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SAR Compliance Test Report

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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.

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2010-03-30 to 2010-04-07
SN, HW and SW numbers of tested device	SN: 004402/13/027199/6, HW: 0200A, SW: 041.005RD, DUT: 24412 SN: 004402/13/031006/7, HW: 0204A, SW: 041.005RD, DUT: 24414
Batteries used in testing	BL-5F, DUT: 24404, 24406, 24409, 24410, 24411
Headsets used in testing	HS-125, DUT: 24400
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 GPRS 850**	128 / 824.4	29.5 dBm	Left, Cheek	0.813 W/kg	**0.91 W/kg**	1.6 W/kg	PASSED
WCDMA 850	4233 / 846.6	23.0 dBm	Left, Cheek	0.647 W/kg	**0.72 W/kg**	1.6 W/kg	PASSED
GSM 1900**	661 / 1880.0	30.0 dBm	Right, Cheek	0.516 W/kg	**0.58 W/kg**	1.6 W/kg	PASSED
WCDMA 1900**	9400 / 1880.0	22.0 dBm	Right, Cheek	0.631 W/kg	**0.71 W/kg**	1.6 W/kg	PASSED
WLAN 2450**	11 / 2462.0	16.0 dBm	Left, Cheek	0.201 W/kg	**0.23 W/kg**	1.6 W/kg	PASSED
2-slot GPRS850** + WLAN2450	-	-	Left, Cheek	0.819 W/kg	**0.92 W/kg**	1.6 W/kg	PASSED
WCDMA 850 + WLAN2450	-	-	Left, Cheek	0. 670 W/kg	**0.75 W/kg**	1.6 W/kg	PASSED
GSM 1900** + WLAN2450	-	-	Left, Cheek	0.625 W/kg	**0.70 W/kg**	1.6 W/kg	PASSED
WCDMA 1900** + WLAN2450	-	-	Right, Cheek	0.631 W/kg	**0.71 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 GPRS 850**	251 / 848.8	29.5 dBm	1.5 cm	0.541 W/kg	**0.61 W/kg**	1.6 W/kg	PASSED
WCDMA 850	4233 / 846.6	23.0 dBm	1.5 cm	0.411 W/kg	**0.46 W/kg**	1.6 W/kg	PASSED
GSM 1900**	512 / 1850.2	30.0 dBm	1.5 cm	0.587 W/kg	**0.66 W/kg**	1.6 W/kg	PASSED
WCDMA 1900**	9262 / 1852.4	22.0 dBm	1.5 cm	0.762 W/kg	**0.85 W/kg**	1.6 W/kg	PASSED
WLAN 2450**	1 / 2412.0	16.0 dBm	1.5 cm	0.038 W/kg	**0.04 W/kg**	1.6 W/kg	PASSED
2-slot GPRS850** + WLAN2450	-	-	1.5 cm	0.552 W/kg	**0.62 W/kg**	1.6 W/kg	PASSED
WCDMA 850 + WLAN2450	-	-	1.5 cm	0.414 W/kg	**0.46 W/kg**	1.6 W/kg	PASSED
GSM 1900** + WLAN2450	-	-	1.5 cm	0.587 W/kg	**0.66 W/kg**	1.6 W/kg	PASSED
WCDMA 1900** + WLAN2450	-	-	1.5 cm	0.762 W/kg	**0.85 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 copied from FCC_RM-627_02 for RM-627 / FCC ID: QTKRM-627.

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.44 dB

1.2.4 Measurement Uncertainty

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

2. DESCRIPTION OF THE DEVICE UNDER TEST

Device category	Portable
Exposure environment	General population / uncontrolled

Modes of Operation	Bands	Modulation Mode	Duty Cycle	Transmitter Frequency Range (MHz)
GSM	850 1900	GMSK	1/8	824 – 849 1850 – 1910
GPRS	850 1900	GMSK	1/8 to 3/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 3/8	824 – 849 1850 – 1910
WCDMA	850 (Band V) 1900 (Band II)	-	1	826 – 847 1852 – 1908
HSUPA	850 (Band V) 1900 (Band II)	-	1	826 – 847 1852 – 1908
BT	2450	GFSK	1	2402 – 2480
WLAN	2450	11Mbps QPSK	1	2412 – 2462

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

This device has Voice-over-IP/Dual Transfer Mode capability for use at the ear. Therefore, SAR for multi slot GPRS mode was evaluated against the head profile of the phantom. Dual Transfer Mode is a feature that utilises the multi-slot GPRS capability in this device; it allows simultaneous transmission of voice and data during the same call, using the same transmitter and antenna.

This is a WCDMA HSUPA device, but SAR tests for HSUPA mode have not been performed as no HSUPA Sub-test mode has an average power > 0.25dB above the basic WCDMA 12.2kbps RMC mode. Appendix C of this report gives a summary of the measured WCDMA and HSUPA average powers; a detailed report of these WCDMA and HSUPA conducted power tests is submitted separately.

This device mutes the internal earpiece when the slide is closed. Head SAR testing has therefore been limited to slide-open configuration only as Voice calls cannot be made with the slide closed.

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 in the back section of the keypad slide. The WLAN antenna is located at the top in the back section of the keypad slide.

3. TEST CONDITIONS

3.1 Temperature and Humidity

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

3.2 Test Signal, Frequencies and Output Power

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

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

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

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

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

The transmission mode of the device in all WLAN tests was DSSS QPSK 11Mbps. This mode has the highest (or equal highest) time-averaged output power of all the WLAN modulation modes in Nokia devices.

Some of the SAR values given in this report have been taken from the earlier report FCC_RM-627_02 for RM-627 / FCC ID: QTKRM-627. The only difference between RM-627 and RM-648 is that RM-648 has had its WCDMA900 components removed and WCDMA850 components added.

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	2010-07
DAE3	573	12 months	2010-07
E-field Probe ES3DV3	3117	12 months	2010-07
E-field Probe ES3DV3	3118	12 months	2010-09
Dipole Validation Kit, D835V2	4d042	24 months	2010-09
Dipole Validation Kit, D1900V2	5d063	24 months	2012-02
Dipole Validation Kit, D2450V2	790	24 months	2010-09
DASY4 software	Version 4.7	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SME06	829445/008	36 months	2012-02
Signal Generator	SME06	848650/011	36 months	2012-08
Amplifier	ZHL-42W	E012903	-	-
Amplifier	2100-BBS3Q8CCJ	1003	-	-
Power Meter	NRP	100808	24 months	2010-04
Power Meter	NRP	101293	24 months	2011-08
Power Sensor	NRP-Z51	100410	24 months	2010-04
Power Sensor	NRP-Z51	100830	24 months	2011-08
Call Tester	CMU200	110735	-	-
Call Tester	CMU200	105900	-	-
Vector Network Analyzer	AT8753ES	MY40001091	12 months	
Dielectric Probe Kit	HP85070B	US33020403	-	-

4.1.1 Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., butyl diglycol)
Calibration	Calibration certificate in Appendix D
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 15.0 ± 0.5 cm measured from the ear reference point during system checking and device measurements.

4.3.1 Tissue Simulant Recipes

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

800MHz band

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

1900MHz band

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

2450MHz band

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

4.3.2 System Checking

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

System checking, head tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ε_r	σ [S/m]	
835	Reference result	2.38	41.4	0.90	
	± 10% window	2.14 - 2.62			
	2010-03-22	2.41	39.7	0.88	21.8
	2010-03-30	2.40	42.8	0.92	22.0
1900	Reference result	9.98	39.2	1.42	
	± 10% window	8.98 - 10.98			
	2010-03-24	10.6	38.0	1.49	21.7
	2010-03-29	10.8	38.3	1.49	22.1
	2010-03-30	10.6	38.7	1.47	21.8
2450	Reference result	13.2	39.8	1.80	
	± 10% window	11.9 – 14.5			
	2010-04-07	14.0	39.9	1.87	21.3

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

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ε_r	σ [S/m]	
836	Recommended value	41.5	0.90	
	± 5% window	39.4 – 43.6	0.86 – 0.95	
	2010-03-22	39.6	0.88	21.8
	2010-03-30	42.8	0.92	22.0
1880	Recommended value	40.0	1.40	
	± 5% window	38.0 – 42.0	1.33 – 1.47	
	2010-03-24	38.0	1.47	21.7
	2010-03-29	38.3	1.47	22.1
2442	Recommended value	39.2	1.79	
	± 5% window	37.3 – 41.2	1.70 – 1.88	
	2010-04-07	39.9	1.86	21.3

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ε_r	σ [S/m]	
836	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
	2010-03-30	52.8	0.96	22.1
1880	Recommended value	53.3	1.52	
	± 5% window	50.6 – 56.0	1.44 – 1.60	
	2010-03-24	50.7	1.58	22.2
	2010-03-29	50.8	1.58	21.9
	2010-03-30	51.3	1.56	21.9
2442	Recommended value	52.7	1.94	
	± 5% window	50.1 – 55.3	1.85 – 2.04	
	2010-04-07	50.7	1.86	21.3

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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

Device holder supplied by SPEAG

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

Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

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

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

5.2.2 Body Worn Configuration

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

5.3 Scan Procedures

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

5.4 SAR Averaging Methods

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

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

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

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

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

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

7. RESULTS

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

850MHz Head SAR results**

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Conducted Power		-	32.5 dBm	-
Slide open	Left	Cheek	-	0.632	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Conducted Power		29.5 dBm	29.5 dBm	29.5 dBm
Slide open	Left	Cheek	**0.813**	0.787	0.656
		Tilt	-	0.363	-
	Right	Cheek	-	0.709	-
		Tilt	-	0.361	-
3-slot GPRS	Conducted Power		-	27.7 dBm	-
Slide open	Left	Cheek	-	0.783	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot 8PSK EGPRS	Conducted Power		23.5 dBm	-	-
Slide open	Left	Cheek	0.110	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-

850MHz Head SAR results

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Conducted Power		23.0 dBm	23.0 dBm	23.0 dBm
Slide open	Left	Cheek	0.603	0.615	**0.647**
		Tilt	-	0.295	-
	Right	Cheek	-	0.591	-
		Tilt	-	0.294	-

1900MHz Head SAR results**

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM	Conducted Power		30.0 dBm	30.0 dBm	30.0 dBm
Slide open	Left	Cheek	-	0.481	-
		Tilt	-	0.079	-
	Right	Cheek	0.336	**0.516**	0.368
		Tilt	-	0.078	-
2-slot GPRS	Conducted Power		-	27.0 dBm	-
Slide open	Left	Cheek	-	0.471	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Conducted Power		-	25.2 dBm	-
Slide open	Left	Cheek	-	0.472	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
1-slot 8PSK EGPRS	Conducted Power		-	25.5 dBm	-
Slide open	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	0.154	-
		Tilt	-	-	-
Option used	Test configuration		Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Conducted Power		22.0 dBm	22.0 dBm	22.0 dBm
Slide open	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	0.463	**0.631**	0.527
		Tilt	-	-	-

2450MHz Head SAR results**

Option used	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN	**Conducted Power**		**16.0 dBm**	**16.0 dBm**	**16.0 dBm**
Slide open	Left	Cheek	0.172	0.176	**0.201**
		Tilt	-	0.080	-
	Right	Cheek	-	0.089	-
		Tilt	-	0.075	-

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

850MHz Body SAR results**

Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS		Conducted Power	29.5 dBm	29.5 dBm	29.5 dBm
Slide closed	Display facing phantom	Without headset	-	0.302	-
		Headset HS-125	-	0.209	-
	Back facing phantom	Without headset	0.370	0.514	**0.541**
		Headset HS-125	-	0.403	-

850MHz Body SAR results

Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA		Conducted Power	23.0 dBm	23.0 dBm	23.0 dBm
Slide closed	Display facing phantom	Without headset	-	0.212	-
		Headset HS-125	-	0.133	-
	Back facing phantom	Without headset	0.327	0.336	**0.411**
		Headset HS-125	-	0.225	-

1900MHz Body SAR results**

Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM		Conducted Power	30.0 dBm	30.0 dBm	30.0 dBm
Slide closed	Display facing phantom	Without headset	-	0.143	-
		Headset HS-125	-	0.149	-
	Back facing phantom	Without headset	-	0.545	-
		Headset HS-125	**0.587**	0.557	0.491
Option used	**Device orientation**	**Test configuration**	**Ch 9262 1852.4 MHz**	**Ch 9400 1880.0 MHz**	**Ch 9538 1907.6 MHz**
WCDMA		Conducted Power	22.0 dBm	22.0 dBm	22.0 dBm
Slide closed	Display facing phantom	Without headset	-	-	-
		Headset HS-125	-	-	-
	Back facing phantom	Without headset	-	-	-
		Headset HS-125	**0.762**	0.706	0.702

2450MHz Body SAR results**

Option used	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN		Conducted Power	16.0 dBm	16.0 dBm	16.0 dBm
Slide closed	Display facing phantom	Without headset	**0.038**	0.038	0.036
		Headset HS-125	-	0.034	-
	Back facing phantom	Without headset	-	0.029	-
		Headset HS-125	-	0.028	-

** SAR values copied from FCC_RM-627_02 for RM-627 / FCC ID: QTKRM-627.

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

Simultaneous transmissions: Combined SAR results – Individual band Max results

Test configuration	Max. 1g SAR results				
	WLAN**	2-slot GPRS 850**	WCDMA 850	GSM 1900**	WCDMA 1900**
Head: Left, Cheek	0.201	0.813	0.647	0.481	-
Head: Left, Tilt	0.080	0.363	0.295	0.080	-
Head: Right, Cheek	0.089	0.709	0.591	0.516	0.631
Head: Right, Tilt	0.075	0.361	0.294	0.078	-
Body: Without Headset	0.038	0.541	0.411	0.545	-
Body: Headset HS-125	0.034	0.403	0.225	0.587	0.762

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

Test configuration	Combined 1g SAR values			
	WLAN + 2-slot GPRS 850**	WLAN + WCDMA 850	WLAN + GSM 1900**	WLAN + WCDMA 1900**
Head: Left, Cheek	**1.014**	**0.848**	**0.682**	-
Head: Left, Tilt	0.443	0.375	0.160	-
Head: Right, Cheek	0.798	0.680	0.605	**0.720**
Head: Right, Tilt	0.436	0.369	0.153	-
Body: Without Headset	**0.579**	**0.449**	0.583	-
Body: Headset HS-125	0.437	0.259	**0.621**	**0.796**

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.

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

Test configuration	Combined 1g SAR values			
	WLAN + 2-slot GPRS 850**	WLAN + WCDMA 850	WLAN + GSM 1900**	WLAN + WCDMA 1900**
Head: Left, Cheek	**0.819**	**0.670**	**0.625**	-
Head: Left, Tilt	-	-	-	-
Head: Right, Cheek	-	-	-	**0.534**
Head: Right, Tilt	-	-	-	-
Body: Without Headset	**0.552**	**0.414**	-	-
Body: Headset HS-125	-	-	**0.566**	**0.735**

Some of the Combined SAR values in the above table are less than the maximum SAR values for the contributing cellular band. This is due to a) minimal overlap of the SAR distributions of the cellular band with WLAN2450 and b) uncertainties associated with the different methods of calculation. In these cases, the maximum SAR values given for the combined Modes in the Summary table in Section 1.2 are those for the individual cellular band.

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

See the following pages

Date/Time: 2010-03-22 13:07:56

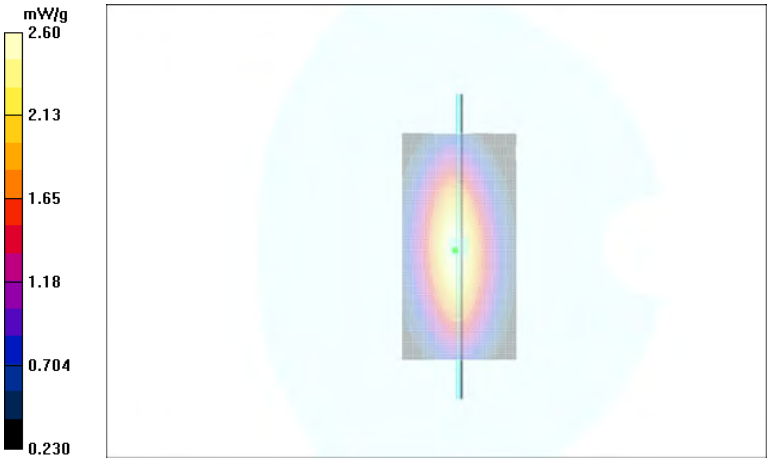
Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 835 MHz; σ = 0.879 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.60 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.8 V/m
Peak SAR (extrapolated) = 3.66 W/kg
SAR(1 g) = 2.41 mW/g
SAR(10 g) = 1.56 mW/g
Power Drift = -0.017 dB
Maximum value of SAR (measured) = 2.60 mW/g



Date/Time: 2010-03-30 08:53:23

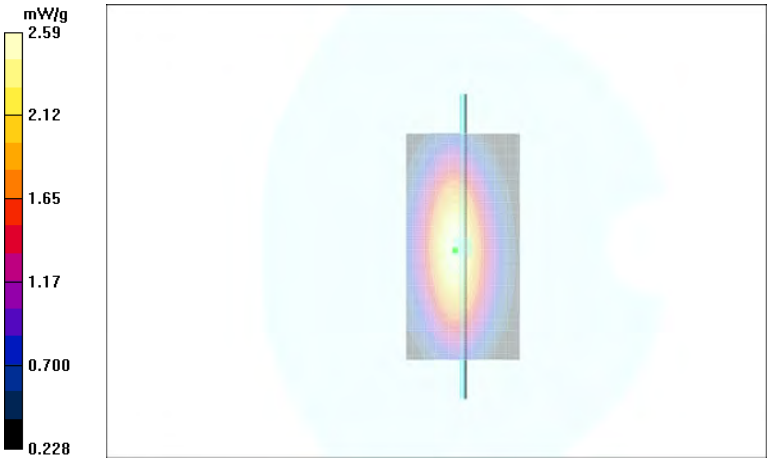
Test Laboratory: TCC Nokia
Type: D835V2; Serial: 4d042

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 22.0 C
Medium parameters used: f = 835 MHz; σ = 0.917 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.60 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.9 V/m
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 2.4 mW/g
SAR(10 g) = 1.56 mW/g
Power Drift = -0.076 dB
Maximum value of SAR (measured) = 2.59 mW/g



Date/Time: 2010-03-24 09:18:20

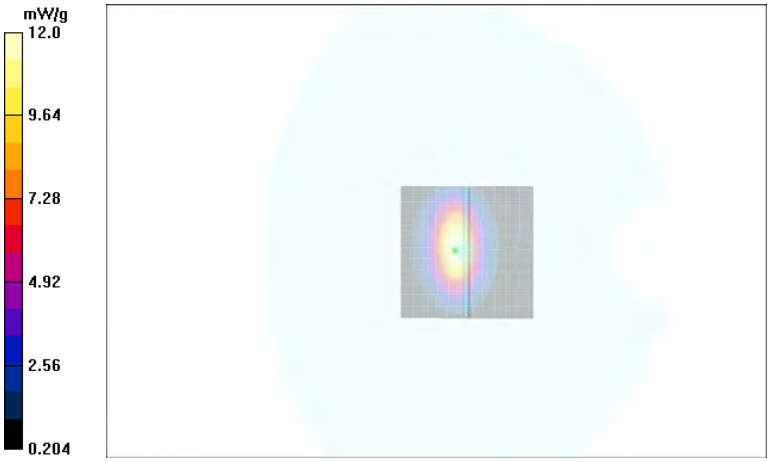
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1900 MHz; σ = 1.49 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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 = 83.7 V/m
Peak SAR (extrapolated) = 20.0 W/kg
SAR(1 g) = 10.6 mW/g
SAR(10 g) = 5.44 mW/g
Power Drift = -0.125 dB
Maximum value of SAR (measured) = 12.0 mW/g



Date/Time: 2010-03-29 09:34:16

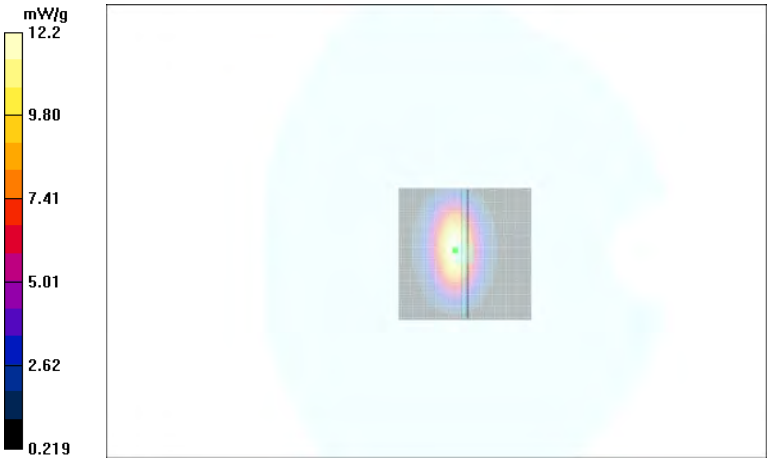
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 1900 MHz; σ = 1.49 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

d=10mm, Pin=250mW/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 12.2 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.5 V/m
Peak SAR (extrapolated) = 20.3 W/kg
SAR(1 g) = 10.8 mW/g
SAR(10 g) = 5.55 mW/g
Power Drift = -0.141 dB
Maximum value of SAR (measured) = 12.2 mW/g



Date/Time: 2010-03-30 09:19:25

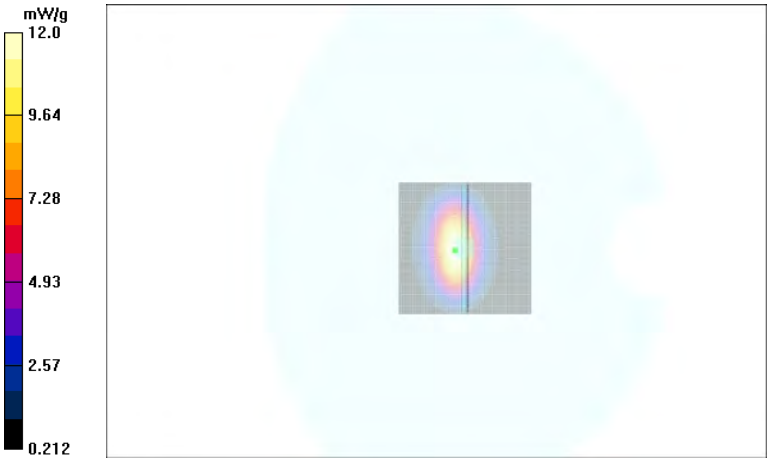
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: 5d063

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 1900 MHz; σ = 1.47 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

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 = 85.3 V/m
Peak SAR (extrapolated) = 19.9 W/kg
SAR(1 g) = 10.6 mW/g
SAR(10 g) = 5.43 mW/g
Power Drift = -0.018 dB
Maximum value of SAR (measured) = 12.0 mW/g



Date/Time: 2010-04-07 10:13:19

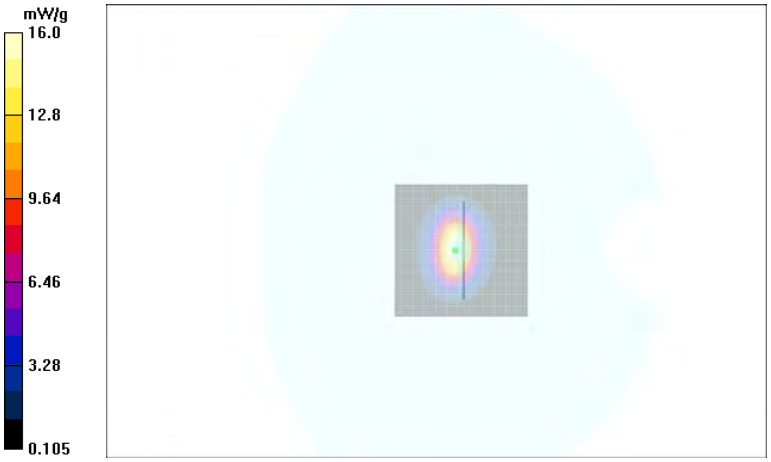
Test Laboratory: The name of your organization
Type: D2450V2; Serial: 790

Communication System: CW2450
Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: Head 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2450 MHz; σ = 1.87 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.36, 4.36, 4.36); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1408
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 184

d=10mm, Pin=250mW/Area Scan (71x71x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.5 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.9 V/m
Peak SAR (extrapolated) = 29.0 W/kg
SAR(1 g) = 14 mW/g
SAR(10 g) = 6.45 mW/g
Power Drift = -0.029 dB
Maximum value of SAR (measured) = 16.0 mW/g



APPENDIX B: MEASUREMENT SCANS

See the following pages

Date/Time: 2010-03-22 15:31:25

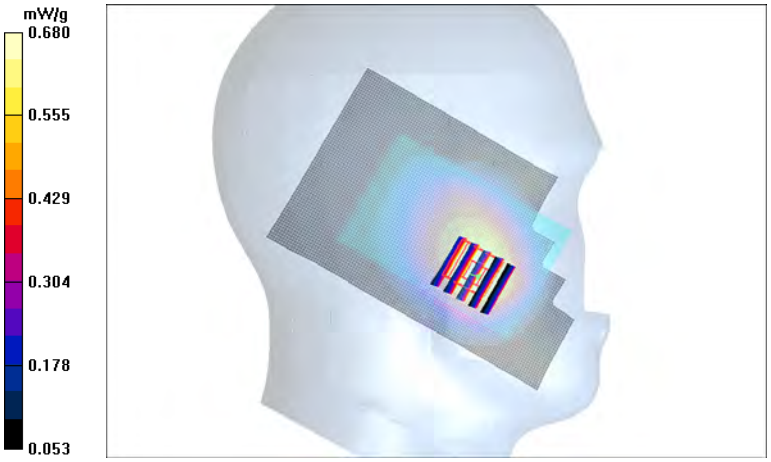
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM850
Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 837 MHz; σ = 0.881 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position – Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.680 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.6 V/m
Peak SAR (extrapolated) = 0.881 W/kg
SAR(1 g) = 0.632 mW/g
SAR(10 g) = 0.442 mW/g
Power Drift = -0.313 dB
Maximum value of SAR (measured) = 0.680 mW/g



Date/Time: 2010-03-22 17:36:09

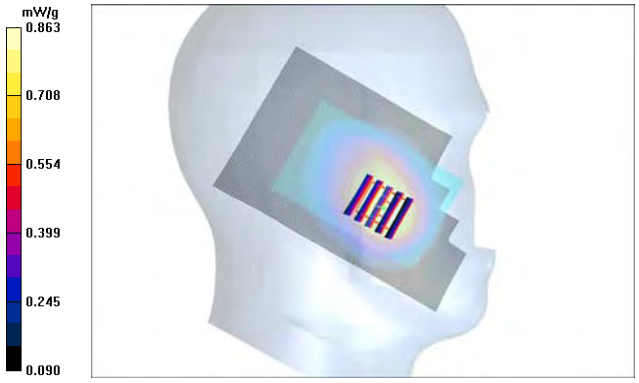
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

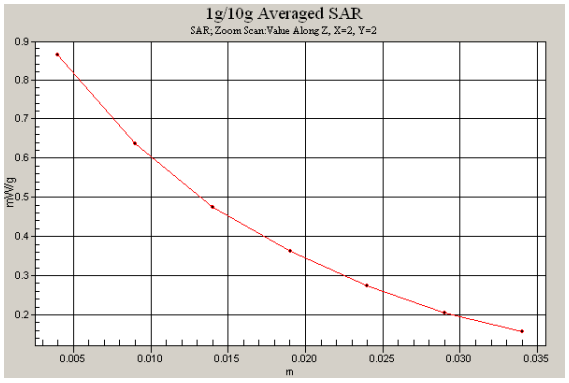
Communication System: 2-slot GPRS850
Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.871 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Low – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.865 mW/g

Cheek position - Low – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 13.6 V/m
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.813 mW/g
SAR(10 g) = 0.573 mW/g
Power Drift = 0.048 dB
Maximum value of SAR (measured) = 0.863 mW/g





Date/Time: 2010-03-22 16:40:20

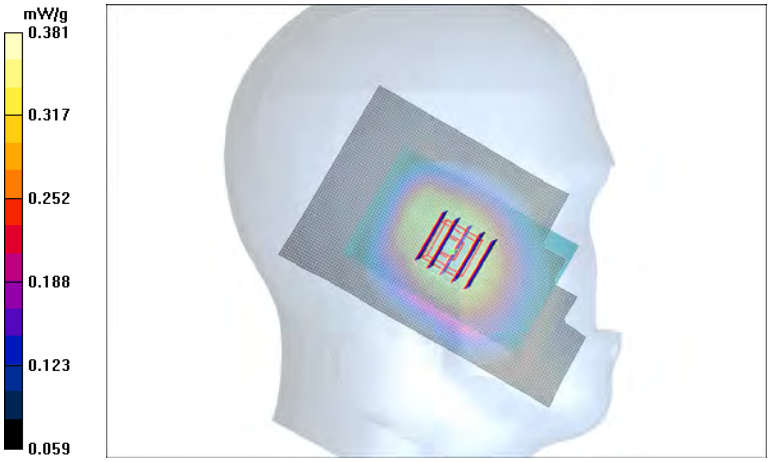
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 837 MHz; σ = 0.881 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.393 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.9 V/m
Peak SAR (extrapolated) = 0.447 W/kg
SAR(1 g) = 0.363 mW/g
SAR(10 g) = 0.278 mW/g
Power Drift = -0.188 dB
Maximum value of SAR (measured) = 0.381 mW/g



Date/Time: 2010-03-22 16:57:49

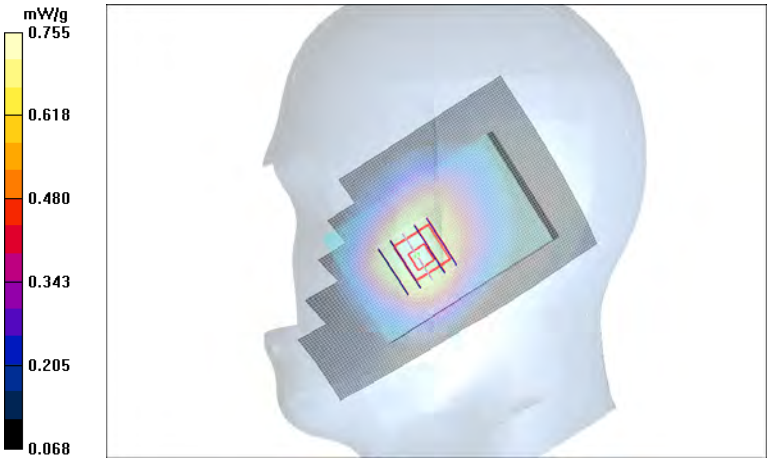
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 837 MHz; σ = 0.881 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.766 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 13.9 V/m
Peak SAR (extrapolated) = 0.924 W/kg
SAR(1 g) = 0.709 mW/g
SAR(10 g) = 0.523 mW/g
Power Drift = -0.001 dB
Maximum value of SAR (measured) = 0.755 mW/g



Date/Time: 2010-03-22 17:19:15

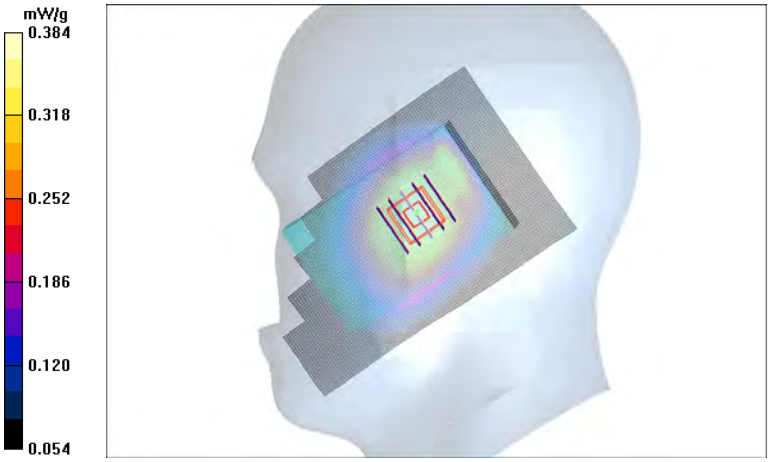
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 837 MHz; σ = 0.881 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.371 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.2 V/m
Peak SAR (extrapolated) = 0.466 W/kg
SAR(1 g) = 0.361 mW/g
SAR(10 g) = 0.273 mW/g
Power Drift = 0.110 dB
Maximum value of SAR (measured) = 0.384 mW/g



Date/Time: 2010-03-22 16:09:56

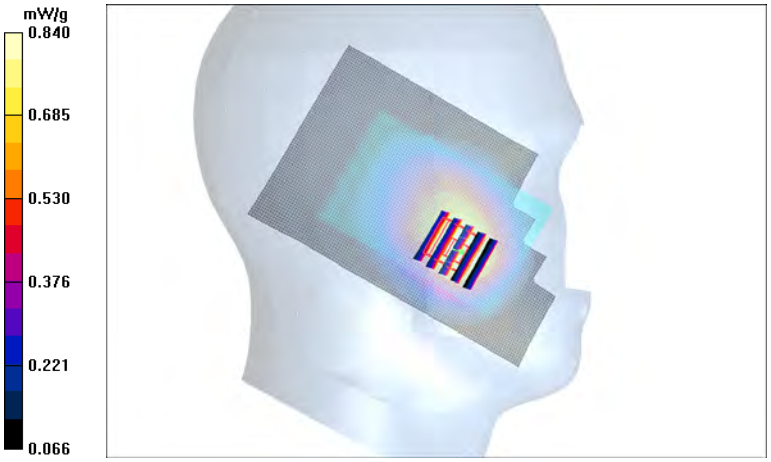
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 3-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:2.8
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used: f = 837 MHz; σ = 0.881 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.842 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.5 V/m
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.783 mW/g
SAR(10 g) = 0.548 mW/g
Power Drift = 0.112 dB
Maximum value of SAR (measured) = 0.840 mW/g



Date/Time: 2010-03-22 19:44:30

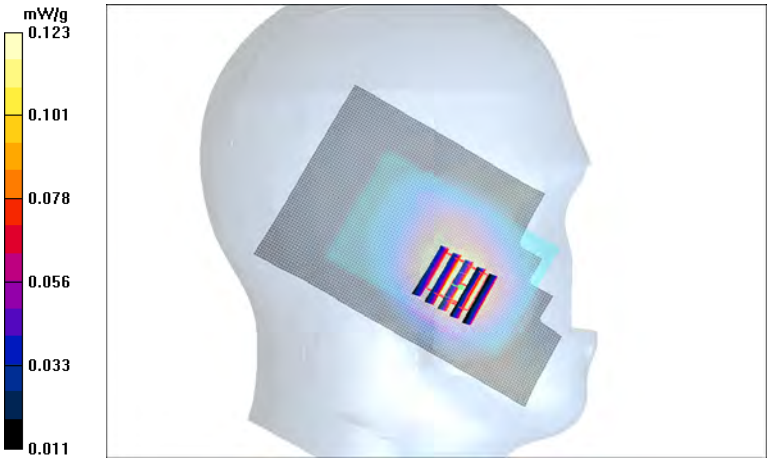
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot 8PSK EGPRS850
Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium: Head 835; Medium Notes: Medium Temperature: 21.8 C
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.871 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.104 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.72 V/m
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.110 mW/g
SAR(10 g) = 0.075 mW/g
Power Drift = -0.418 dB
Maximum value of SAR (measured) = 0.123 mW/g



Date/Time: 2010-03-30 11:03:20

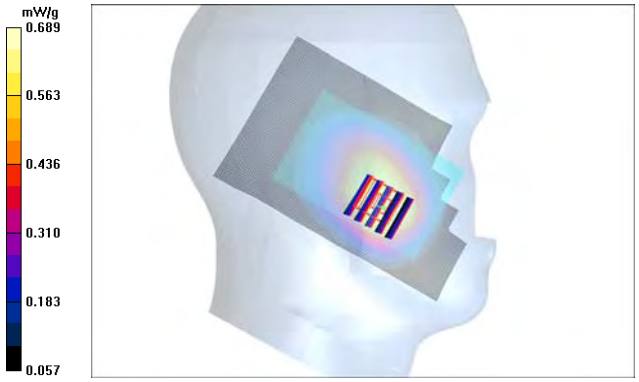
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

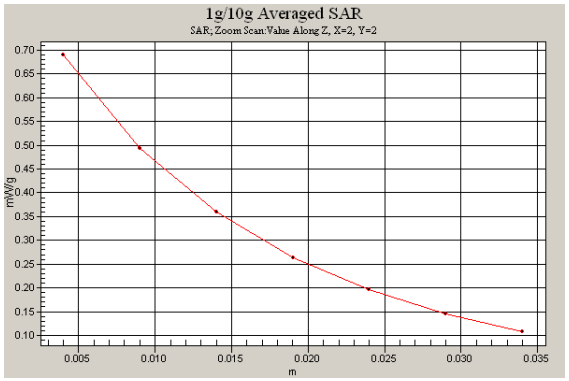
Communication System: WCDMA850
Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 22.0 C
Medium parameters used: f = 847 MHz; σ = 0.93 mho/m; ε_r = 42.7; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - High – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.713 mW/g

Cheek position - High – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.6 V/m
Peak SAR (extrapolated) = 0.908 W/kg
SAR(1 g) = 0.647 mW/g
SAR(10 g) = 0.456 mW/g
Power Drift = -0.140 dB
Maximum value of SAR (measured) = 0.689 mW/g





Date/Time: 2010-03-30 09:44:57

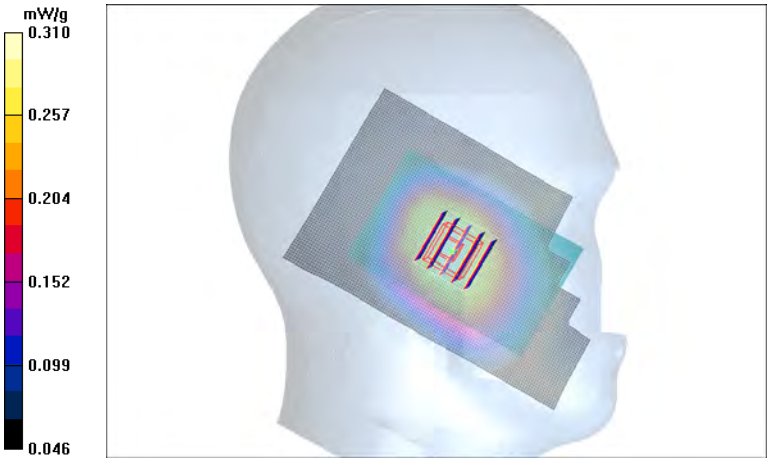
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 22.0 C
Medium parameters used: f = 835 MHz; σ = 0.917 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.308 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 14.1 V/m
Peak SAR (extrapolated) = 0.369 W/kg
SAR(1 g) = 0.295 mW/g
SAR(10 g) = 0.226 mW/g
Power Drift = -0.065 dB
Maximum value of SAR (measured) = 0.310 mW/g



Date/Time: 2010-03-30 09:58:59

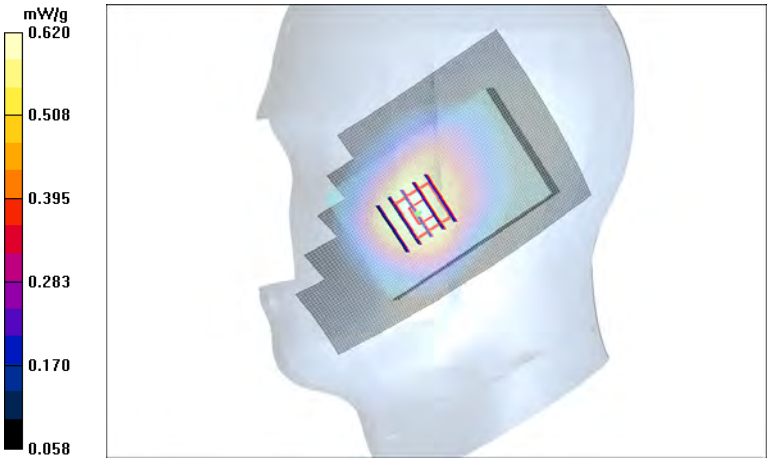
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 22.0 C
Medium parameters used: f = 835 MHz; σ = 0.917 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.637 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.1 V/m
Peak SAR (extrapolated) = 0.791 W/kg
SAR(1 g) = 0.591 mW/g
SAR(10 g) = 0.428 mW/g
Power Drift = -0.062 dB
Maximum value of SAR (measured) = 0.620 mW/g



Date/Time: 2010-03-30 10:15:25

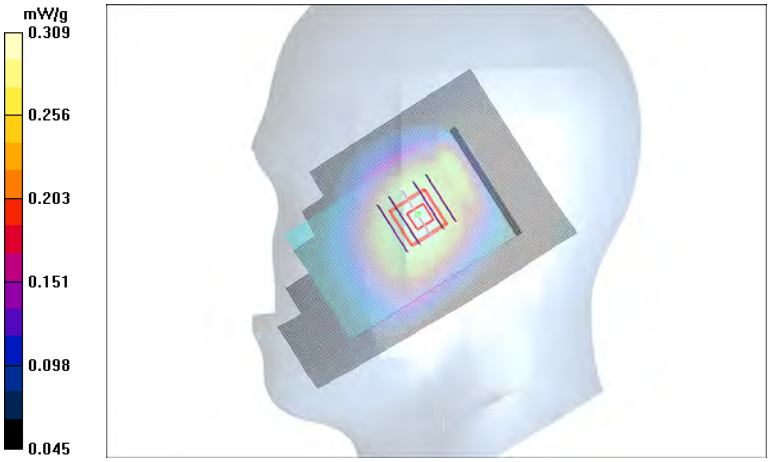
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: 22.0 C
Medium parameters used: f = 835 MHz; σ = 0.917 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.85, 5.85, 5.85); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 4; Type: Twin Phantom; Serial: TP-1410
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.310 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 14.0 V/m
Peak SAR (extrapolated) = 0.366 W/kg
SAR(1 g) = 0.294 mW/g
SAR(10 g) = 0.225 mW/g
Power Drift = 0.066 dB
Maximum value of SAR (measured) = 0.309 mW/g



Date/Time: 2010-03-24 11:08:09

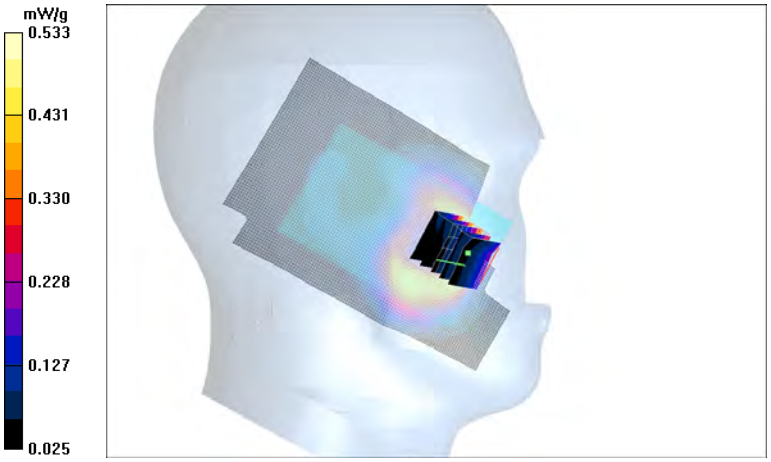
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.485 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.18 V/m
Peak SAR (extrapolated) = 0.834 W/kg
SAR(1 g) = 0.481 mW/g
SAR(10 g) = 0.272 mW/g
Power Drift = -0.054 dB
Maximum value of SAR (measured) = 0.533 mW/g



Date/Time: 2010-03-24 13:53:09

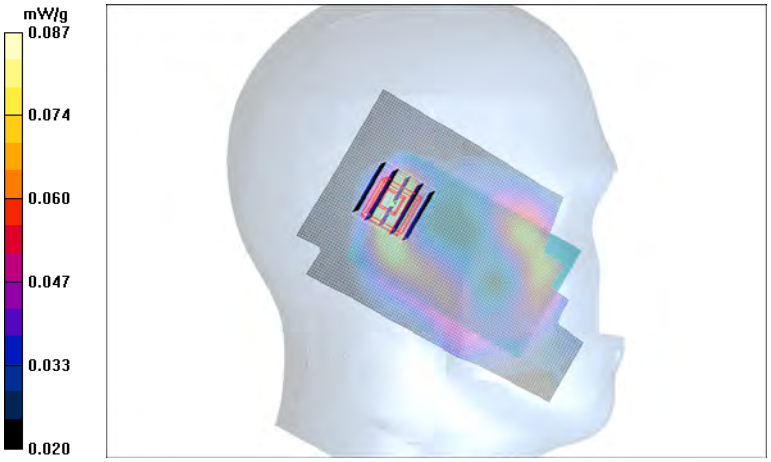
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide openArea Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.093 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.12 V/m
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.079 mW/g
SAR(10 g) = 0.052 mW/g
Power Drift = 0.065 dB
Maximum value of SAR (measured) = 0.087 mW/g



Date/Time: 2010-03-24 13:17:59

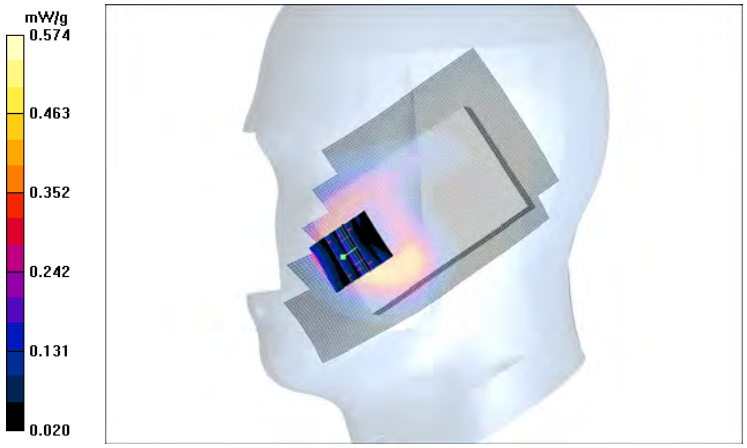
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.468 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.51 V/m
Peak SAR (extrapolated) = 0.901 W/kg
SAR(1 g) = 0.516 mW/g
SAR(10 g) = 0.282 mW/g
Power Drift = -0.444 dB
Maximum value of SAR (measured) = 0.574 mW/g



Date/Time: 2010-03-24 13:36:04

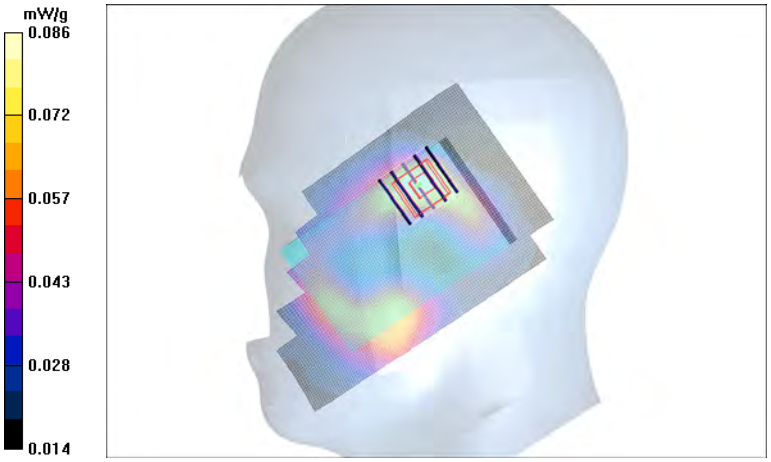
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.094 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.81 V/m
Peak SAR (extrapolated) = 0.117 W/kg
SAR(1 g) = 0.078 mW/g
SAR(10 g) = 0.051 mW/g
Power Drift = -0.097 dB
Maximum value of SAR (measured) = 0.086 mW/g



Date/Time: 2010-03-24 11:54:23

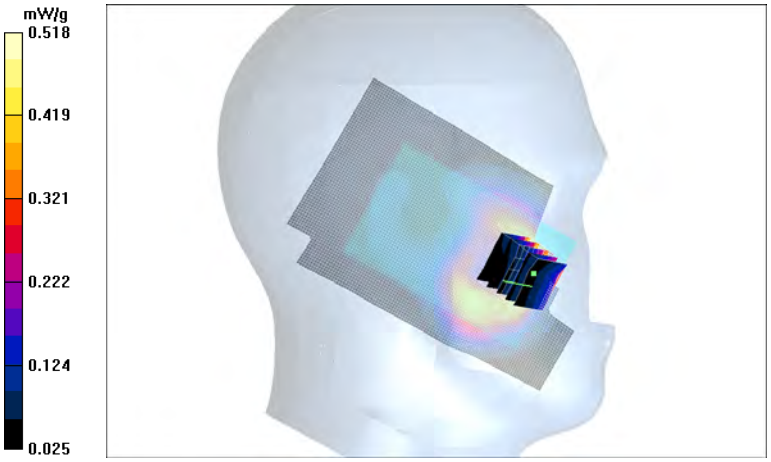
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS1900
Frequency: 1880.0 MHz; Duty Cycle: 1:4.2
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.483 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.04 V/m
Peak SAR (extrapolated) = 0.817 W/kg
SAR(1 g) = 0.471 mW/g
SAR(10 g) = 0.270 mW/g
Power Drift = 0.149 dB
Maximum value of SAR (measured) = 0.518 mW/g



Date/Time: 2010-03-24 12:13:31

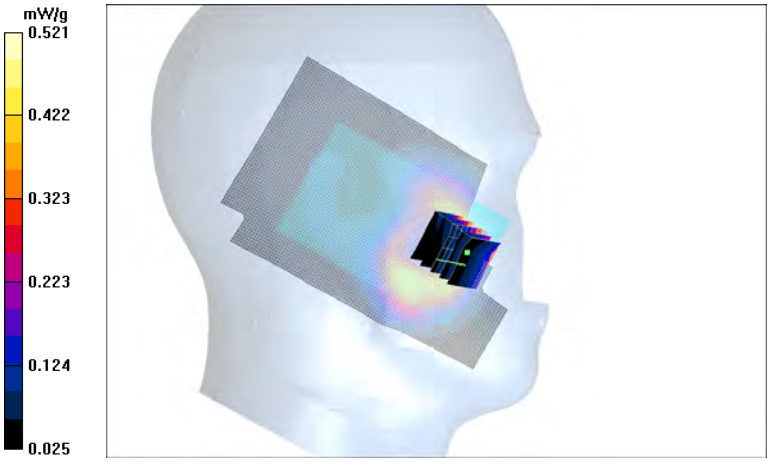
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 3-slot GPRS1900
Frequency: 1880.0 MHz; Duty Cycle: 1:2.8
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.475 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.93 V/m
Peak SAR (extrapolated) = 0.808 W/kg
SAR(1 g) = 0.472 mW/g
SAR(10 g) = 0.265 mW/g
Power Drift = 0.208 dB
Maximum value of SAR (measured) = 0.521 mW/g



Date/Time: 2010-03-24 16:48:52

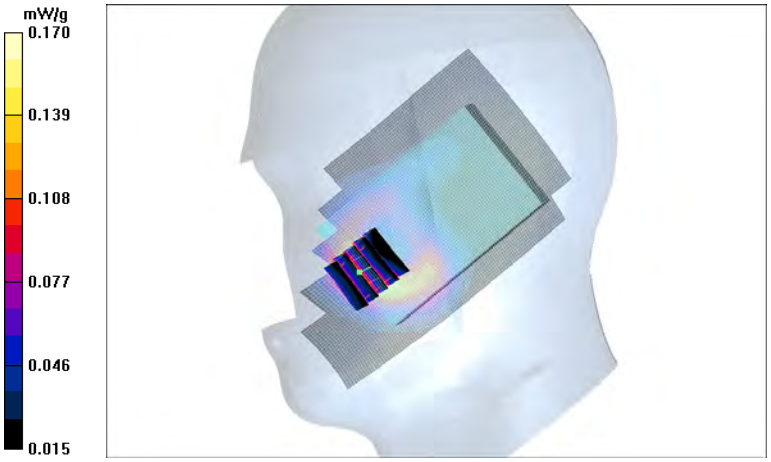
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 1-slot 8PSK EGPRS 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Head 1900; Medium Notes: Medium Temperature: 21.7 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.150 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.12 V/m
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.154 mW/g
SAR(10 g) = 0.088 mW/g
Power Drift = -0.236 dB
Maximum value of SAR (measured) = 0.170 mW/g



Date/Time: 2010-03-29 10:53:52

Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

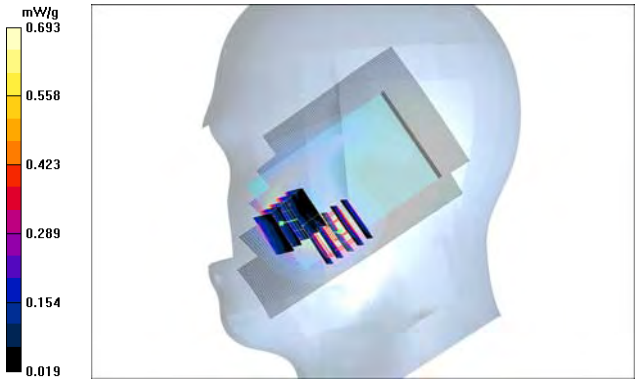
Communication System: WCDMA1900
Frequency: 1880.0 MHz; Duty Cycle: 1:1
Medium: Head 1900; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Phantom section: Right Section

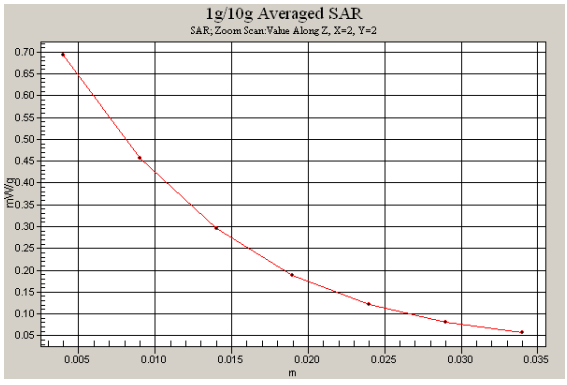
DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.9, 4.9, 4.9); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 3; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.594 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.32 V/m
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.631 mW/g
SAR(10 g) = 0.349 mW/g
Power Drift = -0.396 dB
Maximum value of SAR (measured) = 0.693 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.32 V/m
Peak SAR (extrapolated) = 0.747 W/kg
SAR(1 g) = 0.507 mW/g
SAR(10 g) = 0.314 mW/g
Power Drift = -0.396 dB
Maximum value of SAR (measured) = 0.550 mW/g





Date/Time: 2010-04-07 13:20:16

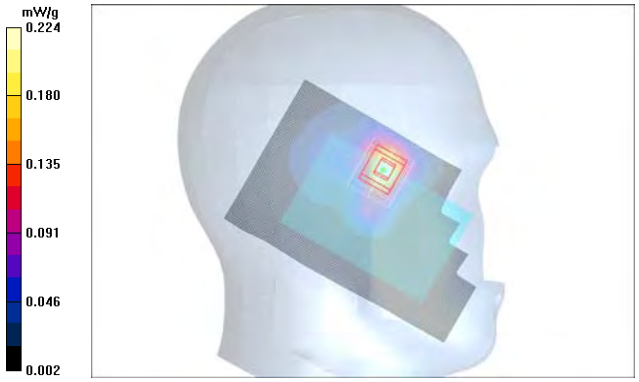
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

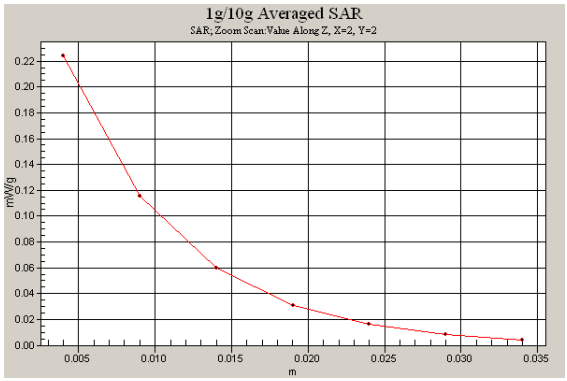
Communication System: WLAN2450
Frequency: 2462.0 MHz; Duty Cycle: 1:1
Medium: Head 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2462 MHz; σ = 1.88 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.36, 4.36, 4.36); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1408
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - High – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.227 mW/g

Cheek position - High – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.09 V/m
Peak SAR (extrapolated) = 0.399 W/kg
SAR(1 g) = 0.201 mW/g
SAR(10 g) = 0.099 mW/g
Power Drift = -0.058 dB
Maximum value of SAR (measured) = 0.224 mW/g





Date/Time: 2010-04-07 11:45:03

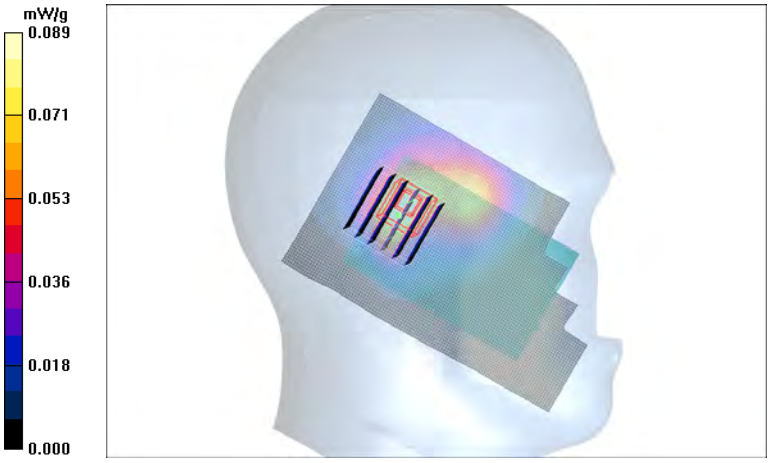
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Head 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.36, 4.36, 4.36); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1408
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.087 mW/g

Tilt position - Middle – Slide open/Zoom Scan 2 (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.81 V/m
Peak SAR (extrapolated) = 0.142 W/kg
SAR(1 g) = 0.080 mW/g
SAR(10 g) = 0.044 mW/g
Power Drift = -0.062 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) = 0.089 mW/g



Date/Time: 2010-04-07 12:17:28

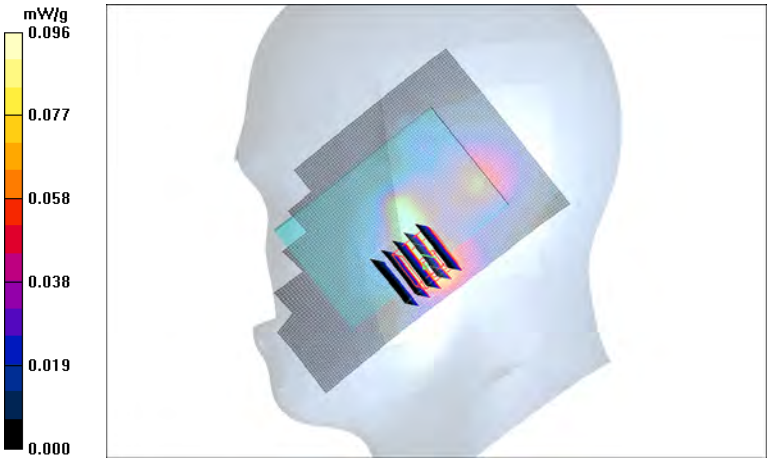
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Head 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.36, 4.36, 4.36); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1408
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Cheek position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.104 mW/g

Cheek position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 5.23 V/m
Peak SAR (extrapolated) = 0.167 W/kg
SAR(1 g) = 0.089 mW/g
SAR(10 g) = 0.048 mW/g
Power Drift = -0.261 dB
Maximum value of SAR (measured) = 0.096 mW/g



Date/Time: 2010-04-07 12:36:04

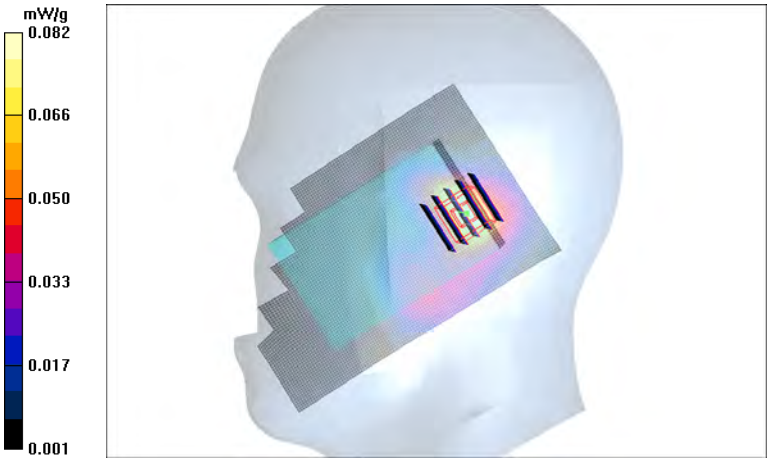
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Head 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.36, 4.36, 4.36); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 8; Type: SAM Twin Phantom; Serial: TP-1408
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Tilt position - Middle – Slide open/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.085 mW/g

Tilt position - Middle – Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.55 V/m
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.075 mW/g
SAR(10 g) = 0.041 mW/g
Power Drift = 0.132 dB
Maximum value of SAR (measured) = 0.082 mW/g



Date/Time: 2010-03-30 17:04:03

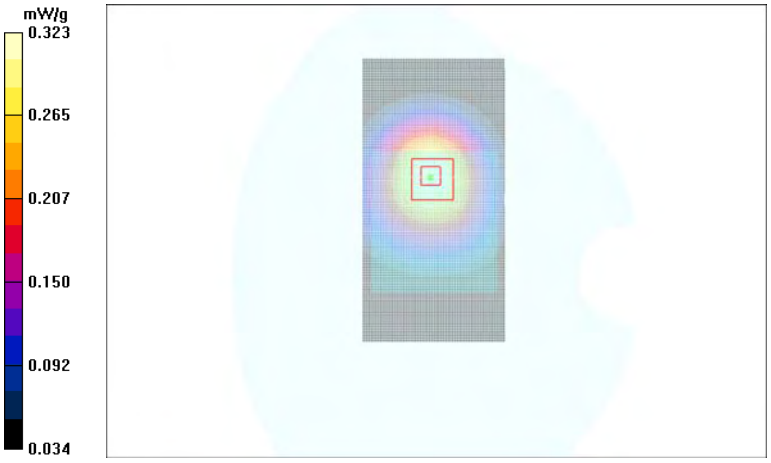
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 837 MHz; σ = 0.958 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - No Accessory - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.332 mW/g

Body - Middle - No Accessory - Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.59 V/m
Peak SAR (extrapolated) = 0.417 W/kg
SAR(1 g) = 0.302 mW/g
SAR(10 g) = 0.211 mW/g
Power Drift = -0.097 dB
Maximum value of SAR (measured) = 0.323 mW/g



Date/Time: 2010-03-30 17:40:20

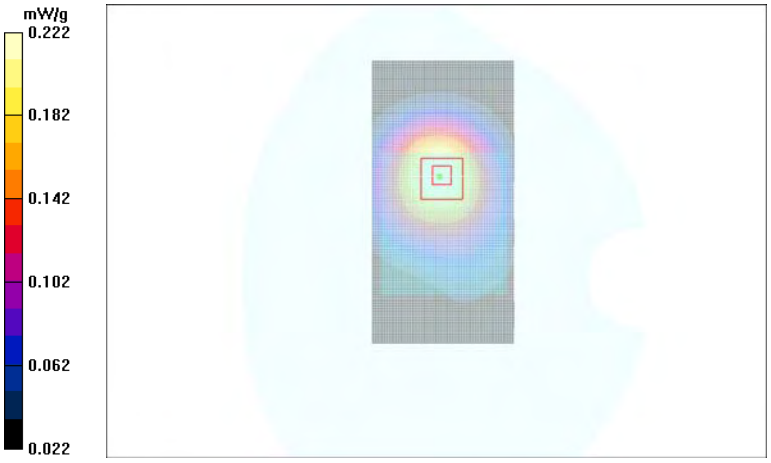
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 837 MHz; σ = 0.958 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.231 mW/g

Body - Middle - HS-125 - Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.35 V/m
Peak SAR (extrapolated) = 0.289 W/kg
SAR(1 g) = 0.209 mW/g
SAR(10 g) = 0.145 mW/g
Power Drift = -0.306 dB
Maximum value of SAR (measured) = 0.222 mW/g



Date/Time: 2010-03-30 18:27:59

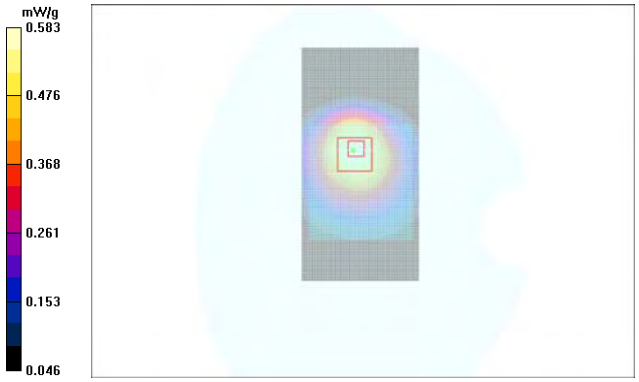
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

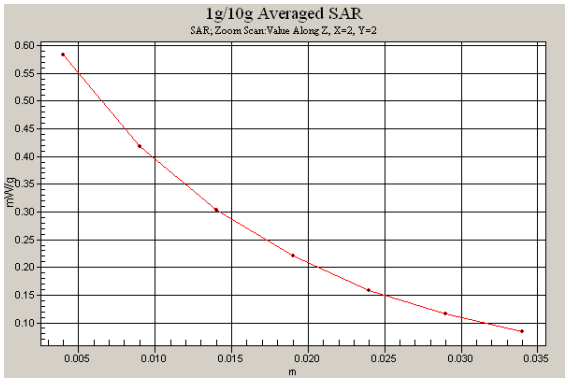
Communication System: 2-slot GPRS850
Frequency: 848.8 MHz; Duty Cycle: 1:4.2
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 849 MHz; σ = 0.97 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - High - No Accessory - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.578 mW/g

Body - High - No Accessory - Slide closed - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.1 V/m
Peak SAR (extrapolated) = 0.757 W/kg
SAR(1 g) = 0.541 mW/g
SAR(10 g) = 0.377 mW/g
Power Drift = 0.106 dB
Maximum value of SAR (measured) = 0.583 mW/g





Date/Time: 2010-03-30 18:46:30

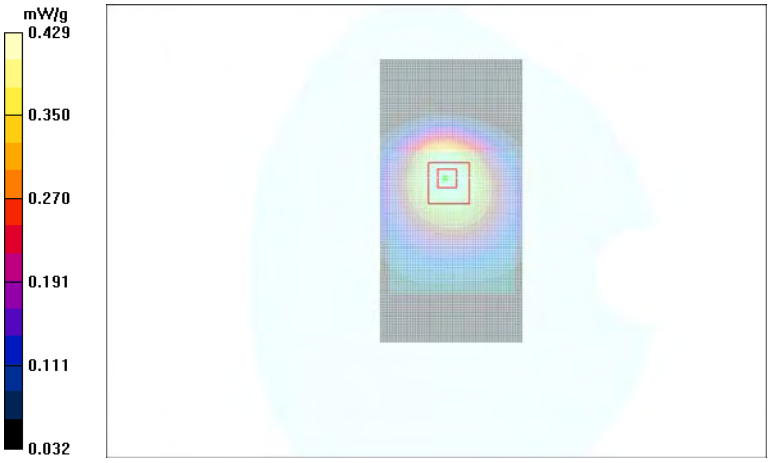
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 837 MHz; σ = 0.958 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.450 mW/g

Body - Middle - HS-125 - Slide closed - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.11 V/m
Peak SAR (extrapolated) = 0.563 W/kg
SAR(1 g) = 0.403 mW/g
SAR(10 g) = 0.280 mW/g
Power Drift = -0.293 dB
Maximum value of SAR (measured) = 0.429 mW/g



Date/Time: 2010-03-30 12:03:37

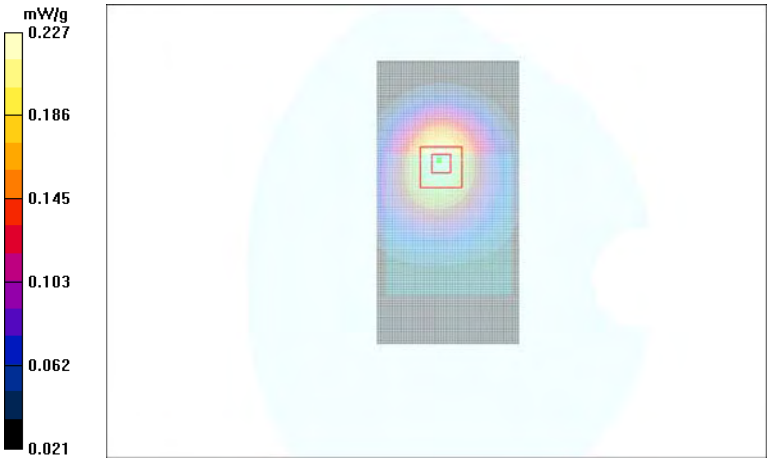
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 835 MHz; σ = 0.956 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - No Accessory – Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.227 mW/g

Body - Middle - No Accessory – Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.92 V/m
Peak SAR (extrapolated) = 0.298 W/kg
SAR(1 g) = 0.212 mW/g
SAR(10 g) = 0.145 mW/g
Power Drift = -0.126 dB
Maximum value of SAR (measured) = 0.227 mW/g



Date/Time: 2010-03-30 12:17:34

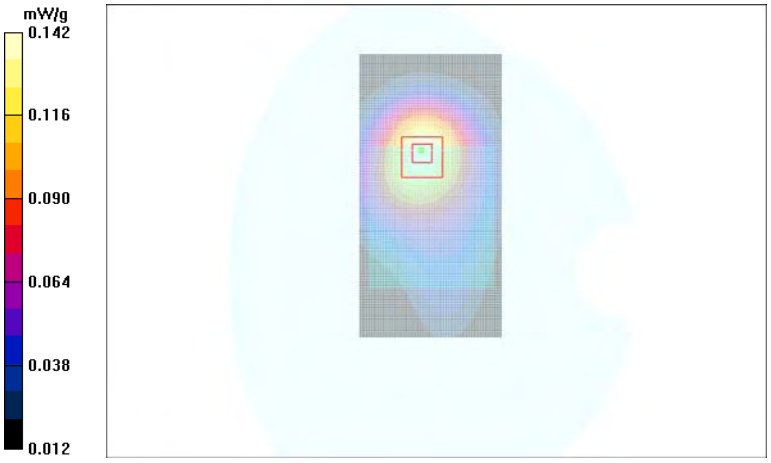
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 835 MHz; σ = 0.956 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 – Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.145 mW/g

Body - Middle - HS-125 – Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.72 V/m
Peak SAR (extrapolated) = 0.192 W/kg
SAR(1 g) = 0.133 mW/g
SAR(10 g) = 0.091 mW/g
Power Drift = -0.380 dB
Maximum value of SAR (measured) = 0.142 mW/g



Date/Time: 2010-03-30 13:59:37

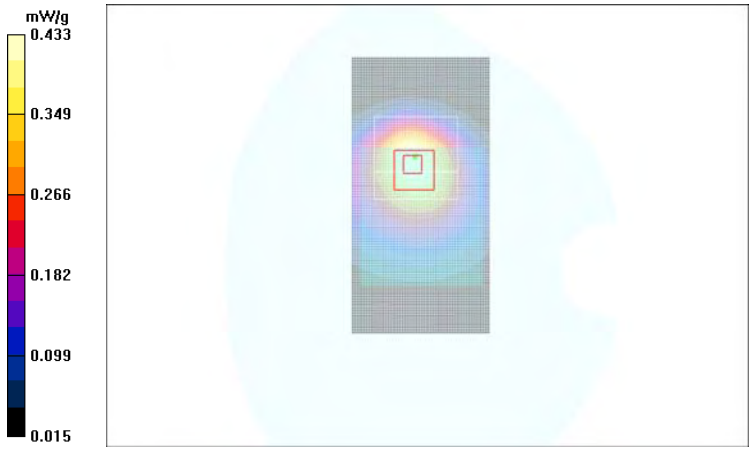
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 847 MHz; σ = 0.968 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - High - No Accessory – Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.435 mW/g

Body - High - No Accessory – Slide closed - Back facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.29 V/m
Peak SAR (extrapolated) = 0.581 W/kg
SAR(1 g) = 0.411 mW/g
SAR(10 g) = 0.283 mW/g
Power Drift = 0.382 dB
Maximum value of SAR (measured) = 0.433 mW/g



Date/Time: 2010-03-30 13:15:09

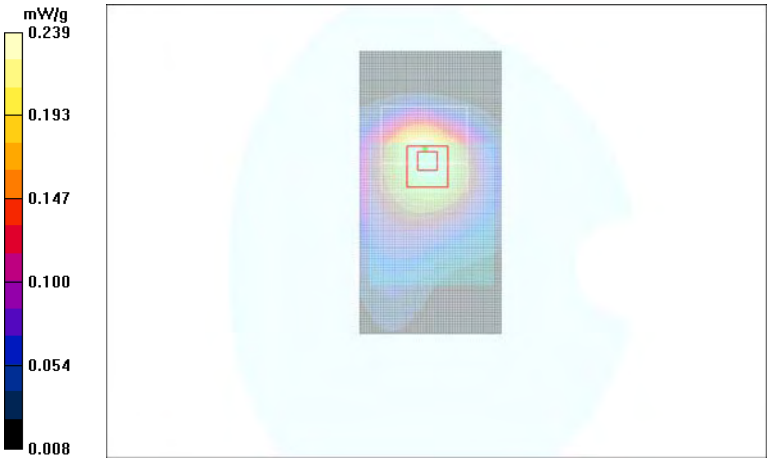
Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031006/7

Communication System: WCDMA850
Frequency: 835.0 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 835 MHz; σ = 0.956 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2009-09-22
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2009-07-21
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1302
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 – Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.240 mW/g

Body - Middle - HS-125 – Slide closed - Back facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.61 V/m
Peak SAR (extrapolated) = 0.318 W/kg
SAR(1 g) = 0.225 mW/g
SAR(10 g) = 0.155 mW/g
Power Drift = 0.175 dB
Maximum value of SAR (measured) = 0.239 mW/g



Date/Time: 2010-03-24 15:04:55

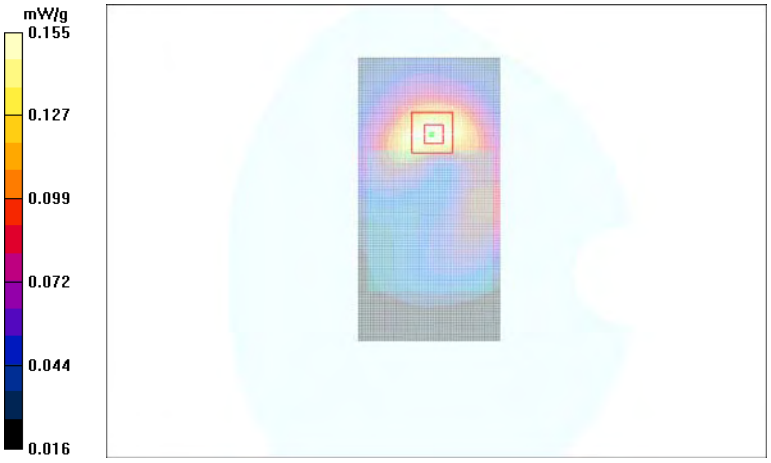
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.58 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - No Accessory - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.162 mW/g

Body - Middle - No Accessory - Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.02 V/m
Peak SAR (extrapolated) = 0.198 W/kg
SAR(1 g) = 0.143 mW/g
SAR(10 g) = 0.094 mW/g
Power Drift = -0.182 dB
Maximum value of SAR (measured) = 0.155 mW/g



Date/Time: 2010-03-24 15:24:30

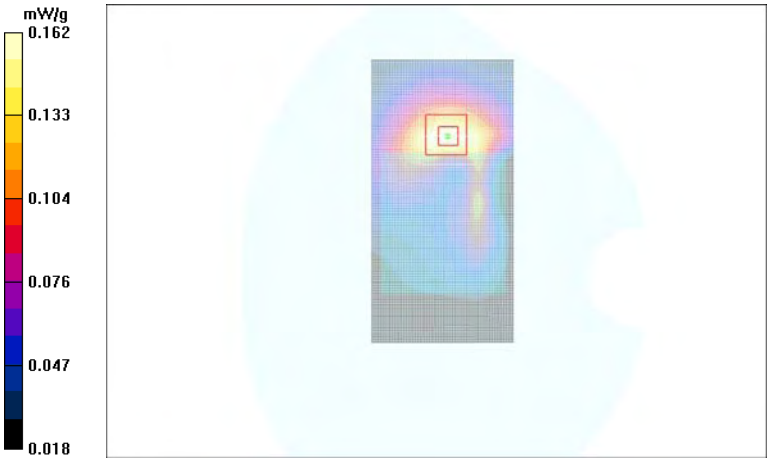
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.58 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - Headset HS-125 - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.162 mW/g

Body - Middle - Headset HS-125 - Slide closed - Display facing phantom/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 5.19 V/m
Peak SAR (extrapolated) = 0.207 W/kg
SAR(1 g) = 0.149 mW/g
SAR(10 g) = 0.097 mW/g
Power Drift = 0.281 dB
Maximum value of SAR (measured) = 0.162 mW/g



Date/Time: 2010-03-24 15:36:49

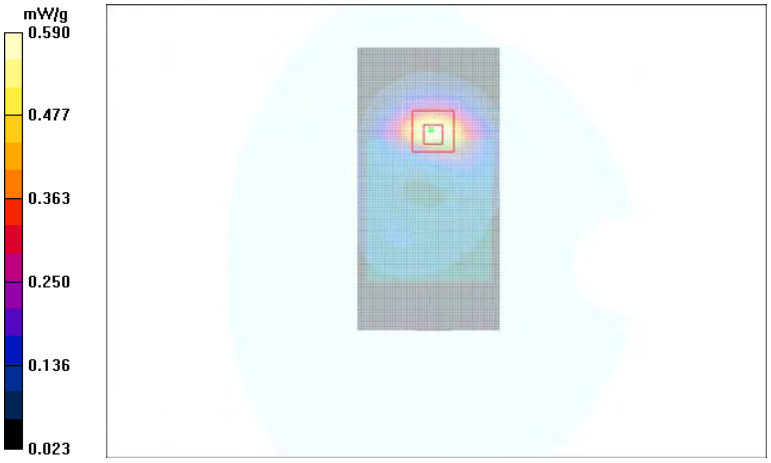
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1880.0 MHz; Duty Cycle: 1:8.3
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used: f = 1880 MHz; σ = 1.58 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - No Accessory - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.599 mW/g

Body - Middle - No Accessory - Slide closed - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.15 V/m
Peak SAR (extrapolated) = 0.854 W/kg
SAR(1 g) = 0.545 mW/g
SAR(10 g) = 0.308 mW/g
Power Drift = 0.025 dB
Maximum value of SAR (measured) = 0.590 mW/g



Date/Time: 2010-03-24 16:03:16

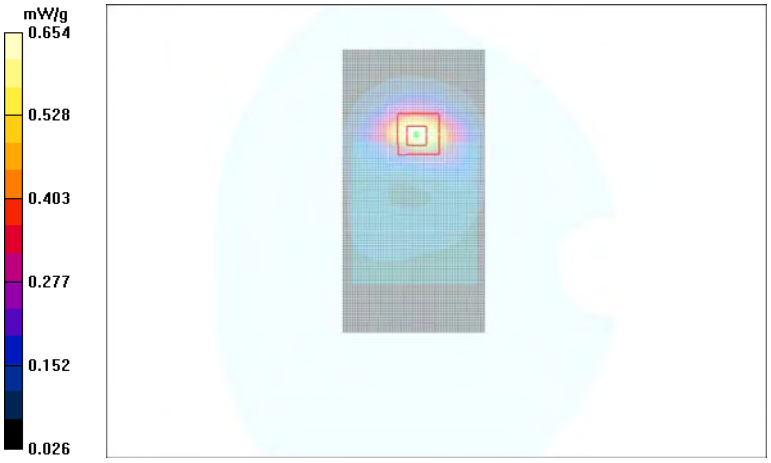
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900
Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Medium: Body 1900; Medium Notes: Medium Temperature: 22.2 C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.54 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Low - Headset HS-125 - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.663 mW/g

Body - Low - Headset HS-125 - Slide closed - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 6.29 V/m
Peak SAR (extrapolated) = 0.904 W/kg
SAR(1 g) = 0.587 mW/g
SAR(10 g) = 0.335 mW/g
Power Drift = -0.044 dB
Maximum value of SAR (measured) = 0.654 mW/g



Date/Time: 2010-03-30 10:24:53

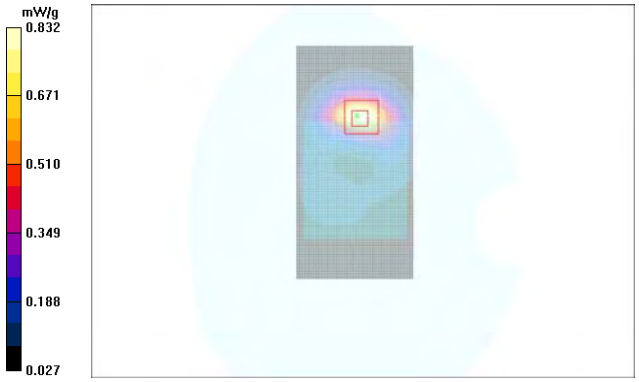
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

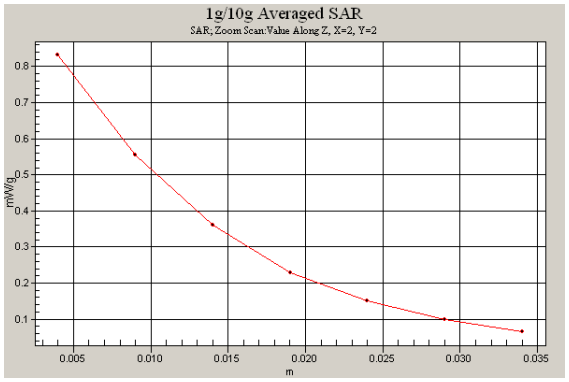
Communication System: WCDMA1900
Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: Body 1900; Medium Notes: Medium Temperature: 21.9 C
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.53 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.41, 4.41, 4.41); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Low - Headset HS-125 - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.852 mW/g

Body - Low - Headset HS-125 - Slide closed - Back facing phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.58 V/m
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.762 mW/g
SAR(10 g) = 0.432 mW/g
Power Drift = -0.275 dB
Maximum value of SAR (measured) = 0.832 mW/g





Date/Time: 2010-04-07 19:30:22

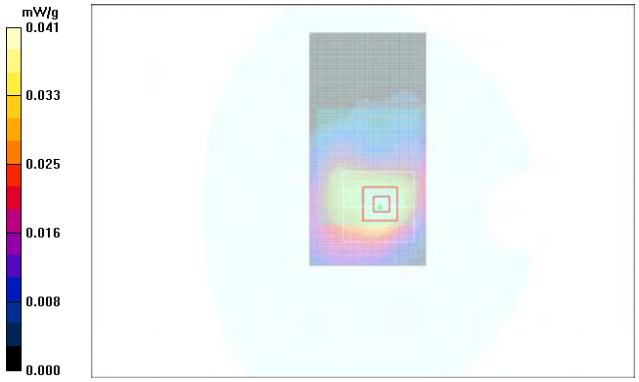
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

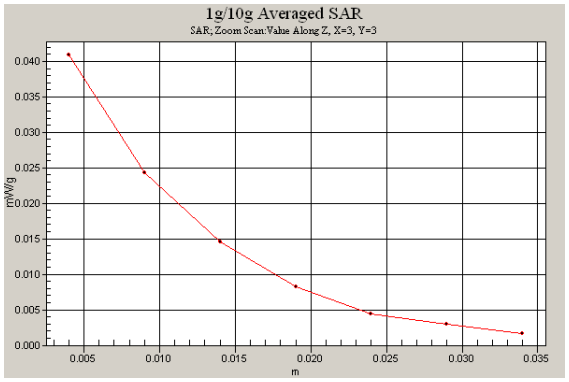
Communication System: WLAN2450
Frequency: 2412.0 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2412 MHz; σ = 1.83 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Low - No Accessory - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.043 mW/g

Body - Low - No Accessory - Slide closed - Display facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.68 V/m
Peak SAR (extrapolated) = 0.066 W/kg
SAR(1 g) = 0.038 mW/g
SAR(10 g) = 0.023 mW/g
Power Drift = -0.014 dB
Maximum value of SAR (measured) = 0.041 mW/g





Date/Time: 2010-04-07 18:30:38

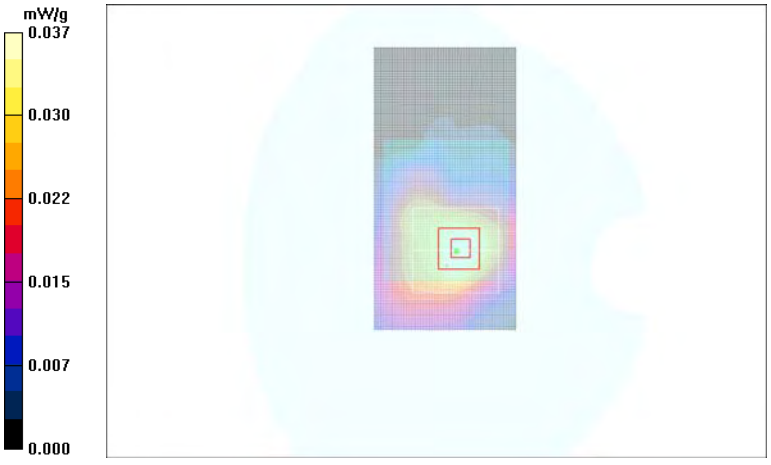
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 - Slide closed - Display facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.038 mW/g

Body - Middle - HS-125 - Slide closed - Display facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.25 V/m
Peak SAR (extrapolated) = 0.058 W/kg
SAR(1 g) = 0.034 mW/g
SAR(10 g) = 0.020 mW/g
Power Drift = 0.150 dB
Maximum value of SAR (measured) = 0.037 mW/g



Date/Time: 2010-04-07 18:52:52

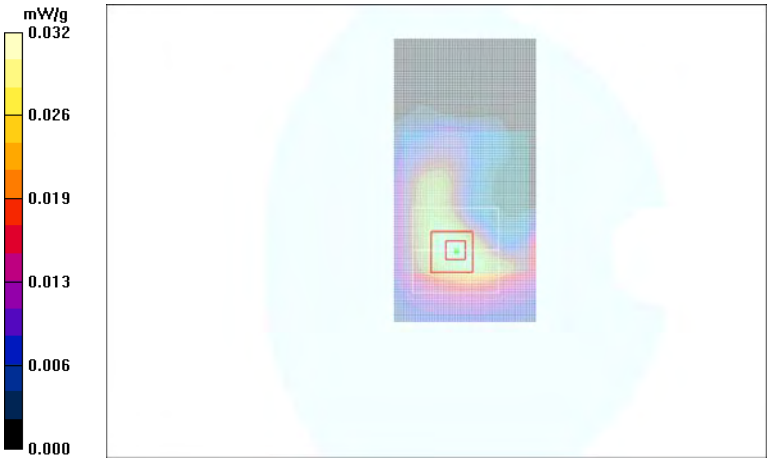
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - No Accessory - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.031 mW/g

Body - Middle - No Accessory - Slide closed - Back facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 4.02 V/m
Peak SAR (extrapolated) = 0.049 W/kg
SAR(1 g) = 0.029 mW/g
SAR(10 g) = 0.016 mW/g
Power Drift = 0.201 dB
Maximum value of SAR (measured) = 0.032 mW/g



Date/Time: 2010-04-07 19:09:30

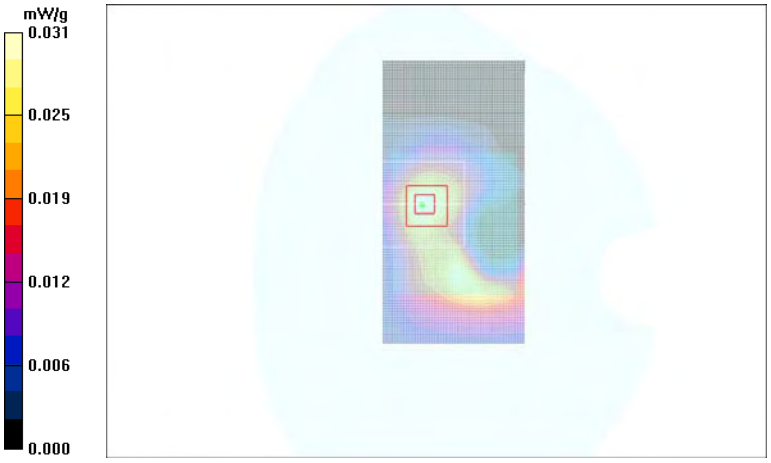
Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WLAN2450
Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Body 2450; Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(4.12, 4.12, 4.12); Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

Body - Middle - HS-125 - Slide closed - Back facing phantom/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.031 mW/g

Body - Middle - HS-125 - Slide closed - Back facing phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 3.77 V/m
Peak SAR (extrapolated) = 0.048 W/kg
SAR(1 g) = 0.028 mW/g
SAR(10 g) = 0.016 mW/g
Power Drift = 0.134 dB
Maximum value of SAR (measured) = 0.031 mW/g



Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850, Communication System: WLAN2450
Frequency: 824.2 MHz, Frequency: 2462.0 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1
Medium: Head 835, Medium: Head 2450; Medium Notes: Medium Temperature: 21.8 C, Medium Notes: Medium Temperature: 21.1 C
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.871 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.89 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

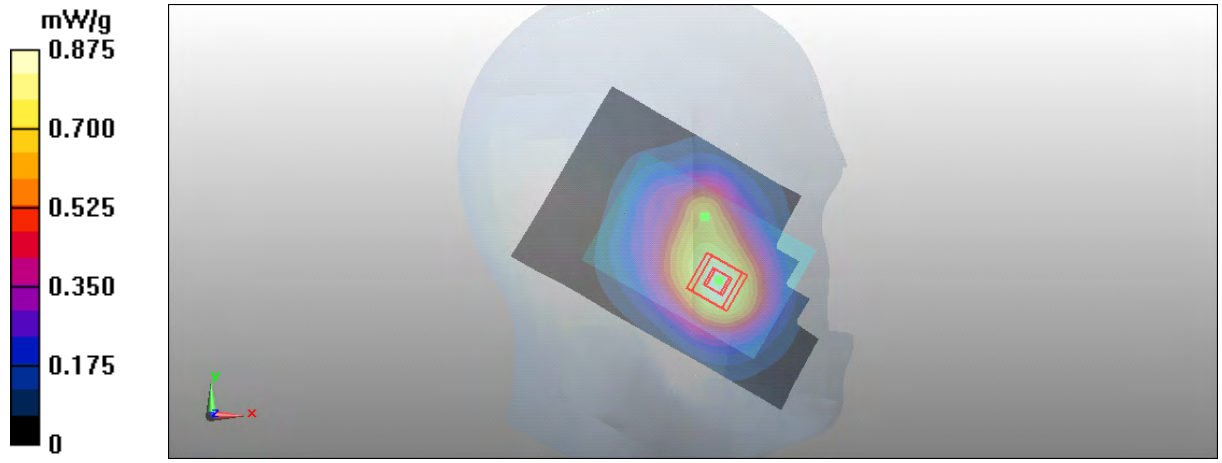
DASY4 Configuration:
- Probe: ES3DV3 - SN3118, Probe: ES3DV3 - SN3117
- ConvF(5.85, 5.85, 5.85), ConvF(4.36, 4.36, 4.36); Calibrated: 9/22/2009, Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE3 Sn573, Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- Phantom: SAM 4, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1410, Serial: TP-1408
- ; SEMCAD X Version 14.0 Build 60

Configuration/Cheek position – Low – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Cheek position – High – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.819 mW/g
SAR(10 g) = 0.565 mW/g

Maximum value of SAR (measured) = 0.875 mW/g



Date/Time: 2010-03-30 11:03:20, Date/Time: 2010-04-07 13:20:16

Test Laboratory: TCC Nokia

Type: RM-648, Type: RM-627; Serial: 004402/13/031006/7, Serial: 004402/13/027199/6

Communication System: WCDMA850, Communication System: WLAN2450

Frequency: 846.6 MHz, Frequency: 2462.0 MHz; Duty Cycle: 1:1

Medium: Head 835, Medium: Head 2450; Medium Notes: Medium Temperature: 22.0 C, Medium Notes: Medium Temperature: 21.3 C

Medium parameters used: f = 847 MHz; σ = 0.93 mho/m; ε_r = 42.7; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.88 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3

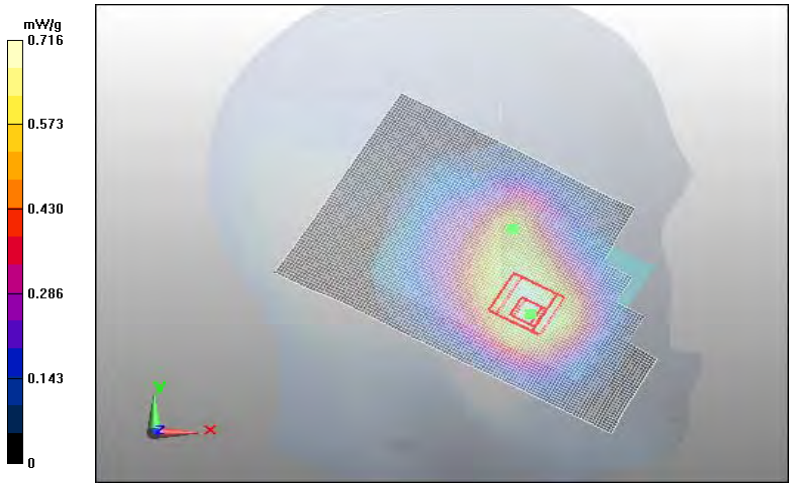
Phantom section: Left Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3118, Probe: ES3DV3 - SN3117
- ConvF(5.85, 5.85, 5.85), ConvF(4.36, 4.36, 4.36); Calibrated: 2009-09-22, Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE3 Sn573, Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 4, Phantom: SAM 8; Type: Twin Phantom, Type: SAM Twin Phantom; Serial: TP-1410, Serial: TP-1408
- ; SEMCAD X Version 14.0 Build 60

Configuration/Cheek position – High – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.670 mW/g
SAR(10 g) = 0.463 mW/g

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



Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900, Communication System: WLAN2450
Frequency: 1880.0 MHz, Frequency: 2462.0 MHz; Duty Cycle: 1:8.3, Duty Cycle: 1:1
Medium: Head 1900, Medium: Head 2450; Medium Notes: Medium Temperature: 21.7 C, Medium Notes: Medium Temperature: 21.1 C
Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38; ρ = 1000 kg/m^3 , Medium parameters used: f = 2462 MHz; σ = 1.89 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Left Section

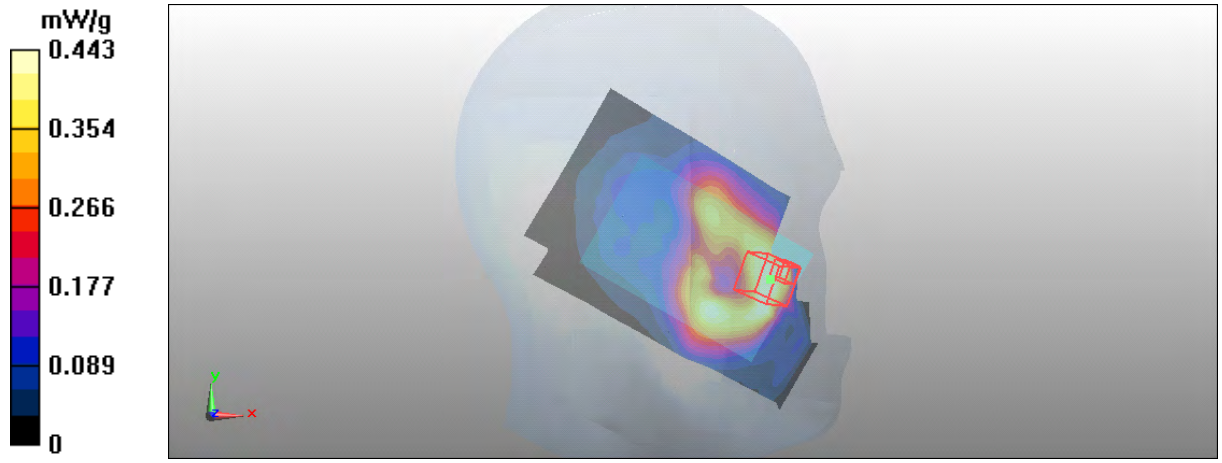
DASY4 Configuration:
- Probe: ES3DV3 - SN3117
- ConvF(4.9, 4.9, 4.9), ConvF(4.36, 4.36, 4.36); Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- 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 60

Configuration/Cheek position – Middle – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Cheek position – High – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.625 mW/g
SAR(10 g) = 0.281 mW/g

Maximum value of SAR (measured) = 0.443 mW/g



Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

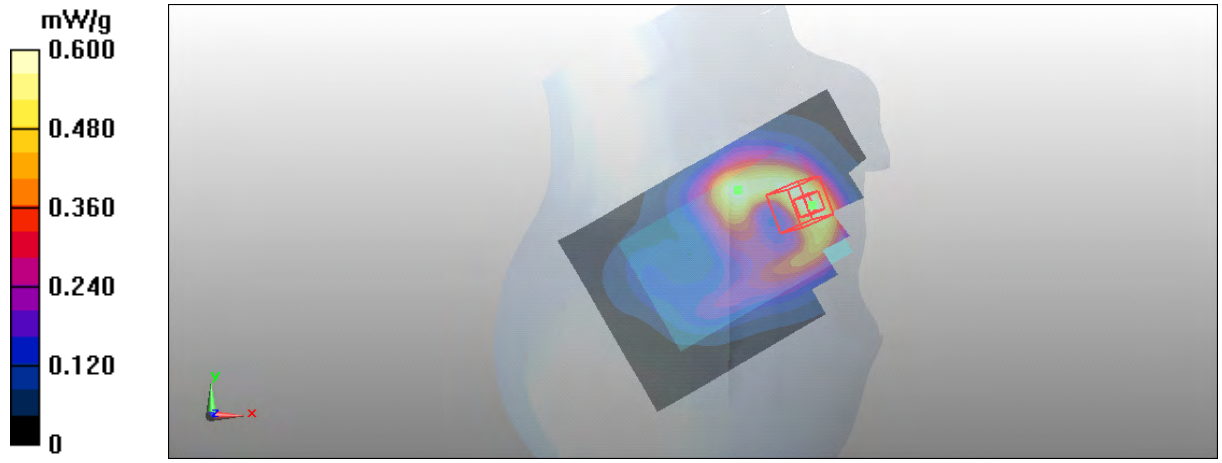
Communication System: WLAN2450, Communication System: WCDMA1900
Frequency: 2442.0 MHz, Frequency: 1880.0 MHz; Duty Cycle: 1:1
Medium: Head 2450, Medium: Head 1900; Medium Notes: Medium Temperature: 21.1 C, Medium Notes: Medium Temperature: 22.1 C
Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 38; ρ = 1000 kg/m^3 , Medium parameters used: f = 1880 MHz; σ = 1.47 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3117
- ConvF(4.36, 4.36, 4.36), ConvF(4.9, 4.9, 4.9); Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- Phantom: SAM 8, Phantom: SAM 3; Type: SAM Twin Phantom, Type: Twin Phantom; Serial: TP-1408, Serial: TP-1302
- ; SEMCAD X Version 14.0 Build 60

Configuration/Cheek position – Middle – Slide open/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.534 mW/g
SAR(10 g) = 0.314 mW/g

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



Date/Time: 2010-03-30 18:27:59, Date/Time: 2010-04-07 19:30:22

Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: 2-slot GPRS850, Communication System: WLAN2450
Frequency: 848.8 MHz, Frequency: 2412.0 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1
Medium: Body 835, Medium: Body 2450; Medium Notes: Medium Temperature: 22.1 C, Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 849 MHz; σ = 0.97 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3 , Medium parameters used: f = 2412 MHz; σ = 1.83 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

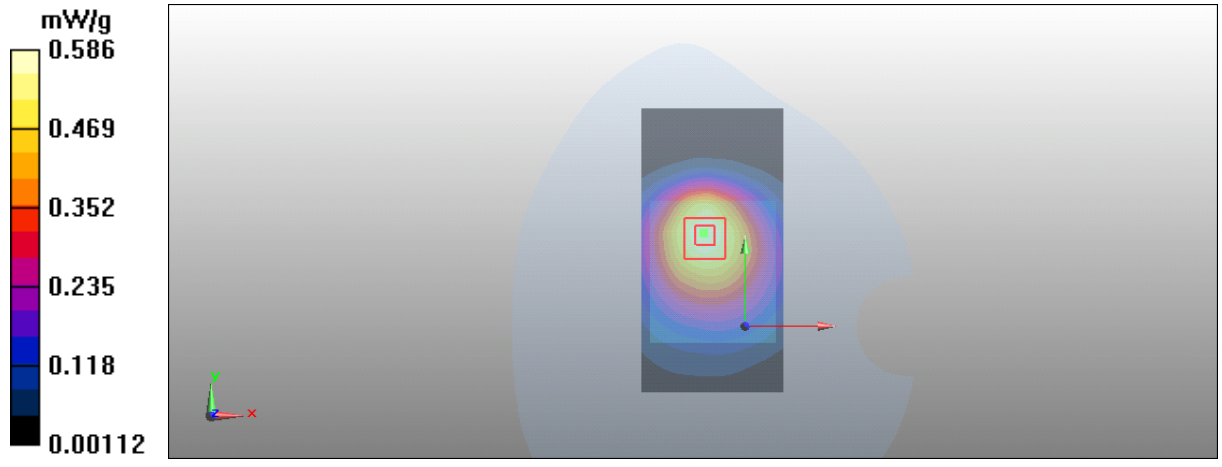
DASY4 Configuration:
- Probe: ES3DV3 - SN3118, Probe: ES3DV3 - SN3117
- ConvF(5.65, 5.65, 5.65), ConvF(4.12, 4.12, 4.12); Calibrated: 9/22/2009, Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE3 Sn573, Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- Phantom: SAM 5, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1302, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 60

Configuration/Body - High - No Accessory - Slide closed - Back facing phantom/Area Scan (6x11x1):
Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Low - No Accessory - Slide closed - Display facing phantom/Area Scan (6x11x1):
Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.552 mW/g
SAR(10 g) = 0.382 mW/g

Maximum value of SAR (measured) = 0.586 mW/g



Date/Time: 2010-03-30 13:59:37, Date/Time: 2010-04-07 19:30:22

Test Laboratory: TCC Nokia
Type: RM-648, Type: RM-627; Serial: 004402/13/031006/7, Serial: 004402/13/027199/6

Communication System: WCDMA850, Communication System: WLAN2450
Frequency: 846.6 MHz, Frequency: 2412.0 MHz; Duty Cycle: 1:1
Medium: Body 835, Medium: Body 2450; Medium Notes: Medium Temperature: 22.1 C, Medium Notes: Medium Temperature: 21.3 C
Medium parameters used: f = 847 MHz; σ = 0.968 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3 , Medium parameters used: f = 2412 MHz; σ = 1.83 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

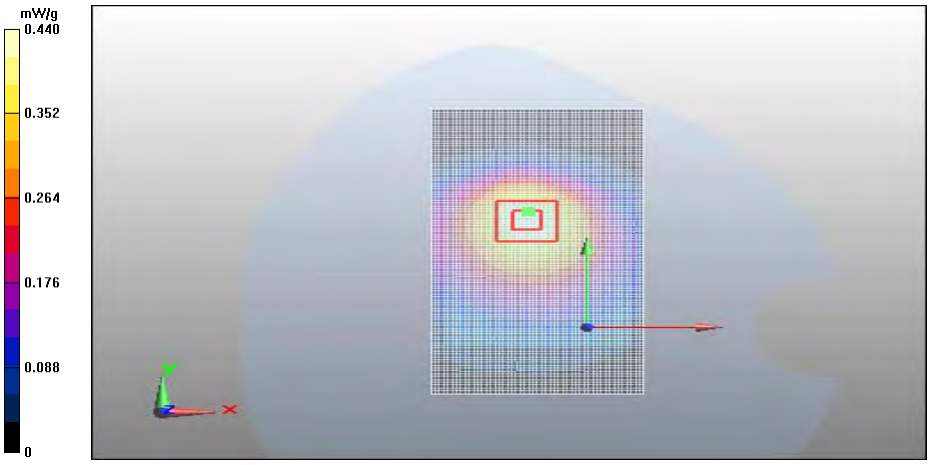
DASY4 Configuration:
- Probe: ES3DV3 - SN3118, Probe: ES3DV3 - SN3117
- ConvF(5.65, 5.65, 5.65), ConvF(4.12, 4.12, 4.12); Calibrated: 2009-09-22, Calibrated: 2009-07-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE3 Sn573, Electronics: DAE4 Sn682; Calibrated: 2009-07-21
- Phantom: SAM 5, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1302, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 60

Configuration/Body - High - No Accessory – Slide closed - Back facing phantom/Area Scan (6x11x1):
Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Low - No Accessory - Slide closed - Display facing phantom/Area Scan (6x11x1):
Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.414 mW/g
SAR(10 g) = 0.286 mW/g

Maximum value of SAR (measured) = 0.440 mW/g



Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: GSM 1900, Communication System: WLAN2450
Frequency: 1850.2 MHz, Frequency: 2442.0 MHz; Duty Cycle: 1:8.3, Duty Cycle: 1:1
Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 22.2 C, Medium Notes: Medium Temperature: 21.3 C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.54 mho/m; ε_r = 50.8; ρ = 1000 kg/m^3 , Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

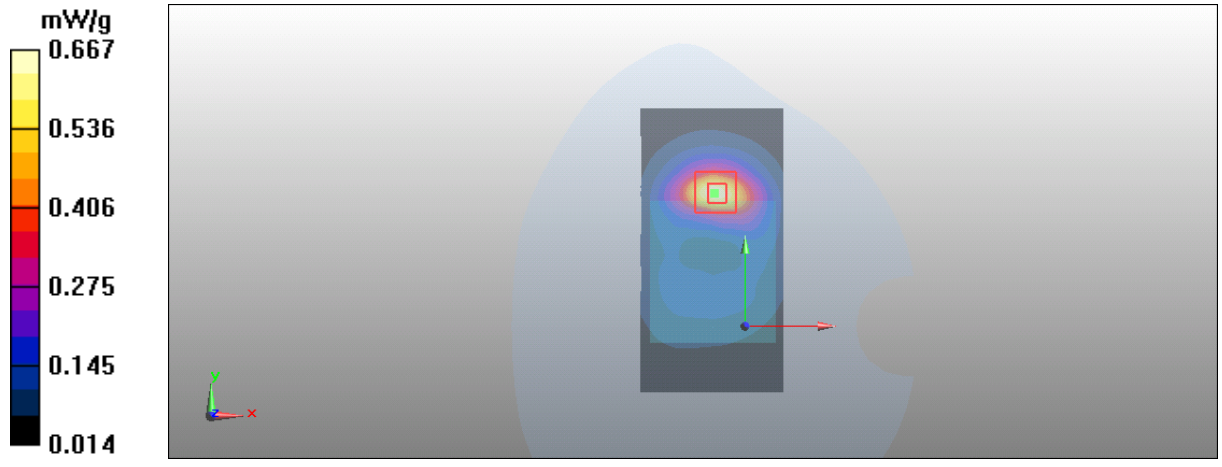
DASY4 Configuration:
- Probe: ES3DV3 - SN3117
- ConvF(4.41, 4.41, 4.41), ConvF(4.12, 4.12, 4.12); Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- Phantom: SAM 2, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1037, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 60

Configuration/Body - Low - HS-125 - Slide closed - Back facing phantom/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Middle - HS-125 - Slide closed - Display facing phantom/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.566 mW/g
SAR(10 g) = 0.302 mW/g

Maximum value of SAR (measured) = 0.667 mW/g



Test Laboratory: TCC Nokia
Type: RM-627; Serial: 004402/13/027199/6

Communication System: WCDMA1900, Communication System: WLAN2450
Frequency: 1852.4 MHz, Frequency: 2442.0 MHz; Duty Cycle: 1:1
Medium: Body 1900, Medium: Body 2450; Medium Notes: Medium Temperature: 21.9 C, Medium Notes: Medium Temperature: 21.3 C
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.53 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3 , Medium parameters used: f = 2442 MHz; σ = 1.86 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

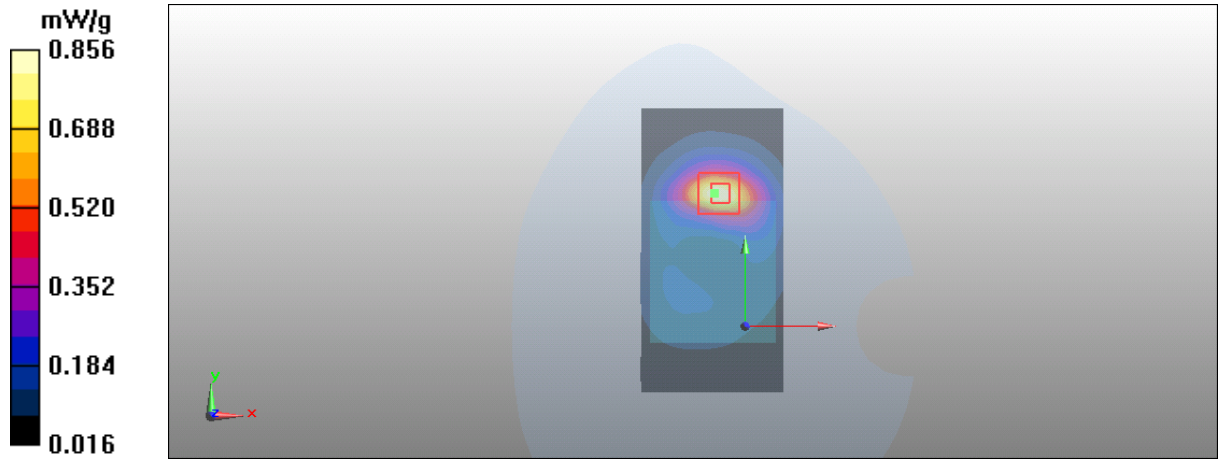
DASY4 Configuration:
- Probe: ES3DV3 - SN3117
- ConvF(4.41, 4.41, 4.41), ConvF(4.12, 4.12, 4.12); Calibrated: 7/21/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn682; Calibrated: 7/21/2009
- Phantom: SAM 2, Phantom: SAM 4.5; Type: Twin Phantom; Serial: TP-1037, Serial: TP-1215
- ; SEMCAD X Version 14.0 Build 60

Configuration/Body - Low - HS-125 – Slide closed - Back facing phantom/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Configuration/Body - Middle - HS-125 - Slide closed - Display facing phantom/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.735 mW/g
SAR(10 g) = 0.390 mW/g

Maximum value of SAR (measured) = 0.856 mW/g



APPENDIX C: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA

Test Laboratory: TCC Nokia
Type: RM-648; Serial: 004402/13/031087/7, HW: 0204, SW: 041.005

C.1. WCDMA850 Test results

Average power

Ch / *f* (MHz)	P [dBm]
4133 / 826.6	22.61
4175 / 835.0	22.60
4232 / 846.4	22.79

C.2. HSUPA850 Test results

Average power

Ch / *f* (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
4133 / 826.6	19.50	18.59	20.53	18.77	19.40
4175 / 835.0	19.65	18.60	20.47	19.52	19.75
4232 / 846.4	19.51	18.59	19.93	19.49	19.62

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR and E-TFC MPR. In each Subtest mode, the routine with the higher power reduction dominates. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
2.5dB	3.0dB	2.0dB	3.0dB	2.5dB

Test Laboratory: TCC Nokia
Type: RM-627; Serial: 766988/72/344762/2, HW: 0200, SW: 041.005

C.3. WCDMA1900 Test results

Average power

Ch / *f* (MHz)	P [dBm]
9263 / 1852.6	21.56
9400 / 1880.0	21.62
9537 / 1907.4	21.60

C.4. HSUPA1900 Test results

Average power

Ch / *f* (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
9263 / 1852.6	18.98	19.52	20.20	18.48	19.09
9400 / 1880.0	19.72	18.54	20.52	19.58	19.62
9537 / 1907.4	19.80	18.84	20.57	18.82	19.69

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR and E-TFC MPR. In each Subtest mode, the routine with the higher power reduction dominates. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.5dB	2.0dB	1.0dB	2.0dB	1.5dB

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

See the following pages

20172

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: **ES3-3117_Jul09**

CALIBRATION CERTIFICATE

Object	ES3DV3x - 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 21, 2009
Condition of the calibrated item	In Tolerance

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

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

Calibration Equipment used (M&TE critical for calibration)

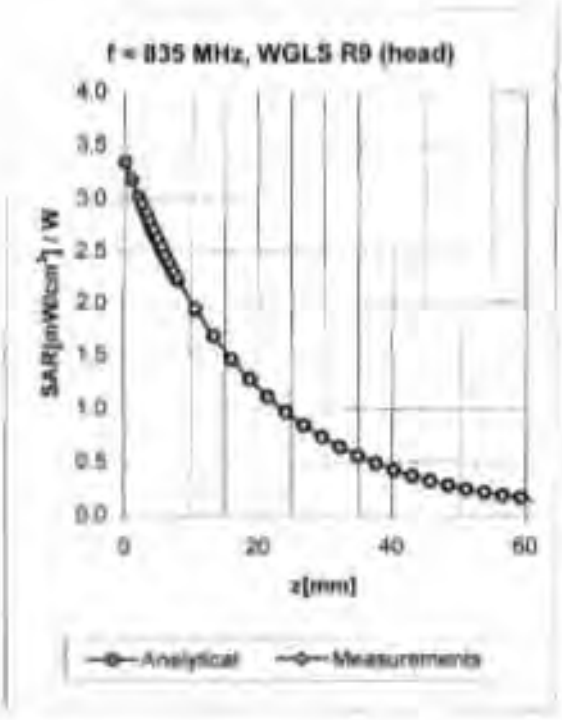
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	9-Sep-08 (No. DAE4-660_Sep08)	Sep-09

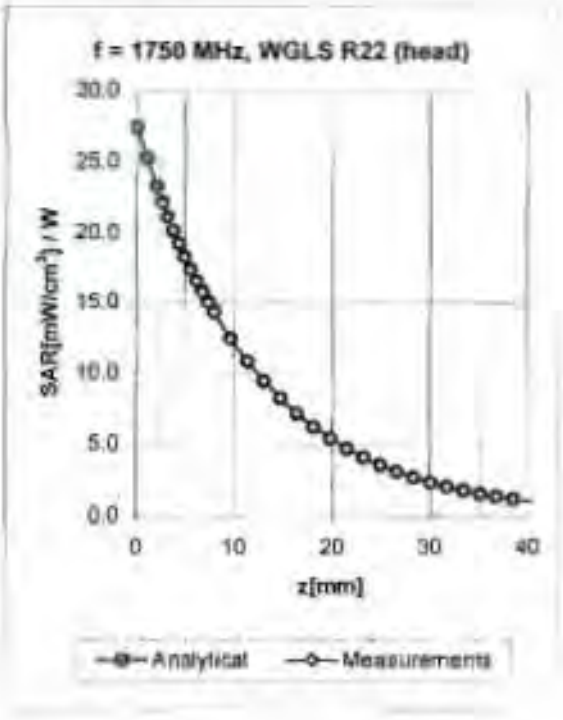
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

	Name	Function	Signature
Calibrated by	Claudio Leubler	Laboratory Technician	
Approved by	Katja Pokovic	Technical Manager	

Issued: July 21, 2009

Conversion Factor Assessment





f [MHz]	Validity [MHz][1]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.88	1.11	5.85 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.53	1.48	5.04 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.50	1.50	4.90 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.41	1.79	4.36 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.90	1.11	5.76 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.37	2.02	4.63 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.31	2.84	4.41 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.81	1.21	4.12 ± 11.0% (k=2)

[1] 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

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: **ES3-3118_Sep09**

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3118
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:	September 22, 2009
Condition of the calibrated item	In Tolerance

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

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

Calibration Equipment used (M&TE critical for calibration)

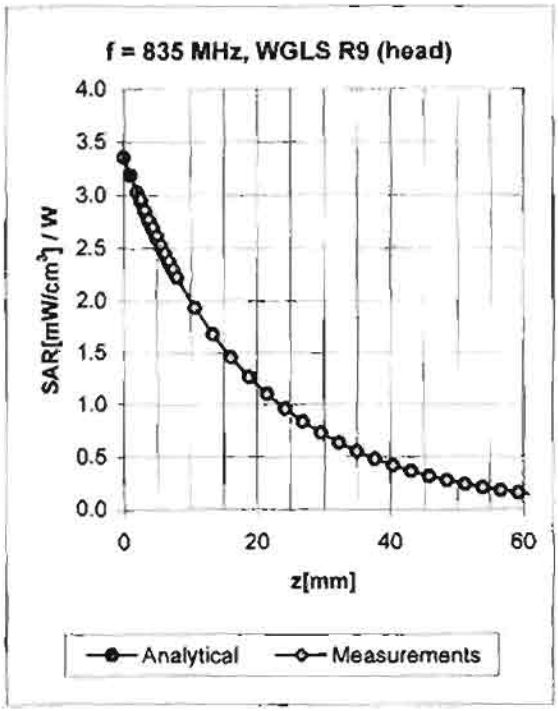
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	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	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	9-Sep-08 (No. DAE4-660_Sep08)	Sep-09

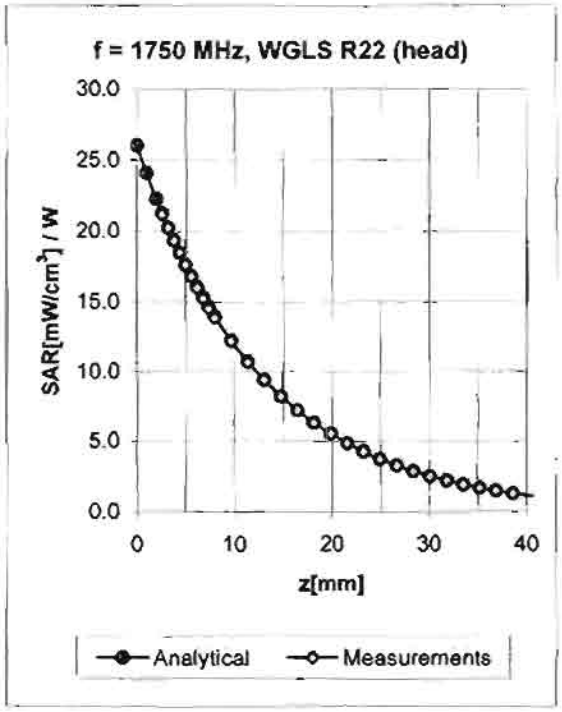
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

	Name	Function	Signature
Calibrated by:	Marcel Fehr	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: September 22, 2009

Conversion Factor Assessment





f [MHz]	Validity [MHz][c]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.97	1.07	5.85 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.61	1.40	4.97 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.50	1.53	4.74 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.46	1.69	4.21 ± 11.0% (k=2)
835	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.95	1.13	5.65 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.41	1.92	4.60 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.41	2.14	4.37 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	1.05	4.05 ± 11.0% (k=2)

[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 E: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)

See the following pages

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

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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: D835V2-4d042_Sep08

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d042
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits
Calibration date:	September 22, 2008
Condition of the calibrated item	In Tolerance

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 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	04-Oct-07 (No. 217-00736)	Oct-08
Power sensor HP 8481A	US37292783	04-Oct-07 (No. 217-00736)	Oct-08
Reference 20 dB Attenuator	SN: 5086 (20g)	01-Jul-08 (No. 217-00864)	Jul-09
Type-N mismatch combination	SN: 5047.2 / 06327	01-Jul-08 (No. 217-00867)	Jul-09
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	14-Mar-08 (No. DAE4-601_Mar08)	Mar-09

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-07)	In house check: Oct-08

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

Issued: September 22, 2008

DASY5 Validation Report for Head TSL

Date/Time: 22.09.2008 10:40:16

Test Laboratory: SPEAG, Zurich, Switzerland

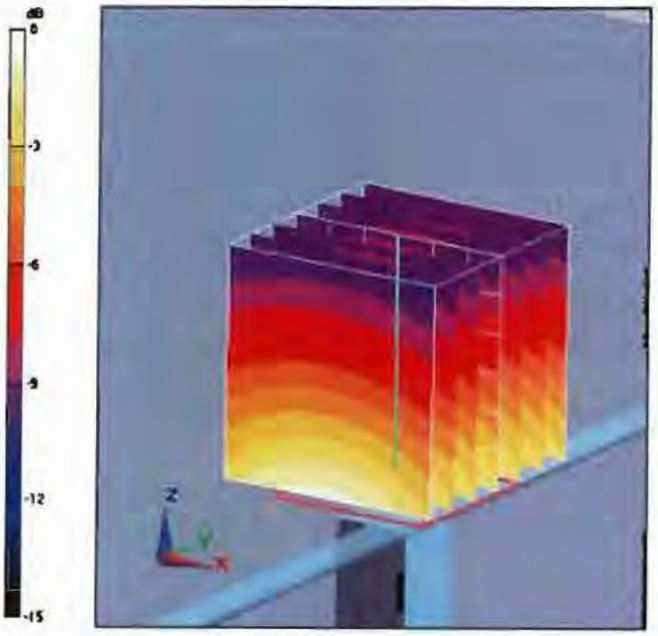
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d042

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL 900 MHz
Medium parameters used: f = 835 MHz; σ = 0.901 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.97, 5.97, 5.97); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 119; SEMCAD X Version 13.2 Build 87

Pin=250mW; dip=15mm; dist=3.4mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.9 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 3.48 W/kg
SAR(1 g) = 2.38 mW/g; SAR(10 g) = 1.57 mW/g
Maximum value of SAR (measured) = 2.69 mW/g



0 dB = 2.69mW/g

DASY5 Validation Report for Body TSL

Date/Time: 16.09.2008 10:46:36

Test Laboratory: SPEAG, Zurich, Switzerland

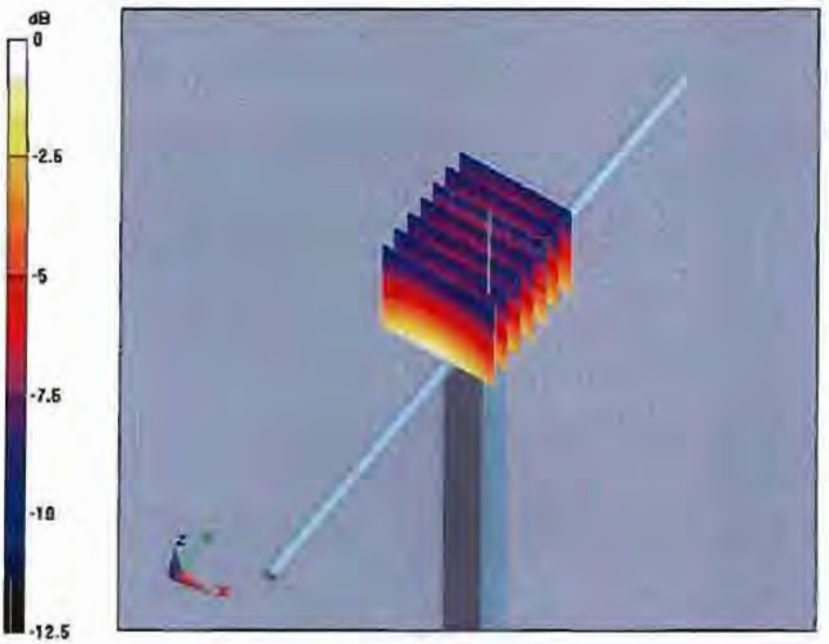
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d042

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 = 53.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.9, 5.9, 5.9); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 119; SEMCAD X Version 13.2 Build 87

Pin = 250mW, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.65 mW/g
Maximum value of SAR (measured) = 2.81 mW/g



0 dB = 2.81 mW/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

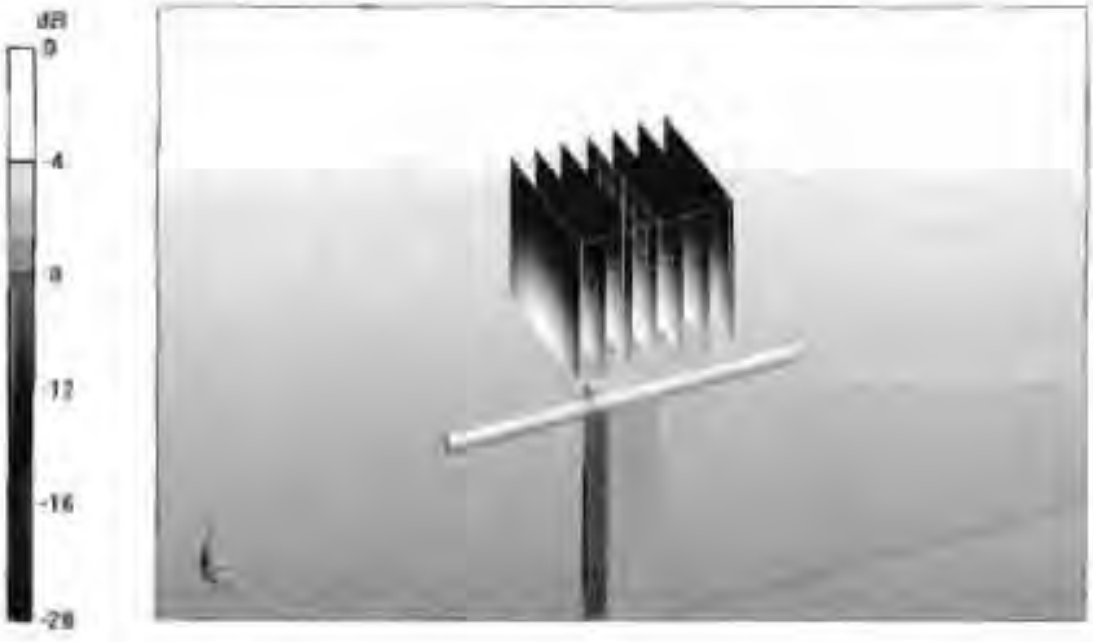
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d063

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

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Accreditation No.: **SCS 108**

Client **Nokia Denmark A/S**

Certificate No: **D2450V2-790_Sep08**

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 790
Calibration procedure(s)	QA CAL-05.v7 Calibration procedure for dipole validation kits
Calibration date:	September 24, 2008
Condition of the calibrated item	In Tolerance

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 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	04-Oct-07 (No. 217-00736)	Oct-08
Power sensor HP 8481A	US37292783	04-Oct-07 (No. 217-00736)	Oct-08
Reference 20 dB Attenuator	SN: S5086 (20g)	01-Jul-08 (No. 217-00864)	Jul-09
Type-N mismatch combination	SN: 5047.2 / 06327	01-Jul-08 (No. 217-00867)	Jul-09
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	14-Mar-08 (No. DAE4-601_Mar08)	Mar-09

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-07)	In house check: Oct-08

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

Issued: September 25, 2008

Date/Time: 24.09.2008 12:50:11

Test Laboratory: SPEAG, Zurich, Switzerland

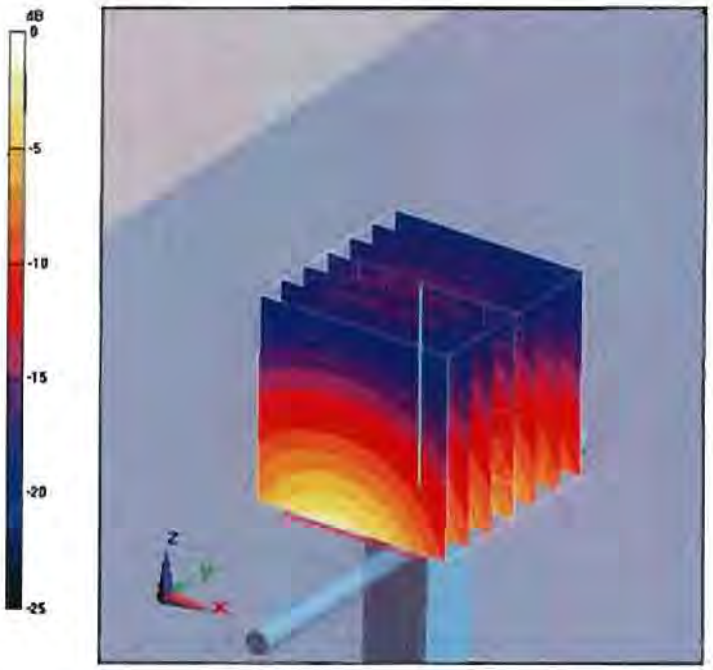
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN790

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HSL U10 BB
Medium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.4, 4.4, 4.4); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 119; SEMCAD X Version 13.2 Build 87

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.9 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 27.6 W/kg
SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.15 mW/g
Maximum value of SAR (measured) = 15.8 mW/g



0 dB = 15.8mW/g

DASY5 Validation Report for Body TSL

Date/Time: 18.09.2008 13:52:58

Test Laboratory: SPEAG, Zurich, Switzerland

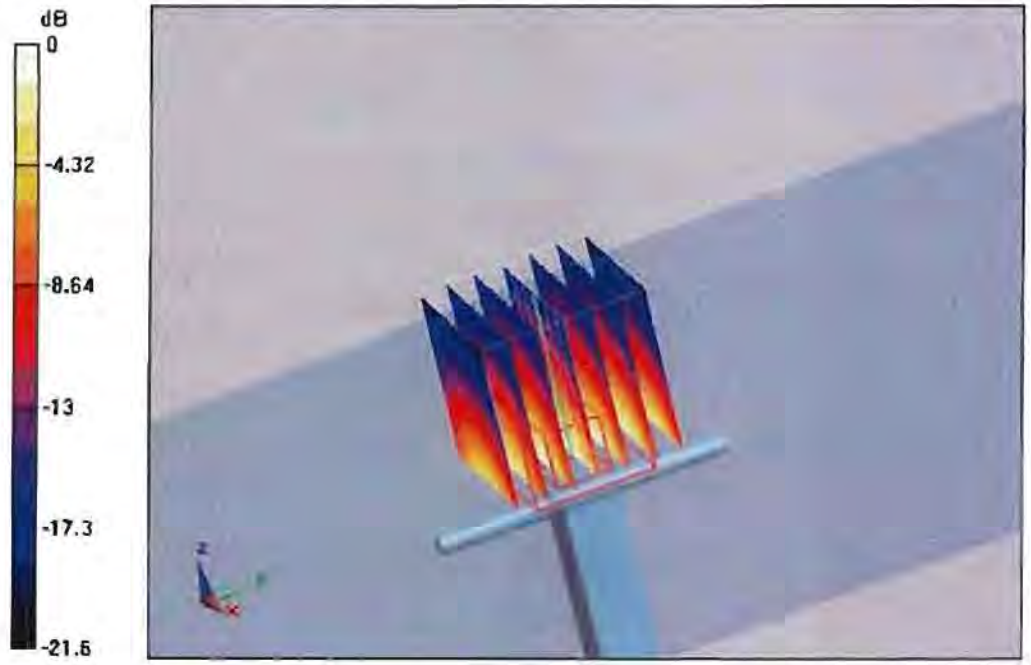
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:790

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: MSL U10 BB
Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.07, 4.07, 4.07); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.0 Build 119; SEMCAD X Version 13.2 Build 87

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.9 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 26 W/kg
SAR(1 g) = 12.6 mW/g; SAR(10 g) = 5.81 mW/g
Maximum value of SAR (measured) = 15.7 mW/g



0 dB = 15.7mW/g