

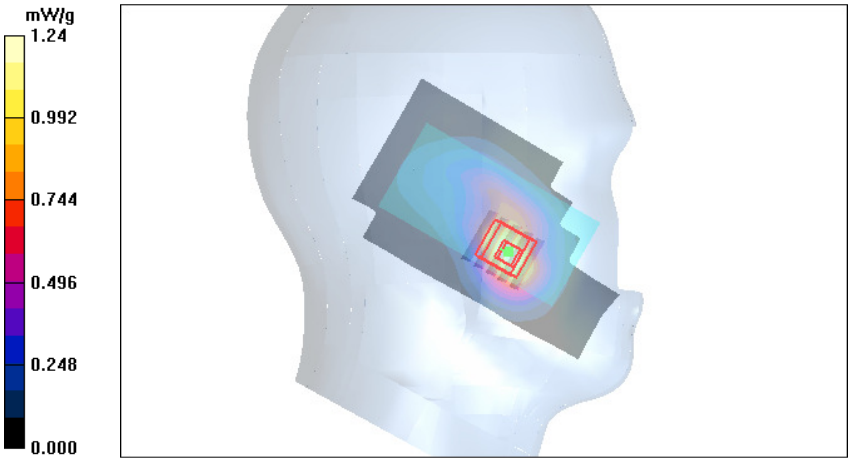
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1850.2 MHz; Duty Cycle: 1:2.8
Medium: Head 1900; Medium Notes: Medium Temperature: 20.7 C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.71, 4.71, 4.71); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.24 mW/g

Cheek - Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.3 V/m
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 1.07 mW/g
SAR(10 g) = 0.595 mW/g
Power Drift = -0.197 dB
Maximum value of SAR (measured) = 1.23 mW/g



Date/Time: 2011-04-26 13:33:19

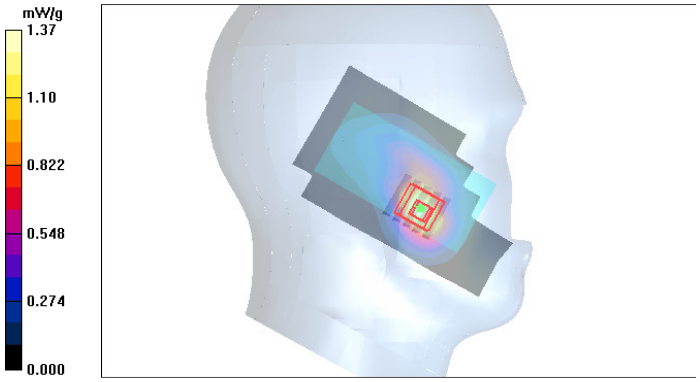
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

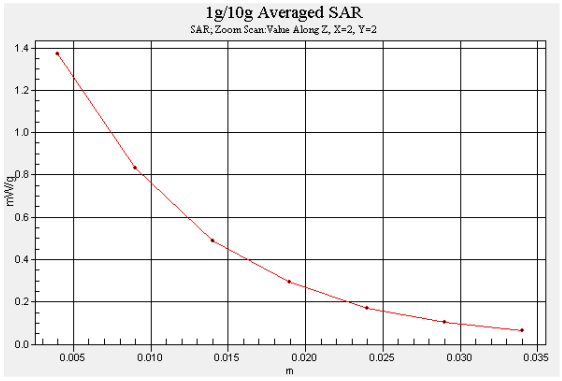
Communication System: WCDMA1900
Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 20.7 C
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.41 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.71, 4.71, 4.71); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.37 mW/g

Cheek - Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.4 V/m
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.22 mW/g
SAR(10 g) = 0.669 mW/g
Power Drift = -0.031 dB
Maximum value of SAR (measured) = 1.37 mW/g





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

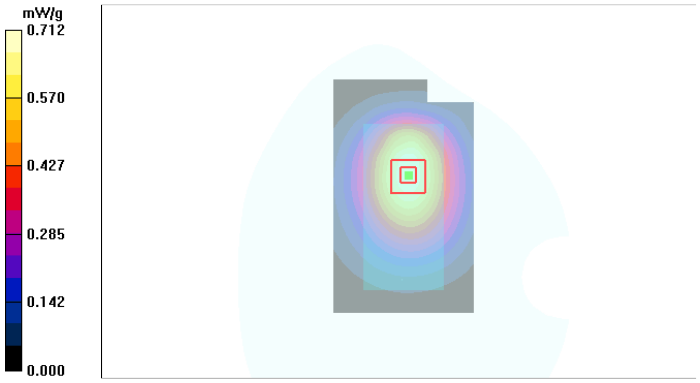
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

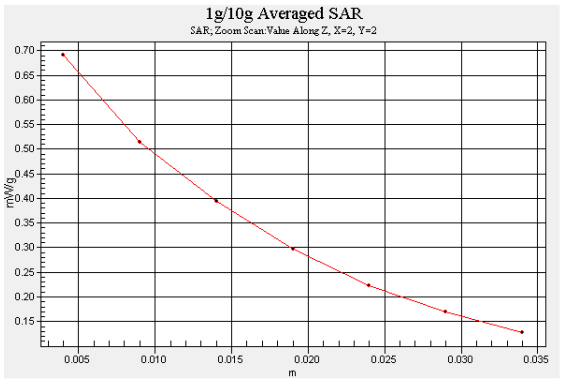
Communication System: 2-slot GPRS850
Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 849 MHz; σ = 0.983 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.712 mW/g

Body - High - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.61 V/m
Peak SAR (extrapolated) = 0.881 W/kg
SAR(1 g) = 0.652 mW/g
SAR(10 g) = 0.471 mW/g
Power Drift = 0.144 dB
Maximum value of SAR (measured) = 0.691 mW/g





Date/Time: 2011-05-02 13:07:15

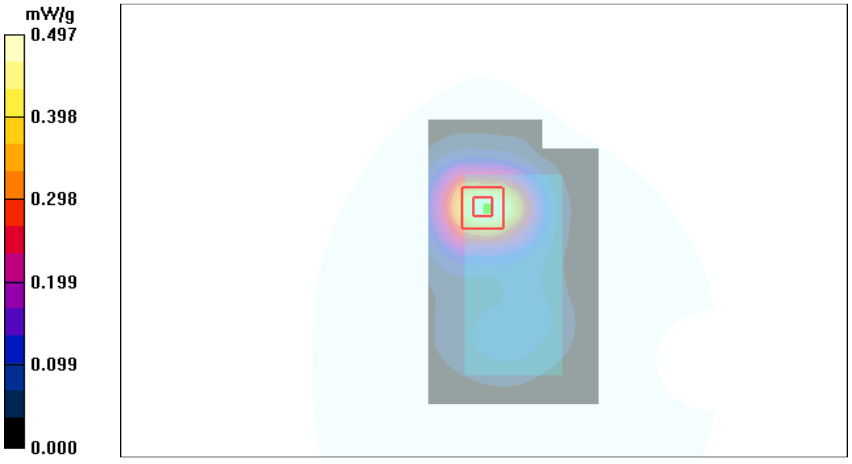
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1909.8 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1910 MHz; σ = 1.61 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.497 mW/g

Body - High - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.86 V/m
Peak SAR (extrapolated) = 0.752 W/kg
SAR(1 g) = 0.455 mW/g
SAR(10 g) = 0.266 mW/g
Power Drift = -0.026 dB
Maximum value of SAR (measured) = 0.495 mW/g



Date/Time: 2011-05-02 15:02:17

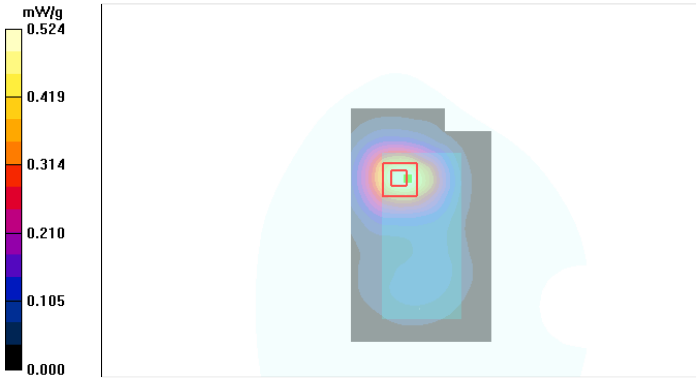
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

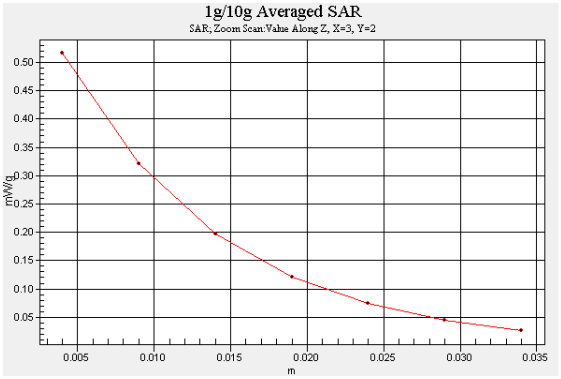
Communication System: WCDMA1900
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1908 MHz; σ = 1.61 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.524 mW/g

Body - High - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.73 V/m
Peak SAR (extrapolated) = 0.767 W/kg
SAR(1 g) = 0.474 mW/g
SAR(10 g) = 0.279 mW/g
Power Drift = 0.024 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) = 0.516 mW/g





Date/Time: 2011-04-26 10:51:08, Date/Time: 2010-09-23 12:58:58

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

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 850, Medium: Head 2450; Medium Notes: Medium Temperature: 21.2 C, Medium Notes: Medium Temperature: 21.7C

Medium parameters used: f = 849 MHz; σ = 0.912 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3 , Medium parameters used: f = 2442 MHz; σ = 1.84 mho/m; ε_r = 38; ρ = 1000 kg/m^3

Phantom section: Right Section

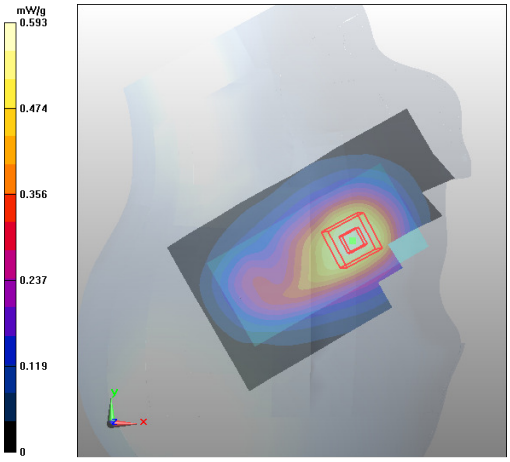
DASY4 Configuration:
- Probe: EX3DV4 - SN3581, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(8.44, 8.44, 8.44), ConvF(4.36, 4.36, 4.36); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682, Electronics: DAE3 Sn501; Calibrated: 2010-07-16, Calibrated: 2010-02-19
- Phantom: SAM 3, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1302, Serial: TP-1408
- ; SEMCAD X Version 14.0 Build 61

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

Configuration/Cheek - Middle 2/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.556 mW/g
SAR(10 g) = 0.378 mW/g

Maximum value of SAR (measured) = 0.593 mW/g



Date/Time: 2011-04-26 12:13:29, Date/Time: 2010-09-23 13:43:17

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

Communication System: 3-slot GPRS1900, Communication System: WLAN2450 b-mode

Frequency: 1850.2 MHz, Frequency: 2462 MHz; Duty Cycle: 1:2.8, Duty Cycle: 1:1
Medium: Head 1900, Medium: Head 2450; Medium Notes: Medium Temperature: 20.7 C, Medium Notes: Medium Temperature: 21.7C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.41 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.87 mho/m; ε_r = 37.9; ρ = 1000 kg/m^3
Phantom section: Left Section

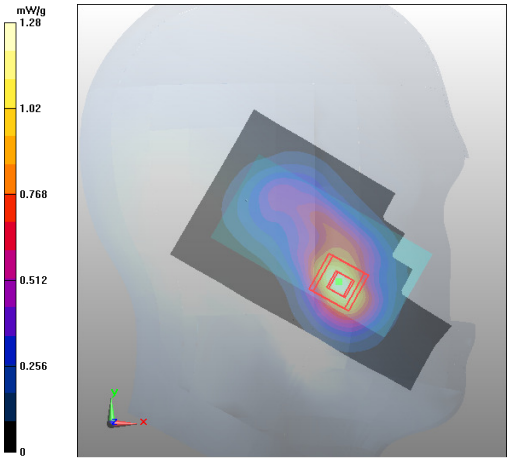
DASY4 Configuration:
- Probe: ES3DV3 - SN3117, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.71, 4.71, 4.71), ConvF(4.36, 4.36, 4.36); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501, Electronics: DAE3 Sn501; Calibrated: 2011-02-18, Calibrated: 2010-02-19
- Phantom: SAM 4.5, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1215, Serial: TP-1408
- ; SEMCAD X Version 14.0 Build 61

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

Configuration/Cheek - High1/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 1.13 mW/g
SAR(10 g) = 0.627 mW/g

Maximum value of SAR (measured) = 1.28 mW/g



Date/Time: 2011-04-26 13:33:19, Date/Time: 2010-09-23 12:24:40

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

Communication System: WCDMA1900, Communication System: WLAN2450 b-mode

Frequency: 1852.4 MHz, Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: Head 1900, Medium: Head 2450; Medium Notes: Medium Temperature: 20.7 C, Medium Notes: Medium Temperature: 21.7C

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.41 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3 , Medium parameters used: f = 2442 MHz; σ = 1.84 mho/m; ε_r = 38; ρ = 1000 kg/m^3

Phantom section: Left Section

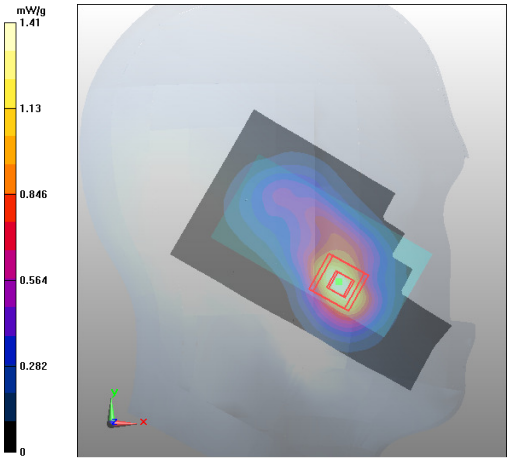
DASY4 Configuration:
- Probe: ES3DV3 - SN3117, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.71, 4.71, 4.71), ConvF(4.36, 4.36, 4.36); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn501, Electronics: DAE3 Sn501; Calibrated: 2011-02-18, Calibrated: 2010-02-19
- Phantom: SAM 4.5, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1215, Serial: TP-1408
- ; SEMCAD X Version 14.0 Build 61

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

Configuration/Cheek - Middle 2/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 1.25 mW/g
SAR(10 g) = 0.692 mW/g

Maximum value of SAR (measured) = 1.41 mW/g



Date/Time: 2011-04-26 11:11:53, Date/Time: 2010-09-23 18:41:44

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

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

Frequency: 848.8 MHz, Frequency: 2462 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: Body 850, Medium: Body 2450; Medium Notes: Medium Temperature: 21.3 C, Medium Notes: Medium Temperature: 21.8 C

Medium parameters used: f = 849 MHz; σ = 0.983 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3

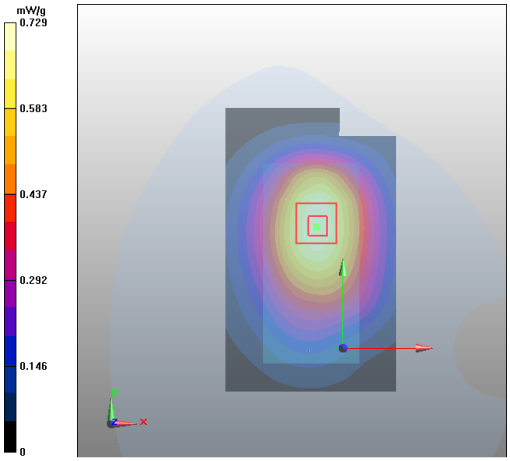
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(8.61, 8.61, 8.61), ConvF(4.12, 4.12, 4.12); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682, Electronics: DAE3 Sn501; Calibrated: 2010-07-16, Calibrated: 2010-02-19
- Phantom: SAM 2, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1037, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.688 mW/g
SAR(10 g) = 0.481 mW/g

Maximum value of SAR (measured) = 0.729 mW/g



Date/Time: 2011-05-02 13:07:15, Date/Time: 2010-09-23 18:41:44

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

Communication System: 3-slot GPRS1900, Communication System: WLAN2450 b-mode

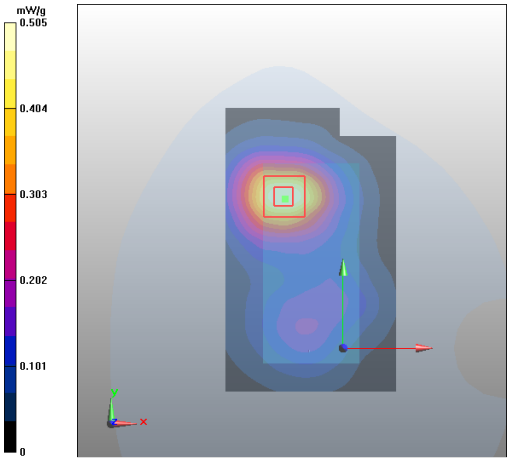
Frequency: 1909.8 MHz, Frequency: 2462 MHz; Duty Cycle: 1:2.8, Duty Cycle: 1:1
Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 21.7 C, Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 1910 MHz; σ = 1.61 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.46, 4.46, 4.46), ConvF(4.12, 4.12, 4.12); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn501, Electronics: DAE3 Sn501; Calibrated: 2011-02-18, Calibrated: 2010-02-19
- Phantom: SAM 5, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1302, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.460 mW/g
SAR(10 g) = 0.266 mW/g

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



Date/Time: 2011-05-02 15:02:17, Date/Time: 2010-09-23 18:41:44

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7, Serial: 004402/13/108348/1

Communication System: WCDMA1900, Communication System: WLAN2450 b-mode

Frequency: 1907.6 MHz, Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 21.7 C, Medium Notes: Medium Temperature: 21.8 C

Medium parameters used: f = 1908 MHz; σ = 1.61 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3

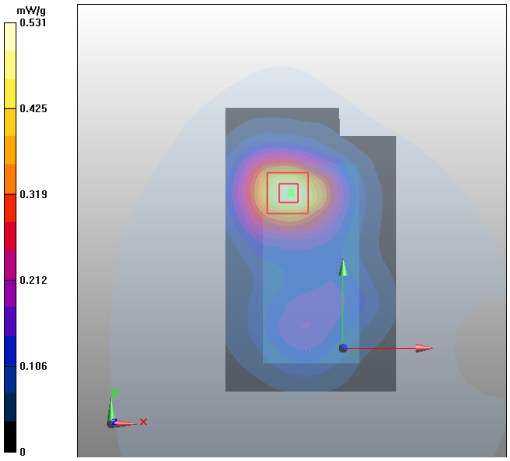
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117, Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.46, 4.46, 4.46), ConvF(4.12, 4.12, 4.12); Calibrated: 2010-07-19, Calibrated: 2010-02-24
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn501, Electronics: DAE3 Sn501; Calibrated: 2011-02-18, Calibrated: 2010-02-19
- Phantom: SAM 5, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1302, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.482 mW/g
SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.531 mW/g



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

See the following pages.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

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 Denmark A/S**

Certificate No: ES3-3116_Feb10

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3116

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: February 24, 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-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

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-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 24, 2010

DASY - Parameters of Probe: ES3DV3 SN:3116

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%	5.94	5.94	5.94	0.83	1.07 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.05	5.05	5.05	0.45	1.55 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.90	4.90	4.90	0.33	1.91 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.36	4.36	4.36	0.41	1.86 ± 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 - Parameters of Probe: ES3DV3 SN:3116

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%	5.84	5.84	5.84	0.72	1.23	± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.82	4.82	4.82	0.45	1.75	± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.58	4.58	4.58	0.33	2.40	± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.12	4.12	4.12	0.82	1.17	± 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.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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S Swiss Calibration Service

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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 Denmark A/S

Certificate No: ES3-3117_Jul10

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3117

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: July 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-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 19, 2010

DASY/EASY - Parameters of Probe: ES3DV3 SN:3117

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%	5.69	5.69	5.69	0.77	1.13 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	4.94	4.94	4.94	0.45	1.56 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.71	4.71	4.71	0.42	1.65 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.22	4.22	4.22	0.46	1.64 ± 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: ES3DV3 SN:3117

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%	5.70	5.70	5.70	0.91	1.12 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.68	4.68	4.68	0.42	1.74 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.46	4.46	4.46	0.35	2.10 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.12	4.12	4.12	0.70	1.31 ± 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.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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S Servizio svizzero di taratura
S Swiss Calibration Service

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 Denmark A/S

Certificate No: EX3-3581_Jul10

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3581

Calibration procedure(s): QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: July 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-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: July 20, 2010

DASY/EASY - Parameters of Probe: EX3DV4 SN:3581

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%	8.44	8.44	8.44	0.72	0.65	± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	7.42	7.42	7.42	0.96	0.54	± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.08	7.08	7.08	0.99	0.52	± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	6.51	6.51	6.51	0.69	0.62	± 11.0%
2600	± 50 / ± 100	39.0 ± 5%	1.96 ± 5%	6.48	6.48	6.48	0.48	0.73	± 11.0%
5200	± 50 / ± 100	36.0 ± 5%	4.66 ± 5%	4.54	4.54	4.54	0.32	1.80	± 13.1%
5500	± 50 / ± 100	35.6 ± 5%	4.96 ± 5%	3.90	3.90	3.90	0.45	1.80	± 13.1%
5800	± 50 / ± 100	35.3 ± 5%	5.27 ± 5%	3.75	3.75	3.75	0.50	1.80	± 13.1%

[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:3581

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%	8.61	8.61	8.61	0.67	0.68 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	7.12	7.12	7.12	0.96	0.56 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	6.86	6.86	6.86	0.89	0.57 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	6.81	6.81	6.81	0.45	0.75 ± 11.0%
2600	± 50 / ± 100	52.5 ± 5%	2.16 ± 5%	6.76	6.76	6.76	0.36	0.85 ± 11.0%
5200	± 50 / ± 100	49.0 ± 5%	5.30 ± 5%	3.84	3.84	3.84	0.50	1.90 ± 13.1%
5500	± 50 / ± 100	48.6 ± 5%	5.65 ± 5%	3.40	3.40	3.40	0.60	1.90 ± 13.1%
5800	± 50 / ± 100	48.2 ± 5%	6.00 ± 5%	3.45	3.45	3.45	0.60	1.90 ± 13.1%

[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.

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

See the following pages.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
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S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
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Accreditation No.: SCS 108

Client **Nokia Denmark A/S**

Certificate No: D835V2-4d042_Jul10

CALIBRATION CERTIFICATE

Object: D835V2 - SN: 4d042

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

Calibration date: July 20, 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 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)	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-09)	In house check: Oct-10

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

Issued: July 20, 2010

DASY5 Validation Report for Head TSL

Date/Time: 12.07.2010 10:35:49

Test Laboratory: SPEAG, Zurich, Switzerland

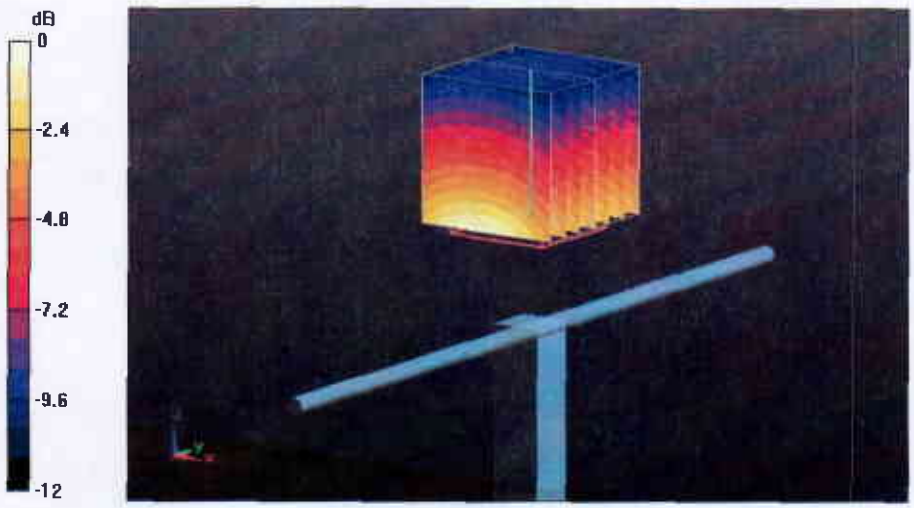
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d042

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL900
Medium parameters used: f = 835 MHz; σ = 0.9 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.03, 6.03, 6.03); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 3.56 W/kg
SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.55 mW/g
Maximum value of SAR (measured) = 2.76 mW/g



0 dB = 2.76mW/g

DASY5 Validation Report for Body

Date/Time: 20.07.2010 11:38:55

Test Laboratory: SPEAG, Zurich, Switzerland

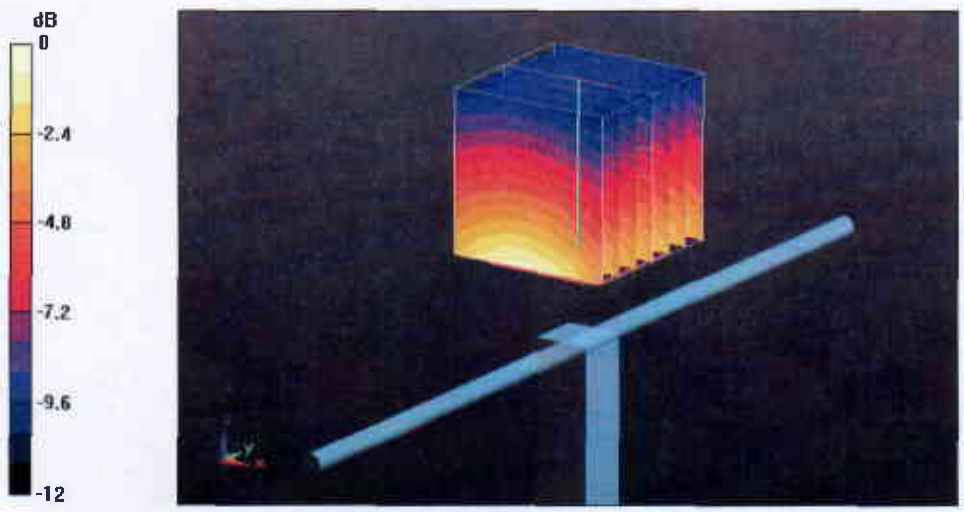
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d042

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL900
Medium parameters used: f = 835 MHz; σ = 1.01 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.2 Build 0, Version 52.2.0 (163)
- Postprocessing SW: SEMCAD X, V14.2 Build 2, Version 14.2.2 (1685)

Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.1 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 3.78 W/kg
SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.68 mW/g
Maximum value of SAR (measured) = 2.97 mW/g



0 dB = 2.97mW/g

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accreditation No.: SCS 108

Client **Nokia Denmark A/S**

Certificate No: D1900V2-5d063_Feb10

CALIBRATION CERTIFICATE

Object	D1900V2 - SN: 5d063
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits
Calibration date:	February 23, 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 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	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-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:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 25, 2010

DASY5 Validation Report for Head TSL

Date/Time: 23.02.2010 13:21:31

Test Laboratory: SPEAG, Zurich, Switzerland

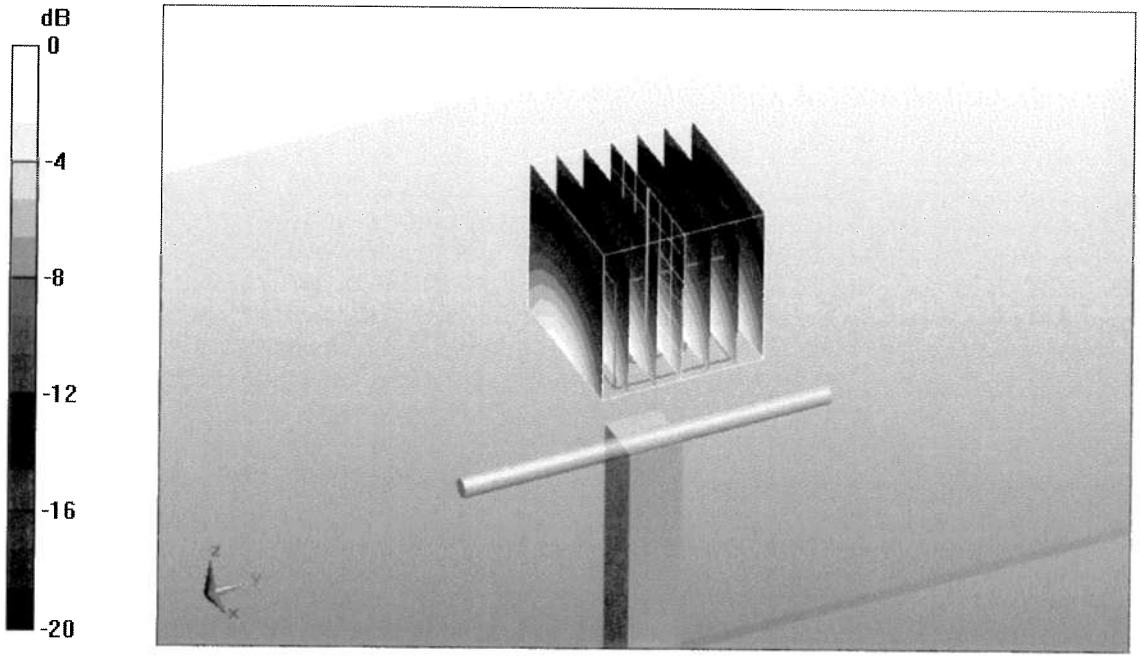
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d063

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL U11 BB
Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

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: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

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 = 97.1 V/m; Power Drift = 0.041 dB
Peak SAR (extrapolated) = 18.3 W/kg
SAR(1 g) = 9.98 mW/g; SAR(10 g) = 5.2 mW/g
Maximum value of SAR (measured) = 12.4 mW/g



0 dB = 12.4mW/g

DASY5 Validation Report for Body

Date/Time: 16.02.2010 13:00:42

Test Laboratory: SPEAG, Zurich, Switzerland

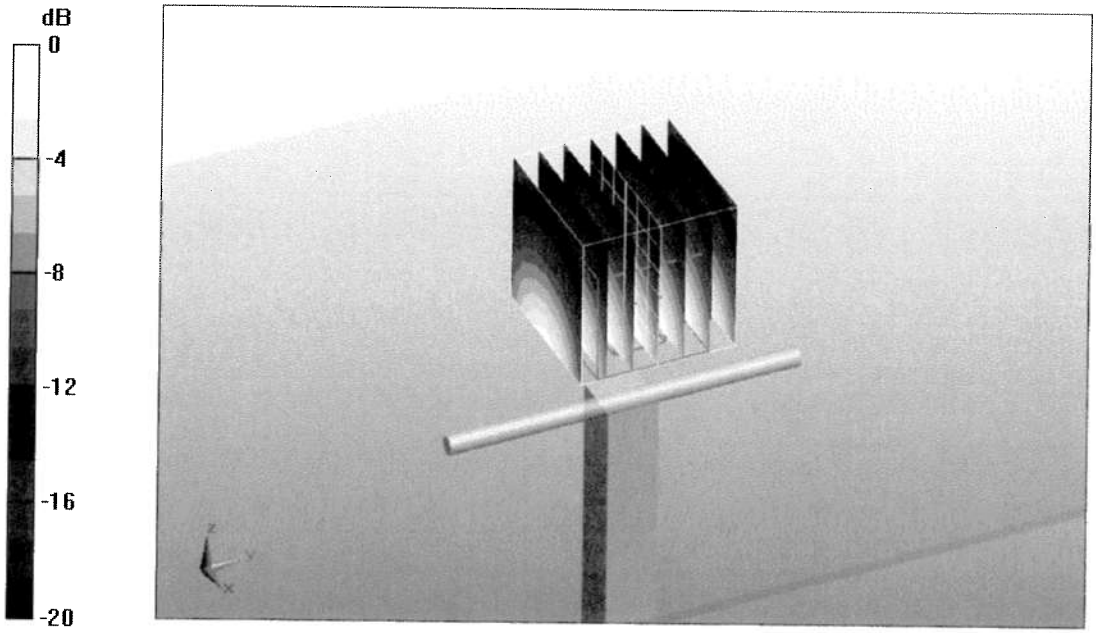
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d063

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL U10 BB
Medium parameters used: f = 1900 MHz; σ = 1.56 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

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: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Pin250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.1 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 16.7 W/kg
SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.31 mW/g
Maximum value of SAR (measured) = 12.8 mW/g



0 dB = 12.8mW/g

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accreditation No.: SCS 108

Client **Nokia Denmark A/S**

Certificate No: D2450V2-750_Feb10

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 750
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits
Calibration date:	February 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 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	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-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:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 22, 2010

DASY5 Validation Report for Head TSL

Date/Time: 17.02.2010 14:26:37

Test Laboratory: SPEAG, Zurich, Switzerland

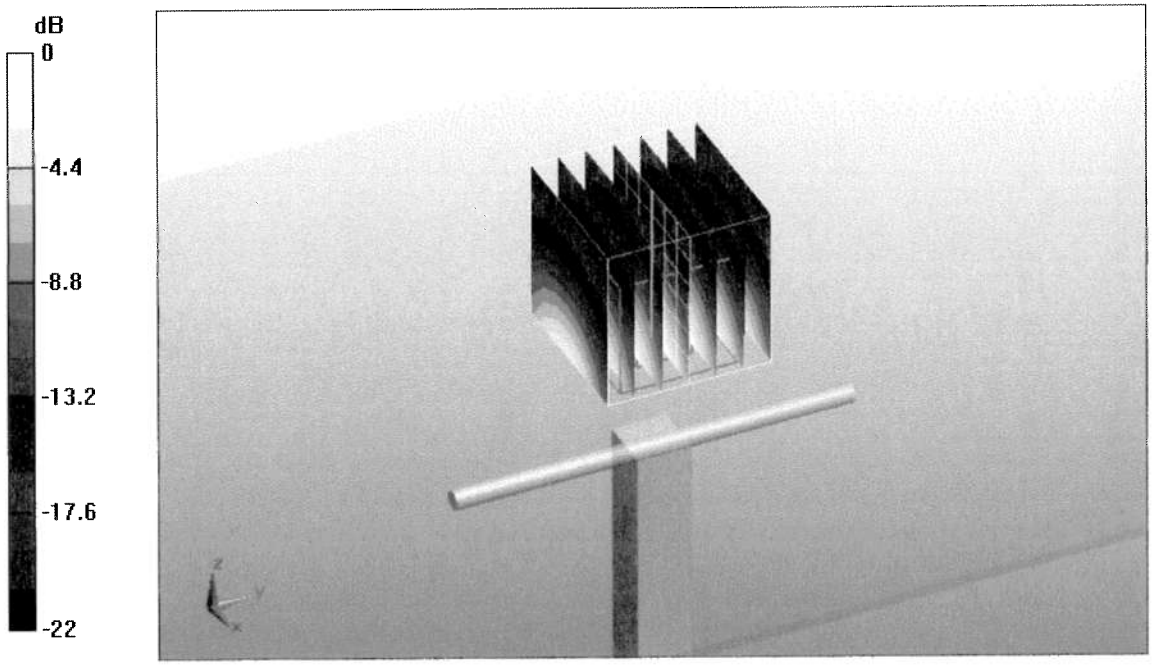
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:750

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HSL U11 BB
Medium parameters used: f = 2450 MHz; σ = 1.77 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
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: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

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 = 103.2 V/m; Power Drift = 0.00838 dB
Peak SAR (extrapolated) = 27.5 W/kg
SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.3 mW/g
Maximum value of SAR (measured) = 17.4 mW/g



0 dB = 17.4mW/g

DASY5 Validation Report for Body

Date/Time: 19.02.2010 14:00:59

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:750

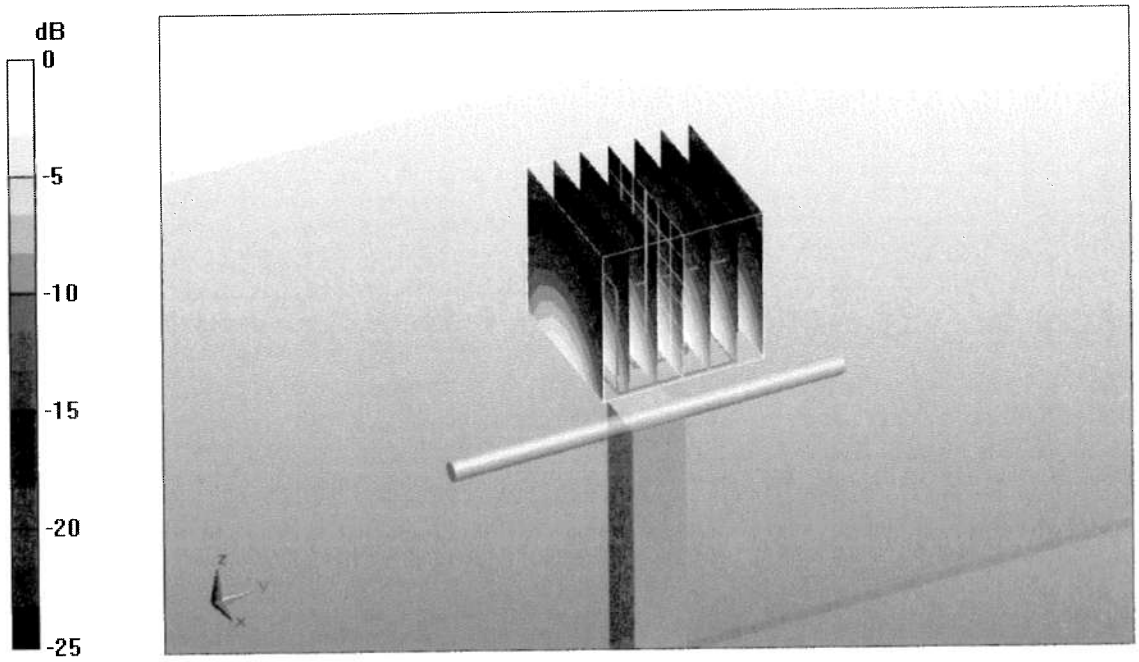
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: MSL U10 BB
Medium parameters used: f = 2450 MHz; σ = 2.01 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

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: 07.03.2009
- 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)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.7 V/m; Power Drift = 0.082 dB
Peak SAR (extrapolated) = 26.9 W/kg
SAR(1 g) = 12.9 mW/g; SAR(10 g) = 5.9 mW/g
Maximum value of SAR (measured) = 17.1 mW/g



0 dB = 17.1mW/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	30.0 dBm	30.0 dBm	30.0 dBm
	Display facing phantom	-	0.357	-
	Back facing phantom	0.621	0.833	**0.974**
	Top edge facing phantom	-	0.029	-
	Bottom edge facing phantom	-	0.082	-
	Left edge facing phantom	-	0.252	-
	Right edge facing phantom	-	0.251	-

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
3-slot GPRS	Conducted Power	24.4 dBm	24.4 dBm	24.4 dBm
	Display facing phantom	-	0.492	-
	Back facing phantom	0.775	0.849	**0.917**
	Top edge facing phantom	-	0.124	-
	Bottom edge facing phantom	-	0.290	-
	Left edge facing phantom	-	0.241	-
	Right edge facing phantom	-	0.121	-
Mode	**Device orientation**	**Ch 9262 1852.4 MHz**	**Ch 9400 1880.0 MHz**	**Ch 9538 1907.6 MHz**
WCDMA	Conducted Power	19.7 dBm	19.7 dBm	19.7 dBm
	Display facing phantom	-	0.446	-
	Back facing phantom	0.706	0.725	**0.763**
	Top edge facing phantom	-	0.159	-
	Bottom edge facing phantom	-	0.324	-
	Left edge facing phantom	-	0.260	-
	Right edge facing phantom	-	0.147	-

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	16.0 dBm	16.0 dBm	16.0 dBm
	Display facing phantom	-	0.085	-
	Back facing phantom	**0.177**	0.169	0.161
	Top edge facing phantom	-	0.090	-
	Bottom edge facing phantom	-	0.002	-
	Left edge facing phantom	-	0.025	-
	Right edge facing phantom	-	0.096	-

Simultaneous transmissions: Combined SAR results – Individual band Max results

Test configuration	Max. 1g SAR results			
	WLAN	2-slot GPRS850	3-slot GPRS1900	WCDMA 1900
Display facing phantom	0.085	0.357	0.492	0.446
Back facing phantom	**0.177**	**0.974**	**0.917**	**0.763**
Top edge facing phantom	0.090	0.029	0.124	0.159
Bottom edge facing phantom	0.002	0.082	0.290	0.324
Left edge facing phantom	0.025	0.252	0.241	0.260
Right edge facing phantom	0.096	0.251	0.121	0.147

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

Test configuration	Max. 1g SAR results		
	2-slot GPRS 850 + WLAN	3-slot GPRS1900 + WLAN	WCDMA 1900 + WLAN
Display facing phantom	0.442	0.577	0.531
Back facing phantom	**1.151**	**1.094**	**0.940**
Top edge facing phantom	0.119	0.214	0.249
Bottom edge facing phantom	0.084	0.292	0.326
Left edge facing phantom	0.277	0.266	0.285
Right edge facing phantom	0.347	0.217	0.243

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 are entered 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 GPRS 850 + WLAN	3-slot GPRS1900 + WLAN	WCDMA 1900 + WLAN
Display facing phantom	-	-	-
Back facing phantom	**1.01**	**0.941**	**0.789**
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	30.0 dBm	1.0 cm	0.974 W/kg	1.6 W/kg	PASSED
3-slot GPRS1900	810 / 1909.8	24.4 dBm	1.0 cm	0.917 W/kg	1.6 W/kg	PASSED
WCDMA1900	9538 / 1907.6	19.7 dBm	1.0 cm	0.763 W/kg	1.6 W/kg	PASSED
WLAN2450	1 / 2412.0	16.0 dBm	1.0 cm	0.177 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	1.0 cm	1.01 W/kg	1.6 W/kg	PASSED
3-slot GPRS1900 + WLAN2450	-	-	1.0 cm	0.941 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	1.0 cm	0.789 W/kg	1.6 W/kg	PASSED

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

See the following pages

Date/Time: 2011-05-17 12:39:43

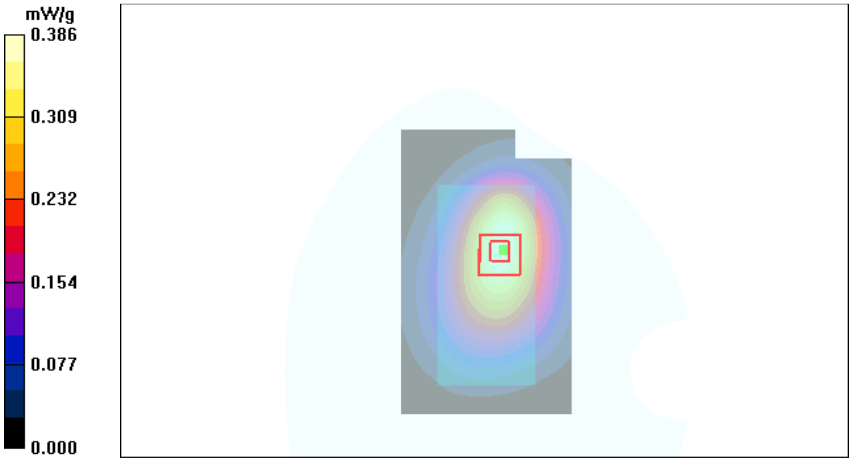
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.965 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.386 mW/g

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.69 V/m
Peak SAR (extrapolated) = 0.484 W/kg
SAR(1 g) = 0.357 mW/g
SAR(10 g) = 0.258 mW/g
Power Drift = -0.086 dB
Maximum value of SAR (measured) = 0.375 mW/g



Date/Time: 2011-05-17 12:25:11

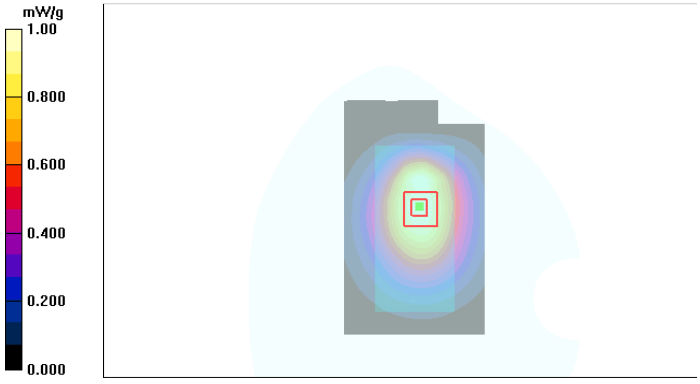
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

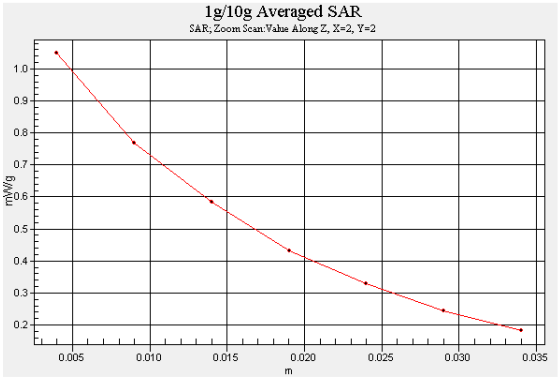
Communication System: 2-slot GPRS850
Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 849 MHz; σ = 0.977 mho/m; ε_r = 53; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.00 mW/g

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 13.0 V/m
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.974 mW/g
SAR(10 g) = 0.690 mW/g
Power Drift = 0.276 dB
Maximum value of SAR (measured) = 1.04 mW/g





Date/Time: 2011-05-17 13:41:54

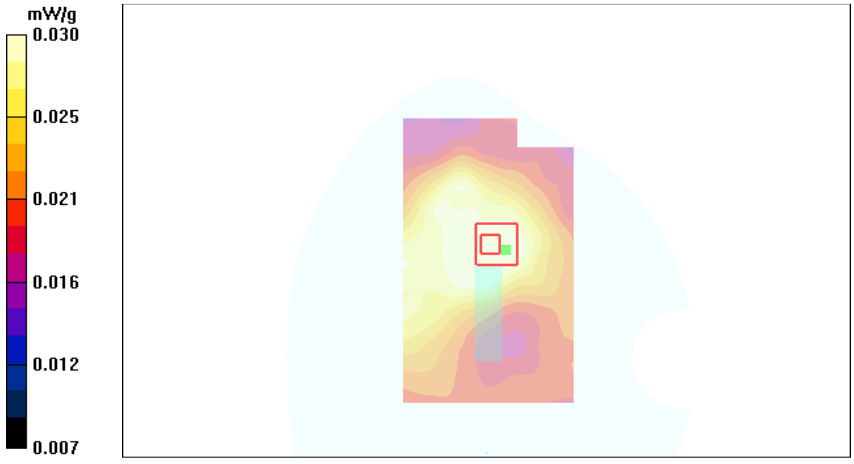
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.965 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory -Top edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.030 mW/g

Body - Middle - No Accessory -Top edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.48 V/m
Peak SAR (extrapolated) = 0.040 W/kg
SAR(1 g) = 0.029 mW/g
SAR(10 g) = 0.022 mW/g
Power Drift = -0.429 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) = 0.030 mW/g



Date/Time: 2011-05-17 14:09:50

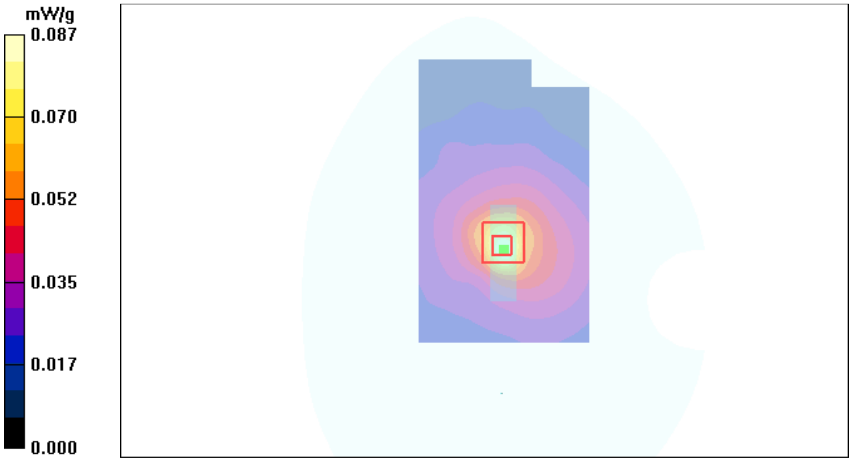
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.965 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory -Bottom edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.087 mW/g

Body - Middle - No Accessory -Bottom edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 5.80 V/m
Peak SAR (extrapolated) = 0.165 W/kg
SAR(1 g) = 0.082 mW/g
SAR(10 g) = 0.047 mW/g
Power Drift = -0.176 dB
Maximum value of SAR (measured) = 0.089 mW/g



Date/Time: 2011-05-17 13:03:18

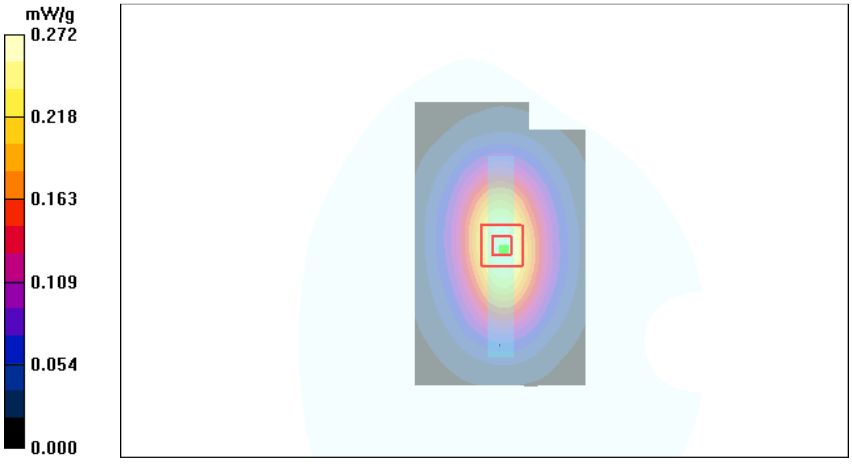
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.965 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Left edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.272 mW/g

Body - Middle - No Accessory - Left edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.81 V/m
Peak SAR (extrapolated) = 0.356 W/kg
SAR(1 g) = 0.252 mW/g
SAR(10 g) = 0.174 mW/g
Power Drift = -0.119 dB
Maximum value of SAR (measured) = 0.269 mW/g



Date/Time: 2011-05-17 13:26:47

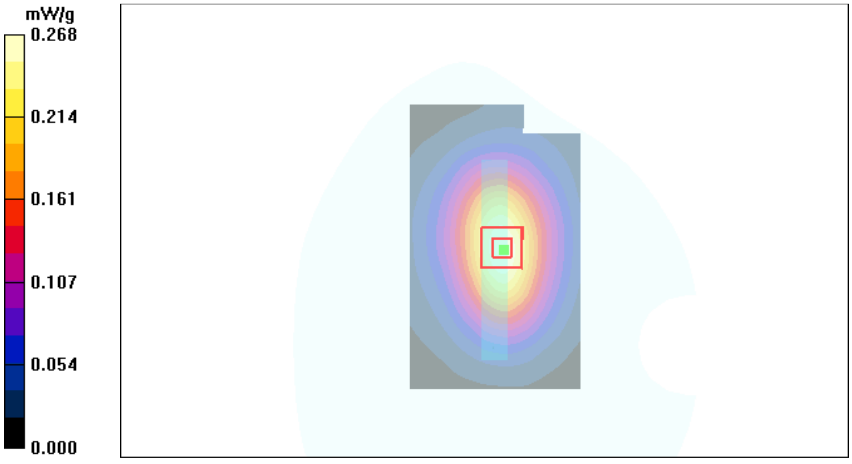
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 850; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.965 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory -Right edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.268 mW/g

Body - Middle - No Accessory -Right edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.35 V/m
Peak SAR (extrapolated) = 0.358 W/kg
SAR(1 g) = 0.251 mW/g
SAR(10 g) = 0.176 mW/g
Power Drift = 0.163 dB
Maximum value of SAR (measured) = 0.267 mW/g



Date/Time: 2011-05-23 18:20:13

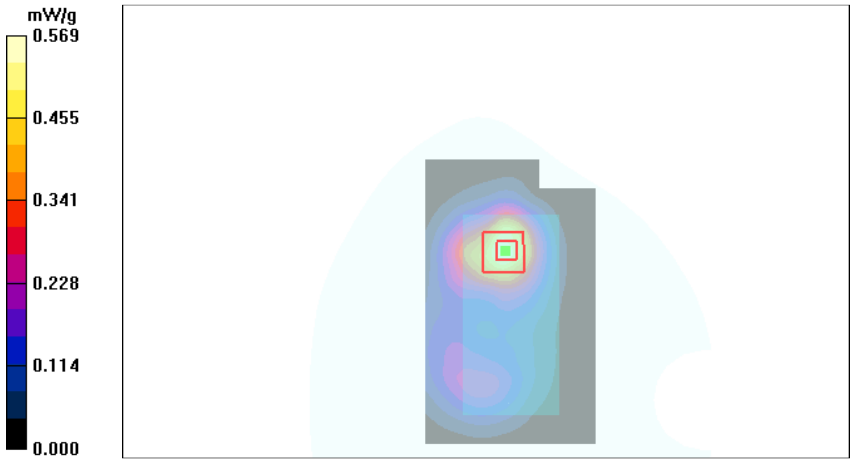
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.569 mW/g

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.59 V/m
Peak SAR (extrapolated) = 0.786 W/kg
SAR(1 g) = 0.492 mW/g
SAR(10 g) = 0.290 mW/g
Power Drift = -0.157 dB
Maximum value of SAR (measured) = 0.530 mW/g



Date/Time: 2011-05-23 19:03:08

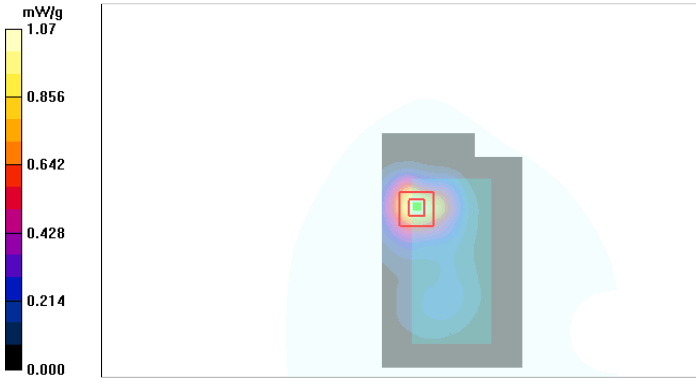
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

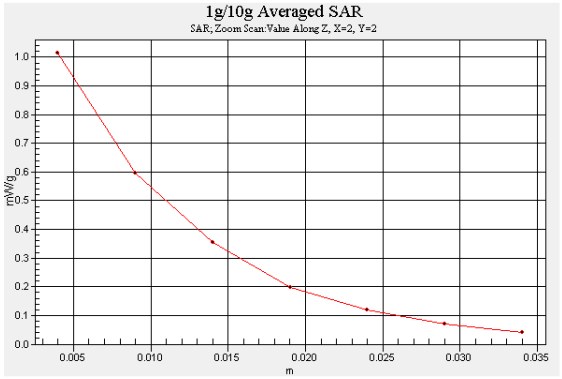
Communication System: 3-slot GPRS1900
Frequency: 1909.8 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.07 mW/g

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.78 V/m
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.917 mW/g
SAR(10 g) = 0.509 mW/g
Power Drift = 0.154 dB
Maximum value of SAR (measured) = 1.01 mW/g





Date/Time: 2011-05-23 19:26:29

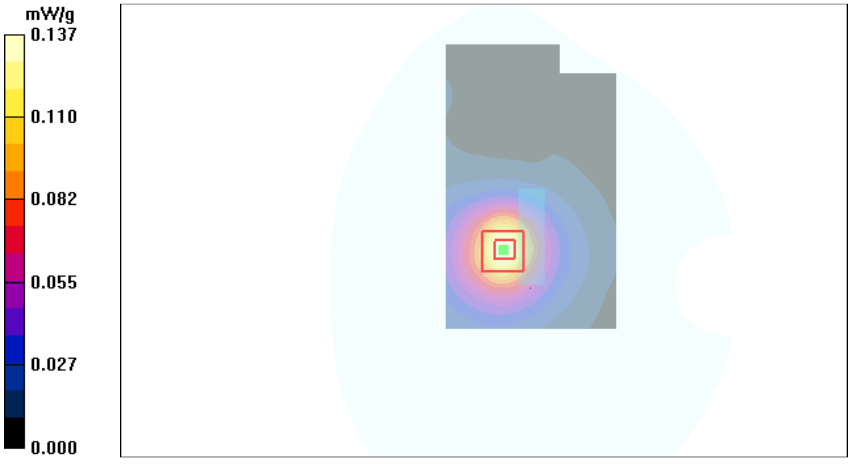
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.137 mW/g

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.18 V/m
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.124 mW/g
SAR(10 g) = 0.074 mW/g
Power Drift = 0.238 dB
Maximum value of SAR (measured) = 0.137 mW/g



Date/Time: 2011-05-23 19:39:59

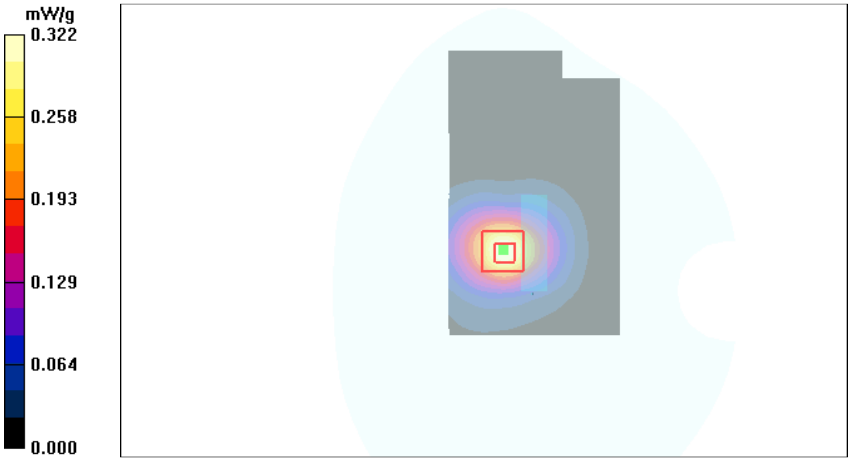
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.322 mW/g

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.09 V/m
Peak SAR (extrapolated) = 0.449 W/kg
SAR(1 g) = 0.290 mW/g
SAR(10 g) = 0.171 mW/g
Power Drift = -0.153 dB
Maximum value of SAR (measured) = 0.317 mW/g



Date/Time: 2011-05-23 19:53:28

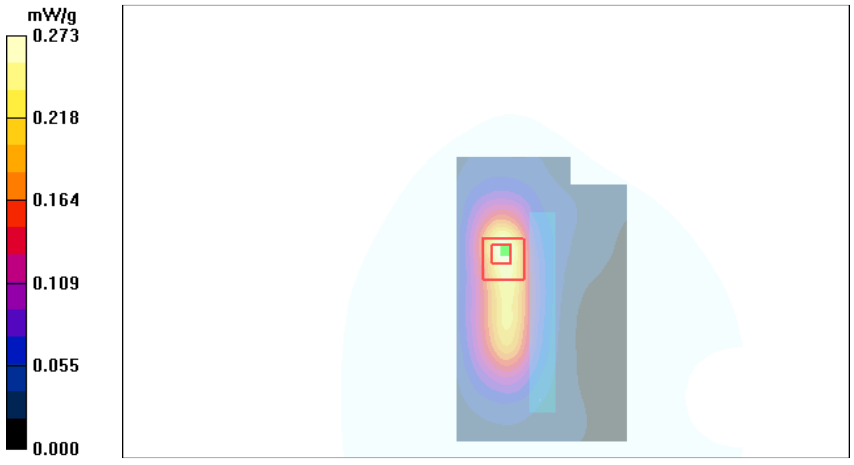
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.273 mW/g

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 5.06 V/m
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.241 mW/g
SAR(10 g) = 0.140 mW/g
Power Drift = 0.269 dB
Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.
Maximum value of SAR (measured) = 0.263 mW/g



Date/Time: 2011-05-23 20:18:08

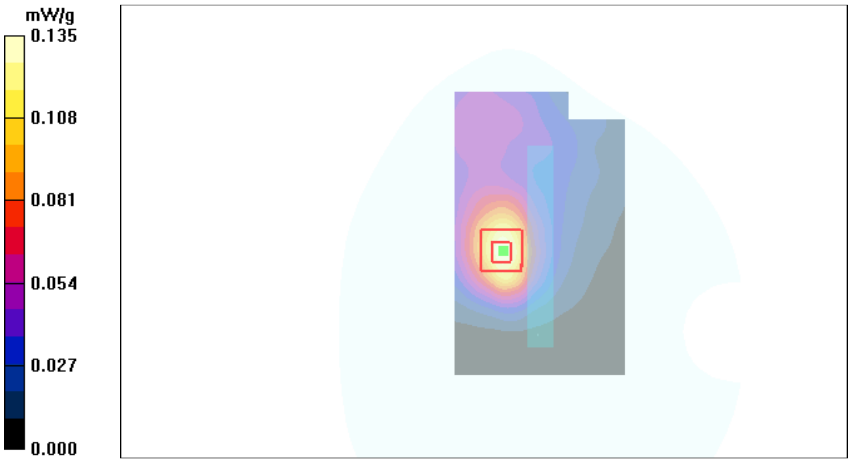
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:2.8
Medium: Body 1900; Medium Notes: Medium Temperature: 21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.46, 4.46, 4.46); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn501; Calibrated: 2011-02-18
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.135 mW/g

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 2.14 V/m
Peak SAR (extrapolated) = 0.184 W/kg
SAR(1 g) = 0.121 mW/g
SAR(10 g) = 0.074 mW/g
Power Drift = -0.036 dB
Maximum value of SAR (measured) = 0.131 mW/g



Date/Time: 2011-05-17 00:12:33

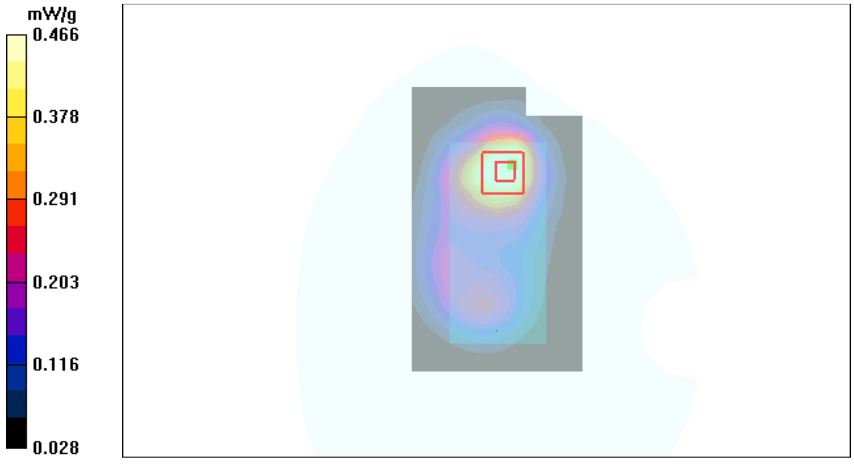
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.517 mW/g

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 10.3 V/m
Peak SAR (extrapolated) = 0.711 W/kg
SAR(1 g) = 0.446 mW/g
SAR(10 g) = 0.274 mW/g
Power Drift = -0.015 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) = 0.466 mW/g



Date/Time: 2011-05-17 00:50:30

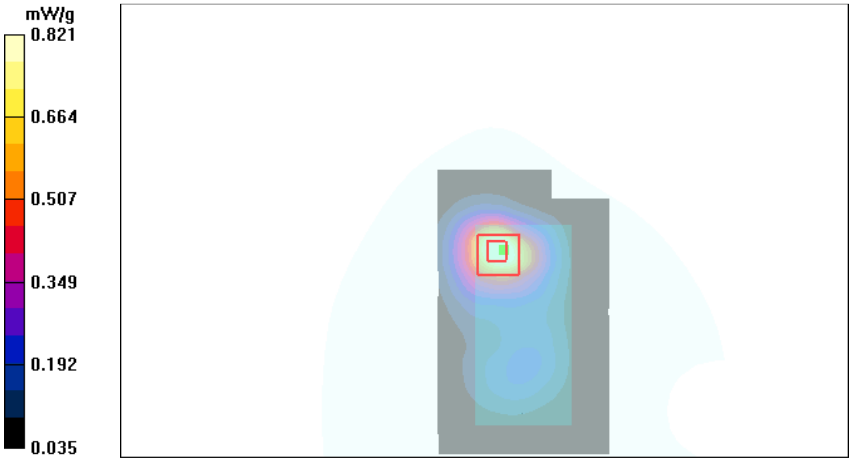
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1908 MHz; σ = 1.5 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.858 mW/g

Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.38 V/m
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.763 mW/g
SAR(10 g) = 0.440 mW/g
Power Drift = 0.264 dB
Maximum value of SAR (measured) = 0.821 mW/g



Date/Time: 2011-05-17 01:03:31

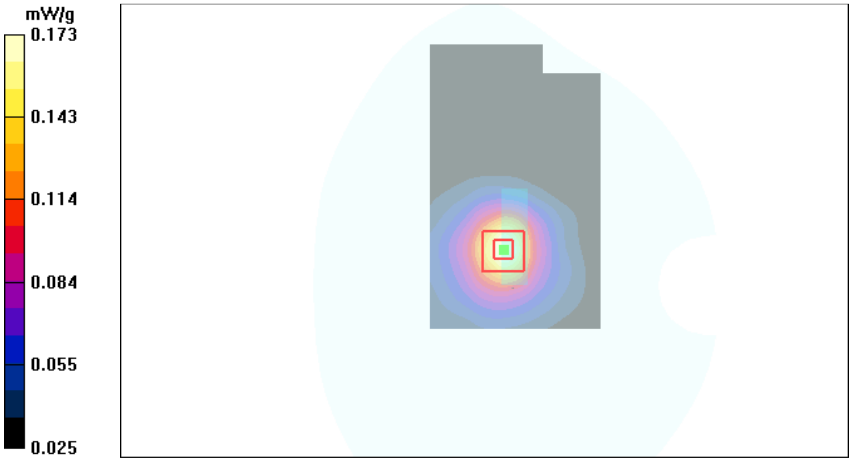
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.180 mW/g

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.46 V/m
Peak SAR (extrapolated) = 0.240 W/kg
SAR(1 g) = 0.159 mW/g
SAR(10 g) = 0.104 mW/g
Power Drift = 0.199 dB
Maximum value of SAR (measured) = 0.173 mW/g



Date/Time: 2011-05-17 01:15:28

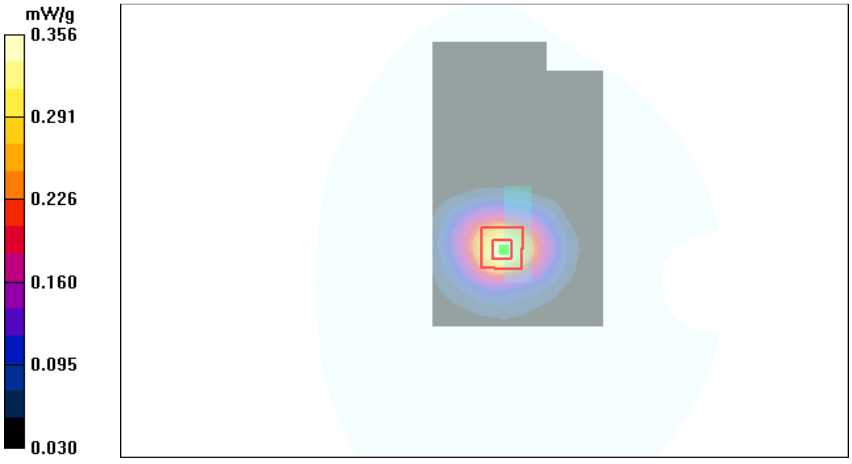
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.353 mW/g

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.90 V/m
Peak SAR (extrapolated) = 0.501 W/kg
SAR(1 g) = 0.324 mW/g
SAR(10 g) = 0.199 mW/g
Power Drift = 0.113 dB
Maximum value of SAR (measured) = 0.356 mW/g



Date/Time: 2011-05-17 01:28:10

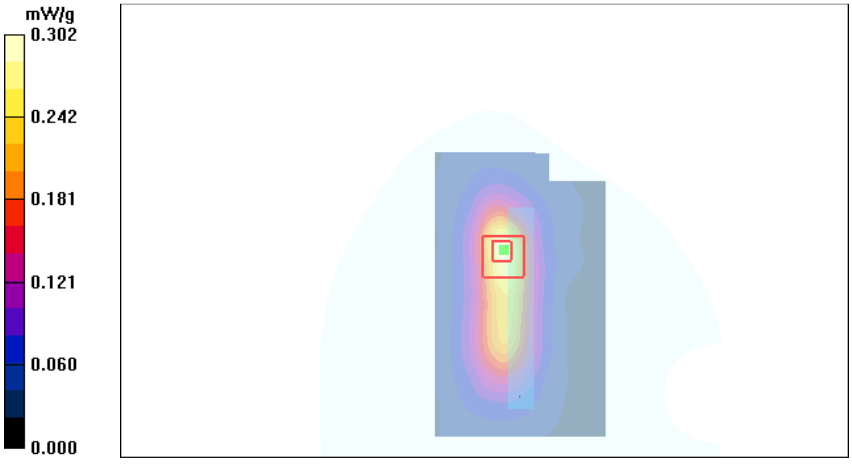
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.302 mW/g

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.84 V/m
Peak SAR (extrapolated) = 0.413 W/kg
SAR(1 g) = 0.260 mW/g
SAR(10 g) = 0.160 mW/g
Power Drift = -0.076 dB
Maximum value of SAR (measured) = 0.282 mW/g



Date/Time: 2011-05-17 01:39:34

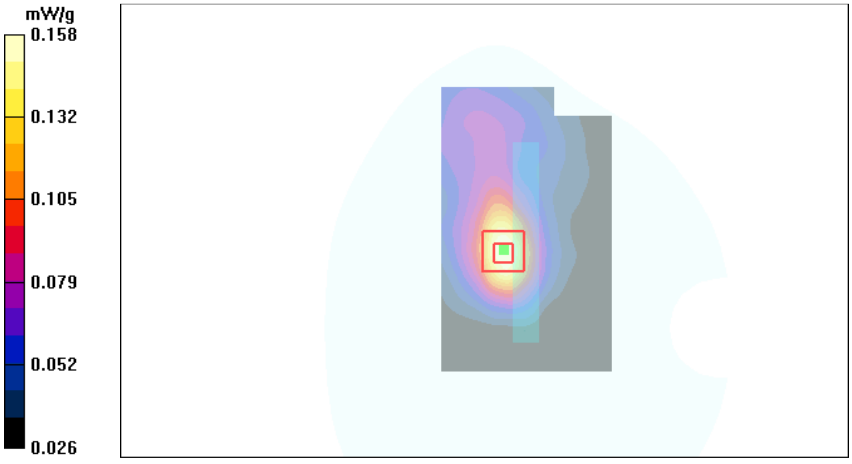
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.68, 4.68, 4.68); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2010-09-17
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.161 mW/g

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.87 V/m
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.147 mW/g
SAR(10 g) = 0.097 mW/g
Power Drift = -0.298 dB
Maximum value of SAR (measured) = 0.158 mW/g



Date/Time: 2011-05-18 20:01:51

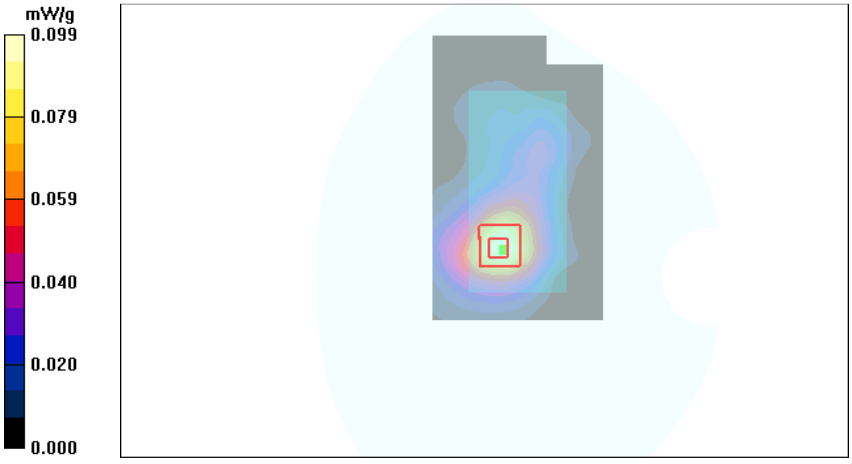
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WLAN2450 b-mode
Frequency: 2442 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2442 MHz; σ = 1.95 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.099 mW/g

Body - Middle - No Accessory - Display Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 5.11 V/m
Peak SAR (extrapolated) = 0.139 W/kg
SAR(1 g) = 0.085 mW/g
SAR(10 g) = 0.050 mW/g
Power Drift = -0.032 dB
Maximum value of SAR (measured) = 0.093 mW/g



Date/Time: 2011-05-18 20:28:23

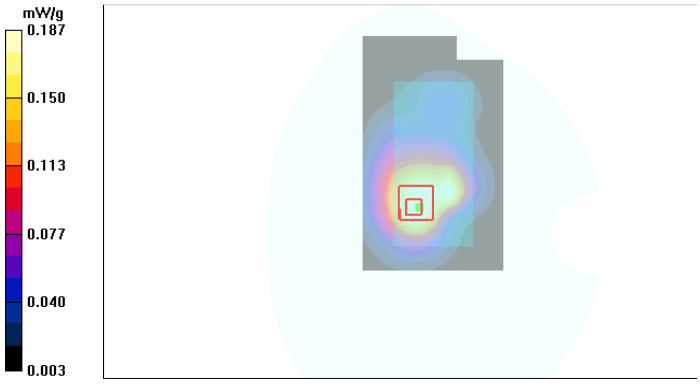
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

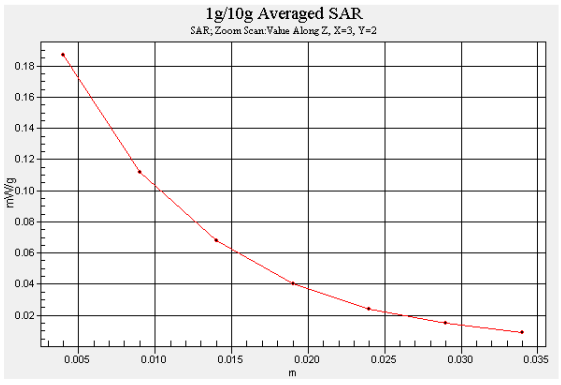
Communication System: WLAN2450 b-mode
Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2412 MHz; σ = 1.91 mho/m; ε_r = 50.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Low - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.200 mW/g

Body - Low - No Accessory - Back Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.90 V/m
Peak SAR (extrapolated) = 0.300 W/kg
SAR(1 g) = 0.177 mW/g
SAR(10 g) = 0.105 mW/g
Power Drift = -0.037 dB
Maximum value of SAR (measured) = 0.187 mW/g





Date/Time: 2011-05-18 20:59:46

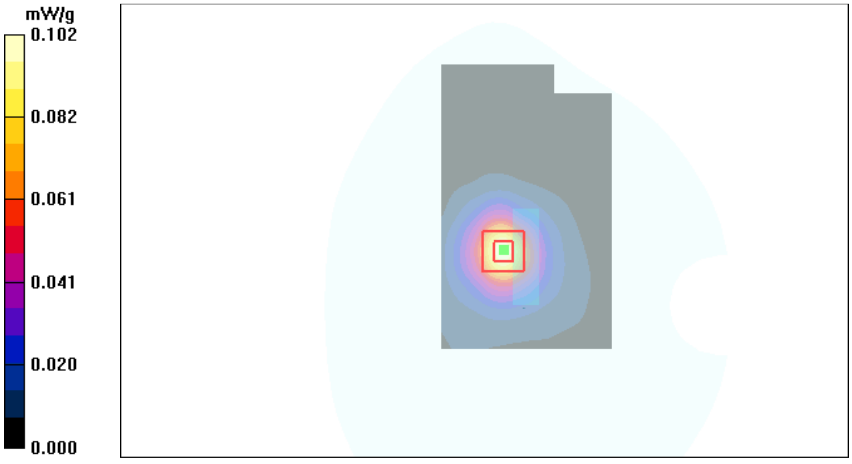
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WLAN2450 b-mode
Frequency: 2442 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2442 MHz; σ = 1.95 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.102 mW/g

Body - Middle - No Accessory - Top Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 3.04 V/m
Peak SAR (extrapolated) = 0.163 W/kg
SAR(1 g) = 0.090 mW/g
SAR(10 g) = 0.048 mW/g
Power Drift = -0.328 dB
Maximum value of SAR (measured) = 0.099 mW/g



Date/Time: 2011-05-18 21:36:50

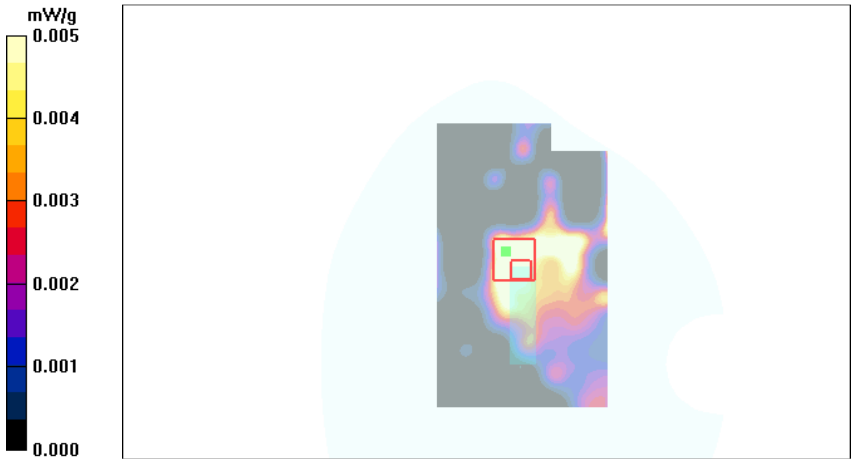
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WLAN2450 b-mode
Frequency: 2442 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2442 MHz; σ = 1.95 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.012 mW/g

Body - Middle - No Accessory - Bottom Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 1.40 V/m
Peak SAR (extrapolated) = 0.013 W/kg
SAR(1 g) = 0.00238 mW/g
SAR(10 g) = 0.000557 mW/g
Power Drift = -0.092 dB
Warning: Maximum averaged SAR over 1 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 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) = 0.005 mW/g



Date/Time: 2011-05-18 21:55:05

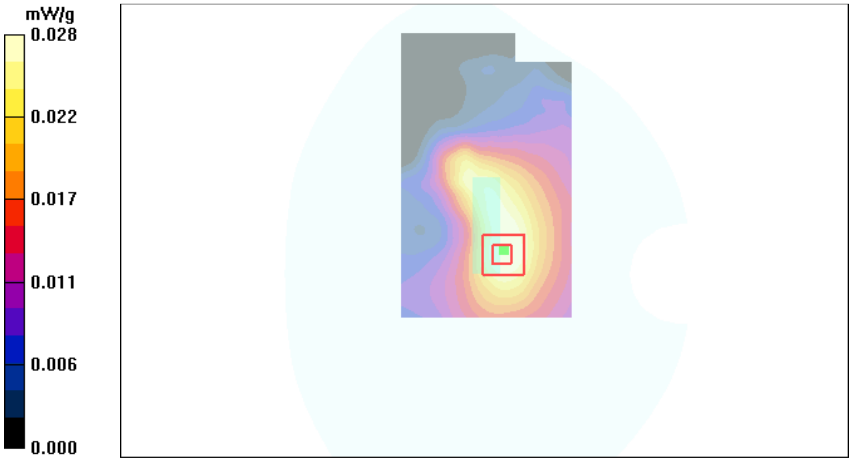
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WLAN2450 b-mode
Frequency: 2442 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2442 MHz; σ = 1.95 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.029 mW/g

Body - Middle - No Accessory - Left Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 3.39 V/m
Peak SAR (extrapolated) = 0.042 W/kg
SAR(1 g) = 0.025 mW/g
SAR(10 g) = 0.015 mW/g
Power Drift = 0.362 dB
Maximum value of SAR (measured) = 0.028 mW/g



Date/Time: 2011-05-18 22:07:10

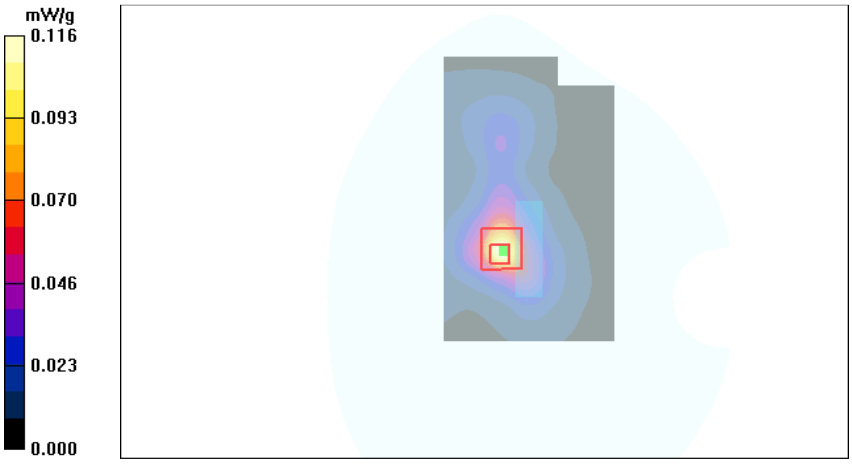
Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WLAN2450 b-mode
Frequency: 2442 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 2442 MHz; σ = 1.95 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1328
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Area Scan (61x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.116 mW/g

Body - Middle - No Accessory - Right Edge Facing Phantom - Separation 10 mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 3.83 V/m
Peak SAR (extrapolated) = 0.192 W/kg
SAR(1 g) = 0.096 mW/g
SAR(10 g) = 0.048 mW/g
Power Drift = 0.203 dB
Maximum value of SAR (measured) = 0.105 mW/g



Date/Time: 2011-05-17 12:25:11, Date/Time: 2011-05-18 20:28:23

Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: 2-slot GPRS850, Communication System: WLAN2450 b-mode
Frequency: 848.8 MHz, Frequency: 2412 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1
Medium: Body 850, Medium: Body 2450; Medium Notes: Medium Temperature: 22.2 C, Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 849 MHz; σ = 0.977 mho/m; ε_r = 53; ρ = 1000 kg/m^3 , Medium parameters used: f = 2412 MHz; σ = 1.91 mho/m; ε_r = 50.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

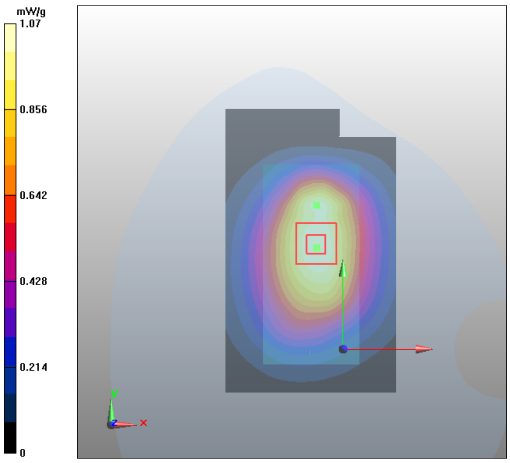
DASY4 Configuration:
- Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(8.61, 8.61, 8.61), ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682; Calibrated: 2010-07-16
- Phantom: SAM 2, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1037, Serial: TP-1328
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Low - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 1.01 mW/g
SAR(10 g) = 0.701 mW/g

Maximum value of SAR (measured) = 1.07 mW/g



Date/Time: 2011-05-23 19:03:08, Date/Time: 2011-05-18 20:28:23

Test Laboratory: TCC Nokia

Type: RM-697; Serial: 357022/04/775109/7

Communication System: 3-slot GPRS1900, Communication System: WLAN2450 b-mode

Frequency: 1909.8 MHz, Frequency: 2412 MHz; Duty Cycle: 1:2.8, Duty Cycle: 1:1
Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 21.5 C, Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 1910 MHz; σ = 1.59 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3 , Medium parameters used: f = 2412 MHz; σ = 1.91 mho/m; ε_r = 50.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117, Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(4.46, 4.46, 4.46), ConvF(6.81, 6.81, 6.81); Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn501, Electronics: DAE4 Sn682; Calibrated: 2011-02-18, Calibrated: 2010-07-16
- Phantom: SAM 5, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1302, Serial: TP-1328
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (7x11x1):

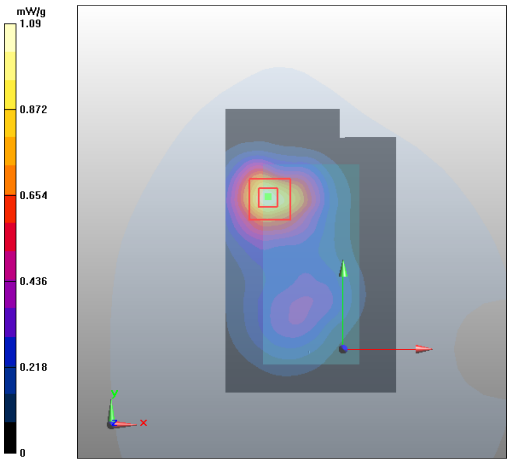
Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Low - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (7x11x1):

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

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.941 mW/g
SAR(10 g) = 0.515 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



Date/Time: 2011-05-17 00:50:30, Date/Time: 2011-05-18 20:28:23

Test Laboratory: TCC Nokia
Type: RM-697; Serial: 357022/04/775109/7

Communication System: WCDMA1900, Communication System: WLAN2450 b-mode
Frequency: 1907.6 MHz, Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 22.2 C, Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 1908 MHz; σ = 1.5 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3 , Medium parameters used: f = 2412 MHz; σ = 1.91 mho/m; ε_r = 50.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3116, Probe: EX3DV4 - SN3581; Probe Notes:
- ConvF(4.68, 4.68, 4.68), ConvF(6.81, 6.81, 6.81); Calibrated: 2011-02-17, Calibrated: 2010-07-19
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn710, Electronics: DAE4 Sn682; Calibrated: 2010-09-17, Calibrated: 2010-07-16
- Phantom: SAM 1, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1215, Serial: TP-1328
- ; SEMCAD X Version 14.0 Build 61

Configuration/Body - High - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Low - No Accessory - Back Facing Phantom - Separation 10 mm/Area Scan (7x11x1):
Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.789 mW/g
SAR(10 g) = 0.444 mW/g

Maximum value of SAR (measured) = 0.886 mW/g