

SAR Compliance Test Report

Test report no.:	FCC_RM-763_01	Date of report:	2011-08-29
Template version:	18.0	Number of pages:	132
Testing laboratory:	TCC Nokia Salo Laboratory P.O.Box 86 Joensuunkatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220 TCC Nokia Ulm laboratory Lise Meitner Strasse 10 89081 ULM, GERMANY	Client:	Nokia Corporation Lise Meitner Strasse 10 89081 ULM GERMANY Tel. +49 731 1754 0 Fax. +49 731 1754 6800
Responsible test engineer:	Virpi Tuominen	Product contact person:	Bruno Ramelli
Measurements made by:	Heikki Haloila, Janne Hirsimäki, Alina Tähkäpää, Daniel Albrecht, Leif Klynsner		
Tested device:	RM-763		
FCC ID:	PPIRM-763	IC:	661U-RM763
Supplement reports:	SAR_Photo_RM-763_03		
Testing has been carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields RSS-102 Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields IEEE 1528 - 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique		
Documentation:	The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test results:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.		
Date and signatures:			
For the contents:			

CONTENTS

1. SUMMARY OF SAR TEST REPORT	4
1.1 TEST DETAILS	4
1.2 MAXIMUM RESULTS	4
1.2.1 Head Configuration	4
1.2.2 Body Worn Configuration	5
1.2.3 Maximum Drift	5
1.2.4 Measurement Uncertainty	5
2. DESCRIPTION OF THE DEVICE UNDER TEST	6
2.1 DESCRIPTION OF THE ANTENNA	7
3. TEST CONDITIONS	7
3.1 TEMPERATURE AND HUMIDITY	7
3.2 TEST SIGNAL, FREQUENCIES AND OUTPUT POWER	7
3.3 TEST CASES AND TEST MINIMISATION	8
4. DESCRIPTION OF THE TEST EQUIPMENT	10
4.1 MEASUREMENT SYSTEM AND COMPONENTS	10
4.1.1 Isotropic E-field Probe Type ET3DV6	12
4.1.2 Isotropic E-field Probe Type ES3DV3	13
4.1.3 Isotropic E-field Probe Type EX3DV4	13
4.2 PHANTOMS	14
4.3 TISSUE SIMULANTS	14
4.3.1 Tissue Simulant Recipes	14
4.3.2 System Checking	15
4.3.3 Tissue Simulants used in the Measurements	18
5. DESCRIPTION OF THE TEST PROCEDURE	20
5.1 DEVICE HOLDER	20
5.2 TEST POSITIONS	20
5.2.1 Against Phantom Head	20
5.2.2 Body Worn Configuration	21
5.3 SCAN PROCEDURES	21
5.4 SAR AVERAGING METHODS	21
6. MEASUREMENT UNCERTAINTY	22
7. RESULTS	23
APPENDIX A: SYSTEM CHECKING SCANS	33
APPENDIX B: MEASUREMENT SCANS	46
APPENDIX C: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA	128

APPENDIX D: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S).....	131
--	-----

APPENDIX E: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S).....	132
--	-----

1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2011-08-04 to 2011-08-26
SN, HW and SW numbers of tested device	SN: 004402/13/621109/5, HW: 0200, SW: Vp ch104_11w28_1, DUT: 15776
Batteries used in testing	BP-3L Sony, DUT: 15777, 15778 BP-3L LG, DUT: 15779, 15780, 15781, 15782
Headsets used in testing	WH-102, DUT: 15538, 15619
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
GSM850	251 / 848.8	32.5 dBm	Left, Cheek	0.771 W/kg	0.86 W/kg	1.6 W/kg	PASSED
WCDMA850	4233 / 846.6	23.0 dBm	Right, Cheek	0.862 W/kg	0.97 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100	1412 / 1732.4	22.5 dBm	Left, Cheek	1.04 W/kg	1.16 W/kg	1.6 W/kg	PASSED
4-slot GPRS1900	512 / 1850.2	24.0 dBm	Left, Cheek	0.689 W/kg	0.77 W/kg	1.6 W/kg	PASSED
WCDMA1900	9400 / 1880.0	22.5 dBm	Left, Cheek	0.919 W/kg	1.03 W/kg	1.6 W/kg	PASSED
WLAN2450	7 / 2442.0	19.5 dBm	Right, Cheek	0.331 W/kg	0.37 W/kg	1.6 W/kg	PASSED
GSM850 + WLAN2450	-	-	Right, Cheek	0.785 W/kg	0.88 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	Right, Cheek	0.899 W/kg	1.01 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN2450	-	-	Left, Cheek	1.04 W/kg	1.16 W/kg	1.6 W/kg	PASSED
4-slot GPRS1900 + WLAN2450	-	-	Left, Cheek	0.689 W/kg	0.77 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	Left, Cheek	0.919 W/kg	1.03 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
GSM850	251 / 848.8	32.5 dBm	1.5cm	0.882 W/kg	0.99 W/kg	1.6 W/kg	PASSED
WCDMA850	4233 / 846.6	23.0 dBm	1.5cm	0.917 W/kg	1.03 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100	1412 / 1732.4	22.5 dBm	1.5cm	0.709 W/kg	0.79 W/kg	1.6 W/kg	PASSED
4-slot GPRS1900	661 / 1880.0	24.0 dBm	1.5cm	0.436 W/kg	0.49 W/kg	1.6 W/kg	PASSED
WCDMA1900	9400 / 1880.0	22.5 dBm	1.5cm	0.682 W/kg	0.76 W/kg	1.6 W/kg	PASSED
WLAN2450	11 / 2462.0	19.5 dBm	1.5cm	0.061 W/kg	0.07 W/kg	1.6 W/kg	PASSED
GSM850 + WLAN2450	-	-	1.5cm	0.884 W/kg	0.99 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	1.5cm	0.935 W/kg	1.05 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN2450	-	-	1.5cm	0.709 W/kg	0.79 W/kg	1.6 W/kg	PASSED
4-slot GPRS1900 + WLAN2450	-	-	1.5cm	0.438 W/kg	0.49 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	1.5cm	0.720 W/kg	0.81 W/kg	1.6 W/kg	PASSED

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

1.2.3 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.48dB

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 4/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 4/8	824 – 849 1850 – 1910
WCDMA	850 (Band V) 1700/2100 (Band IV) 1900 (Band II)		1	826 – 847 1712 – 1753 1852 – 1908
HSUPA	850 (Band V) 1700/2100 (Band IV) 1900 (Band II)		1	826 – 847 1712 – 1753 1852 – 1908
BT	2450	GFSK	1	2402 – 2480
WLAN b-mode	2450	Up to 11Mbps QPSK	1	2412 – 2462
WLAN g-mode	2450	Up to 54Mbps 64QAM	1	2412 – 2462
WLAN n-mode 20MHz	2450	Up to 72.2Mbps 64QAM	1	2412 – 2462

Outside of USA and Canada, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900, GSM/GPRS/EGPRS1800, WCDMA900 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 is a BT Class 1 device; as its power tuning target is 7dBm (5mW), SAR testing was deemed unnecessary.

2.1 Description of the Antenna

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

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	20.5 – 22.5
Ambient humidity (RH %):	40 - 60

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

3.3 Test Cases and Test Minimisation

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

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

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

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

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

In the results tables in Section 7, the maximum SAR value for the 'basic' tests (i.e. left cheek, left tilt, right cheek and right tilt in Head SAR testing; with and without headset with the back &/or

display side facing the flat phantom in Body SAR testing) is bolded for each band. In some cases, after full testing of the basic SAR test configurations has been completed, additional checking SAR tests are made. These checking tests are always based on the bolded result from the 'basic' testing. When the SAR value of a checking test exceeds the maximum value from the basic tests, it is also bolded and used as the basis for any further checking tests that might be needed.

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

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

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

The following table lists calibration dates of SPEAG components:

Test Equipment	Serial Number	Calibration interval	Calibration expiry
DAE 4	538	12 months	2011-09
DAE 4	555	12 months	2012-02
DAE 4	793	12 months	2011-09
DAE4	671	12 months	2011-09
E-field Probe ET3DV6	1675	12 months	2011-09
E-field Probe ES3DV3	3194	12 months	2011-09
E-field Probe ES3DV3	3165	12 months	2012-02
E-field Probe EX3DV4	3573	12 months	2012-02
Dipole Validation Kit, D835V2	480	24 months	2011-10
Dipole Validation Kit, D835V2	474	24 months	2013-06
Dipole Validation Kit, D1800V2	256	24 months	2011-10
Dipole Validation Kit, D1900V2	5d013	24 months	2012-03
Dipole Validation Kit, D1900V2	5d007	24 months	2013-06
Dipole Validation Kit, D2450V2	749	24 months	2011-10
DASY4 software	Version 4.7	-	-
DASY5 software	Version 52.6.1.408	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration interval	Calibration expiry
Signal Generator	SML03	101265	12 months	2011-08
Signal Generator	SMIQ03B	100391	36 months	2012-10
Signal Generator	E4436B	US39260114	12 months	2011-08
Amplifier	ZHL-42 (SMA)	N072095-5	12 months	2011-08
Amplifier	ZHL-42W	D050802-1	-	-
Amplifier	5S1G4	25583	12 months	2011-08
Power Meter	NRVS	849305/028	12 months	2011-08
Power Meter	E4417A	GB40320113	24 months	2012-03
Power Meter	NRVS	849305/028	12 months	2011-08
Power Sensor	NRV-Z32	839176/020	12 months	2011-08
Power Sensor	E9325A	US40420308	12 months	2012-03
Power Sensor	E9325A	US40420291	12 months	2012-03
Power Sensor	NRV-Z32	100067	12 months	2011-12
Call Tester	CMU 200	101111	-	-
Call Tester	CMU 200	103293	-	-
Call Tester	CMU200	117027	-	-
Vector Network Analyzer	8753E	US38432928	12 months	2011-08
Vector Network Analyzer	8714B	GB36050238	12 months	2012-03
Dielectric Probe Kit	85070B	US33020420	-	-
Dielectric Probe Kit	85070B	US01440027	-	-

4.1.1 Isotropic E-field Probe Type ET3DV6

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

4.1.2 Isotropic E-field Probe Type ES3DV3

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

4.1.3 Isotropic E-field Probe Type EX3DV4

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Calibration certificate in Appendix D
Frequency	10 MHz to >6 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g, Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 10 mm Body diameter: 12 mm Tip diameter: 2.5 mm
Application	Distance from probe tip to dipole centers: 1.0 mm General dosimetry up to 6 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

4.2 Phantoms

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

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

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

4.3 Tissue Simulants

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

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

4.3.1 Tissue Simulant Recipes

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

800MHz band

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

1800MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	54.0	70.20
Tween 20	45.6	29.37
Salt	0.4	0.43

1900MHz band

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

2450MHz band

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

4.3.2 System Checking

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

System checking, head tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.36	40.5	0.88	
	$\pm 10\%$ window	2.12 – 2.60			
	2011-08-04	2.45	39.9	0.91	21.0
	2011-08-05	2.42	39.6	0.90	21.0
835	Reference result	2.33	40.8	0.89	
	$\pm 10\%$ window	2.10 – 2.56			
	2011-08-25	2.39	41.9	0.89	21.0
1800	Reference result	9.90	40.0	1.40	
	$\pm 10\%$ window	8.91 – 10.89			
	2011-08-12	10.1	38.4	1.41	21.0
	2011-08-15	10.8	38.0	1.39	21.0
1900	Reference result	10.2	41.2	1.45	
	$\pm 10\%$ window	9.2 – 11.2			
	2011-08-08	10.9	39.4	1.43	21.0
	2011-08-09	10.8	39.2	1.39	21.0
	2011-08-10	10.9	39.3	1.40	21.0
	2011-08-11	10.9	39.2	1.41	21.0
1900	Reference result	9.95	39.0	1.40	
	$\pm 10\%$ window	8.95 – 10.95			
	2011-08-26	10.6	39.0	1.45	21.0
2450	Reference result	13.2	39.1	1.78	
	$\pm 10\%$ window	11.9 – 14.5			
	2011-08-16	13.5	37.6	1.80	21.0

System checking, body tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
835	Reference result	2.52	53.2	1.01	
	$\pm 10\%$ window	2.27 – 2.77			
	2011-08-09	2.43	53.3	0.98	21.0
2450	Reference result	12.5	52.7	1.98	
	$\pm 10\%$ window	11.2 – 13.8			
	2011-08-17	12.7	50.6	1.97	21.0

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

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
835	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2011-08-05	39.6	0.90	21.0
836	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2011-08-04	39.9	0.91	21.0
	2011-08-25	41.9	0.89	21.4
1732	Recommended value	40.1	1.36	
	$\pm 5\%$ window	38.1 – 42.1	1.29 – 1.43	
	2011-08-12	38.7	1.34	21.0
1880	Recommended value	40.0	1.40	
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2011-08-08	39.5	1.41	21.0
	2011-08-09	39.3	1.37	21.0
	2011-08-10	39.4	1.38	21.0
	2011-08-11	39.3	1.39	21.0
	2011-08-26	39.0	1.43	21.8
2442	Recommended value	39.2	1.79	
	$\pm 5\%$ window	37.3 – 41.2	1.70 – 1.88	
	2011-08-16	37.6	1.79	21.0

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
835	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
	2011-08-09	53.3	0.98	21.0
836	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
	2011-08-09	53.3	0.98	21.0
1732	Recommended value	53.5	1.48	
	± 5% window	50.8 – 56.2	1.40 – 1.55	
	2011-08-15	51.0	1.43	21.0
1880	Recommended value	53.3	1.52	
	± 5% window	50.6 – 56.0	1.44 – 1.60	
	2011-08-09	53.0	1.49	21.0
	2011-08-10	52.6	1.49	21.0
2442	2011-08-11	52.9	1.51	21.0
	Recommended value	52.7	1.94	
	± 5% window	50.1 – 55.3	1.85 – 2.04	
	2011-08-17	50.6	1.96	21.0

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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



Device holder supplied by SPEAG

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



Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

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

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

5.2.2 Body Worn Configuration

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

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

5.3 Scan Procedures

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

5.4 SAR Averaging Methods

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

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

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

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

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

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

7. RESULTS

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

850MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Conducted Power		32.5 dBm	32.5 dBm	32.5 dBm
BP-3L Sony	Left	Cheek	0.725	0.764	0.771
		Tilt	-	0.490	-
	Right	Cheek	-	0.763	-
		Tilt	-	0.449	-
2-slot GPRS	Conducted Power		-	29.5 dBm	-
BP-3L Sony	Left	Cheek	-	0.731	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Conducted Power		-	27.7 dBm	-
BP-3L Sony	Left	Cheek	-	0.736	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot GPRS	Conducted Power		-	26.5 dBm	-
BP-3L Sony	Left	Cheek	-	0.732	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
1-slot 8PSK EGPRS	Conducted Power		-	27.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.100	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-

(850MHz Table continues)

(850MHz Table continues)

Mode	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 8PSK EGPRS	Conducted Power		-	27.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.194	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot 8PSK EGPRS	Conducted Power		-	27.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.287	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot 8PSK EGPRS	Conducted Power		-	26.5 dBm	-
BP-3L Sony	Left	Cheek	-	0.369	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Conducted Power		23.0 dBm	23.0 dBm	23.0 dBm
BP-3L Sony	Left	Cheek	0.704	0.857	0.820
		Tilt	-	0.475	-
	Right	Cheek	0.707	0.839	0.862
		Tilt	-	0.449	-
WCDMA BP-3L LG	Right Cheek		0.668	0.811	0.796

1700/2100MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz
WCDMA	Conducted Power		22.5 dBm	22.5 dBm	22.5 dBm
BP-3L Sony	Left	Cheek	0.912	1.04	0.932
		Tilt	-	0.186	-
	Right	Cheek	-	0.671	-
		Tilt	-	0.164	-
BP-3L LG	Left Cheek		0.918	0.983	0.937

1900MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM	Conducted Power		-	30.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.666	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Conducted Power		-	27.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.632	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot GPRS	Conducted Power		-	25.2 dBm	-
BP-3L Sony	Left	Cheek	-	0.633	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot GPRS	Conducted Power		24.0 dBm	24.0 dBm	24.0 dBm
BP-3L Sony	Left	Cheek	0.689	0.687	0.585
		Tilt	-	0.084	-
	Right	Cheek	-	0.448	-
		Tilt	-	0.092	-

(1900MHz Table continues)

(1900MHz Table continues)

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
1-slot 8PSK EGPRS	Conducted Power		-	26.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.168	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot 8PSK EGPRS	Conducted Power		-	26.0 dBm	-
BP-3L Sony	Left	Cheek	-	0.323	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
3-slot 8PSK EGPRS	Conducted Power		-	25.7 dBm	-
BP-3L Sony	Left	Cheek	-	0.457	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
4-slot 8PSK EGPRS	Conducted Power		-	24.5 dBm	-
BP-3L Sony	Left	Cheek	-	0.582	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Conducted Power		22.5 dBm	22.5 dBm	22.5 dBm
BP-3L Sony	Left	Cheek	0.864	0.919	0.773
		Tilt	-	0.097	-
	Right	Cheek	-	0.541	-
		Tilt	-	0.122	-
WCDMA BP-3L LG	Left Cheek		0.739	0.760	0.654

2450MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode	Conducted Power		19.5 dBm	19.5 dBm	19.5 dBm
BP-3L Sony	Left	Cheek	-	0.208	-
		Tilt	-	0.194	-
	Right	Cheek	0.198	0.331	0.328
		Tilt	-	0.262	-
WLAN n-mode 20MHz	Conducted Power		13.0 dBm	13.0 dBm	13.0 dBm
BP-3L Sony	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	0.069	0.137	0.114
		Tilt	-	-	-
WLAN b-mode BP-3L LG	Rigt Cheek		0.213	0.311	0.322

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

850MHz Body SAR results

Mode	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
GSM		Conducted Power	32.5 dBm	32.5 dBm	32.5 dBm
BP-3L Sony	Display facing phantom	Without headset	-	0.676	-
		Headset WH-102	-	0.489	-
	Back facing phantom	Without headset	0.838	0.872	0.882
		Headset WH-102	-	0.726	-
Mode	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
BP-3L Sony	Display facing phantom	Without headset	-	0.755	-
		Headset WH-102	-	0.589	-
	Back facing phantom	Without headset	0.855	0.792	0.917
		Headset WH-102	-	0.698	-
WCDMA BP-3L LG	Back facing phantom	Without headset	0.824	0.806	0.898

1700/2100MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz
WCDMA		Conducted Power	22.5 dBm	22.5 dBm	22.5 dBm
BP-3L Sony	Display facing phantom	Without headset	-	0.378	-
		Headset WH-102	-	0.390	-
	Back facing phantom	Without headset	-	0.685	-
		Headset WH-102	0.653	0.709	0.675
BP-3L LG	Back facing phantom	Headset WH-102	0.635	0.671	0.648

1900MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
4-slot GPRS		Conducted Power	24.0 dBm	24.0 dBm	24.0 dBm
BP-3L Sony	Display facing phantom	Without headset	-	0.257	-
		Headset WH-102	-	0.253	-
	Back facing phantom	Without headset	-	0.425	-
		Headset WH-102	0.410	0.436	0.415
Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA		Conducted Power	22.5 dBm	22.5 dBm	22.5 dBm
BP-3L Sony	Display facing phantom	Without headset	-	0.404	-
		Headset WH-102	-	0.381	-
	Back facing phantom	Without headset	-	0.649	-
		Headset WH-102	0.595	0.652	0.628
WCDMA BP-3L LG	Back facing phantom	Headset WH-102	0.589	0.682	0.620

2450MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 7 2442.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode		Conducted Power	19.5 dBm	19.5 dBm	19.5 dBm
BP-3L Sony	Display facing phantom	Without headset	0.030	0.052	0.056
		Headset WH-102	-	0.038	-
	Back facing Phantom	Without headset	-	0.047	-
		Headset WH-102	-	0.047	-
WLAN n-mode 20MHz		Conducted Power	13.0 dBm	13.0 dBm	13.0 dBm
BP-3L Sony	Display facing phantom	Without headset	0.010	0.021	0.019
		Headset WH-102	-	-	-
	Back facing phantom	Without headset	-	-	-
		Headset WH-102	-	-	-
WLAN b-mode BP-3L LG	Display facing phantom	Without headset	0.027	0.048	0.061

Simultaneous transmissions: Combined SAR results – Individual band Max results

Test configuration	Max. 1g SAR results					
	WLAN	GSM850	WCDMA 850	WCDMA 1700/2100	4-slot GPRS1900	WCDMA 1900
Head: Left, Cheek	0.208	0.771	0.857	1.04	0.689	0.919
Head: Left, Tilt	0.194	0.490	0.475	0.186	0.084	0.097
Head: Right, Cheek	0.331	0.763	0.862	0.671	0.448	0.541
Head: Right, Tilt	0.262	0.449	0.449	0.164	0.092	0.122
Body: Display facing phantom, Without Headset	0.061	0.676	0.755	0.378	0.257	0.404
Body: Display facing phantom, Headset WH-102	0.038	0.489	0.589	0.390	0.253	0.381
Body: Back facing phantom, Without Headset	0.047	0.882	0.917	0.685	0.425	0.649
Body: Back facing phantom, Headset WH-102	0.047	0.726	0.698	0.709	0.436	0.682

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

Test configuration	Max. 1g SAR results				
	GSM850 + WLAN	WCDMA 850 + WLAN	WCDMA 1700/2100 + WLAN	4-slot GPRS1900 + WLAN	WCDMA 1900 + WLAN
Head: Left, Cheek	0.979	1.065	1.248	0.897	1.127
Head: Left, Tilt	0.684	0.669	0.380	0.278	0.291
Head: Right, Cheek	1.094	1.193	1.002	0.779	0.872
Head: Right, Tilt	0.711	0.711	0.426	0.354	0.384
Body: Display facing phantom, Without Headset	0.737	0.816	0.439	0.318	0.465
Body: Display facing phantom, Headset WH-102	0.527	0.627	0.428	0.291	0.419
Body: Back facing phantom, Without Headset	0.929	0.964	0.732	0.472	0.696
Body: Back facing phantom, Headset WH-102	0.773	0.745	0.756	0.483	0.729

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	Max. 1g SAR results				
	GSM850 + WLAN	WCDMA 850 + WLAN	WCDMA 1700/2100 + WLAN	4-slot GPRS1900 + WLAN	WCDMA 1900 + WLAN
Head: Left, Cheek	-	-	1.02	0.629	0.908
Head: Left, Tilt	-	-	-	-	-
Head: Right, Cheek	0.785	0.899	-	-	-
Head: Right, Tilt	-	-	-	-	-
Body: Display facing phantom, Without Headset	-	-	-	-	-
Body: Display facing phantom, Headset WH-102	-	-	-	-	-
Body: Back facing phantom, Without Headset	0.884	0.935	-	-	-
Body: Back facing phantom, Headset WH-102	-	-	0.686	0.438	0.720

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.

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

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2011-08-04 10:12:32, Date/Time: 2011-08-04 10:18:17

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: $t = 21.6$ C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 2.59 mW/g

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

Reference Value = 54.4 V/m

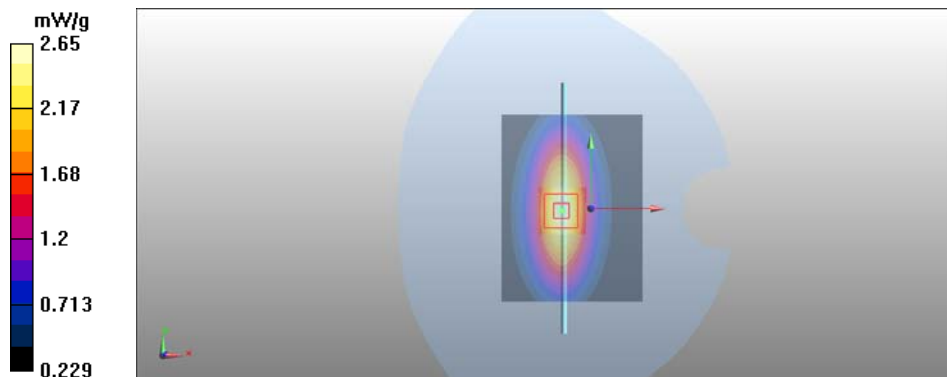
Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.45 mW/g

SAR(10 g) = 1.58 mW/g

Power Drift = 0.017 dB

Maximum value of SAR (measured) = 2.65 mW/g



Date/Time: 2011-08-05 09:10:32, Date/Time: 2011-08-04 09:15:19

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 835 MHz; σ = 0.896 mho/m; ϵ_r = 39.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 2.56 mW/g

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

Reference Value = 54.4 V/m

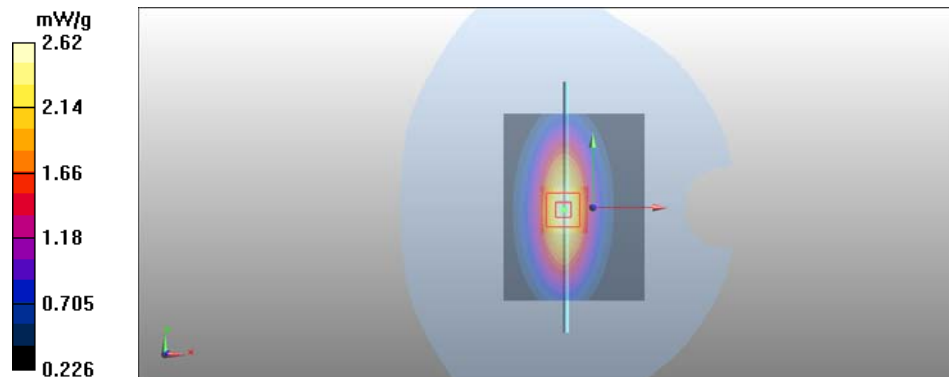
Peak SAR (extrapolated) = 3.69 W/kg

SAR(1 g) = 2.42 mW/g

SAR(10 g) = 1.56 mW/g

Power Drift = 0.017 dB

Maximum value of SAR (measured) = 2.62 mW/g



Date/Time: 2011-08-25 10:08:47, Date/Time: 2011-08-25 10:17:43

Test Laboratory: TCC Nokia

Type: D835V2; Serial: 474

Communication System: CW850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835; Medium Notes: Liquid Temperature: 21.4 °C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(6.06, 6.06, 6.06); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM LB; Type: Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

Configuration/d=15mm, Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm

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

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

Reference Value = 56 V/m

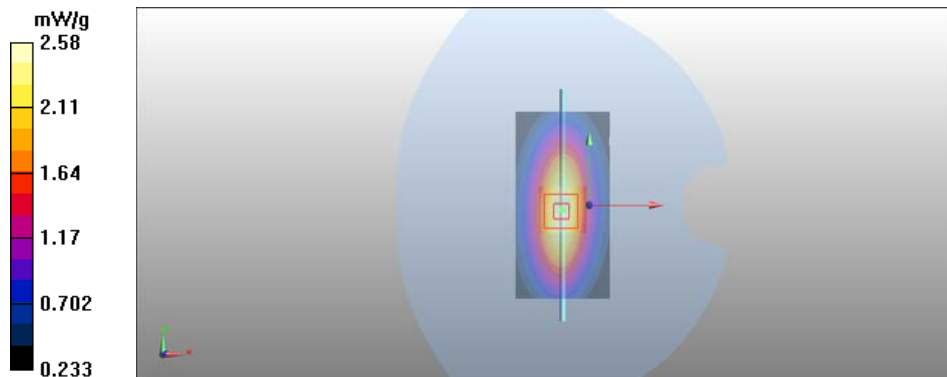
Peak SAR (extrapolated) = 3.48 W/kg

SAR(1 g) = 2.39 mW/g

SAR(10 g) = 1.57 mW/g

Power Drift = -0.037 dB

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



Date/Time: 2011-08-12 15:12:20, Date/Time: 2011-08-12 15:18:12

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:256

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used: f = 1800 MHz; σ = 1.41 mho/m; ϵ_r = 38.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

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

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

Reference Value = 90.7 V/m

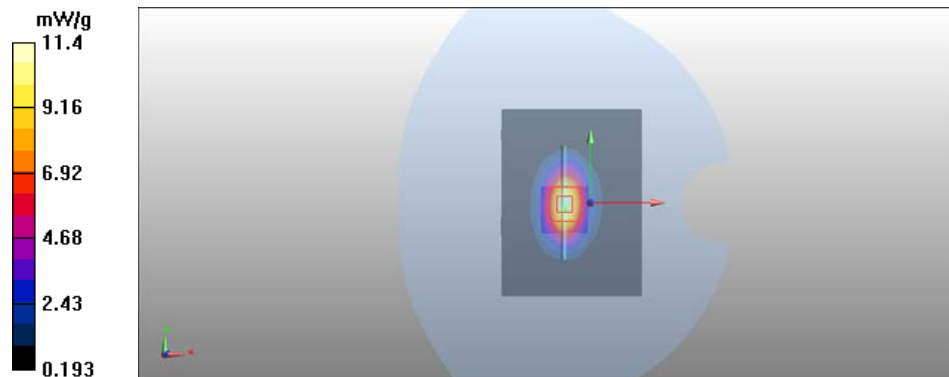
Peak SAR (extrapolated) = 19 W/kg

SAR(1 g) = 10.1 mW/g

SAR(10 g) = 5.23 mW/g

Power Drift = 0.105 dB

Maximum value of SAR (measured) = 11.4 mW/g



Date/Time: 2011-08-15 10:07:07, Date/Time: 2011-08-15 10:13:06

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:256

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used: f = 1800 MHz; σ = 1.39 mho/m; ϵ_r = 38; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 12.4 mW/g

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

Reference Value = 96 V/m

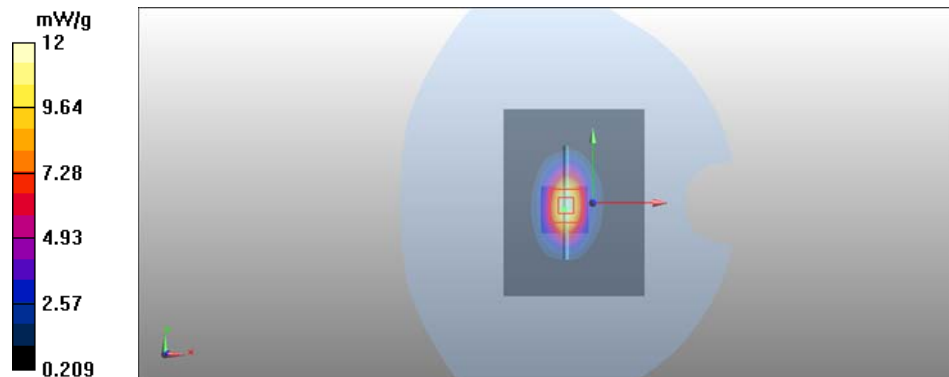
Peak SAR (extrapolated) = 20.2 W/kg

SAR(1 g) = 10.8 mW/g

SAR(10 g) = 5.56 mW/g

Power Drift = -0.042 dB

Maximum value of SAR (measured) = 12 mW/g



Date/Time: 2011-08-08 08:35:51, Date/Time: 2011-08-08 09:01:22

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1900 MHz; σ = 1.43 mho/m; ϵ_r = 39.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 12.4 mW/g

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

Reference Value = 94.5 V/m

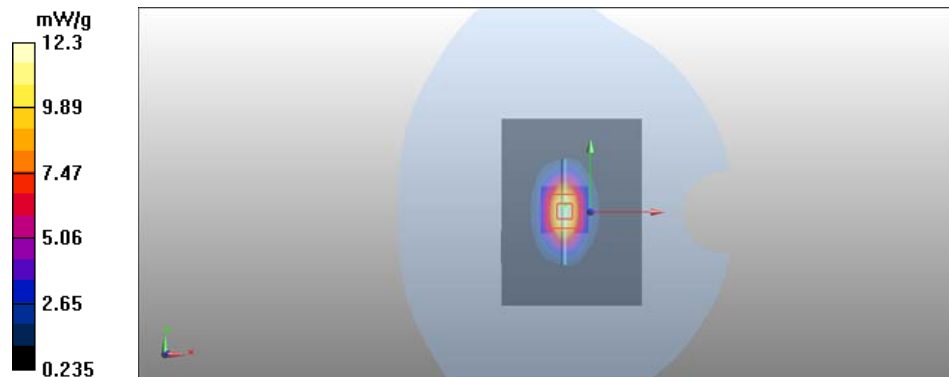
Peak SAR (extrapolated) = 20.6 W/kg

SAR(1 g) = 10.9 mW/g

SAR(10 g) = 5.65 mW/g

Power Drift = 0.025 dB

Maximum value of SAR (measured) = 12.3 mW/g



Date/Time: 2011-08-09 09:20:18, Date/Time: 2011-08-09 09:26:14

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1900 MHz; σ = 1.39 mho/m; ϵ_r = 39.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 12.7 mW/g

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

Reference Value = 92.3 V/m

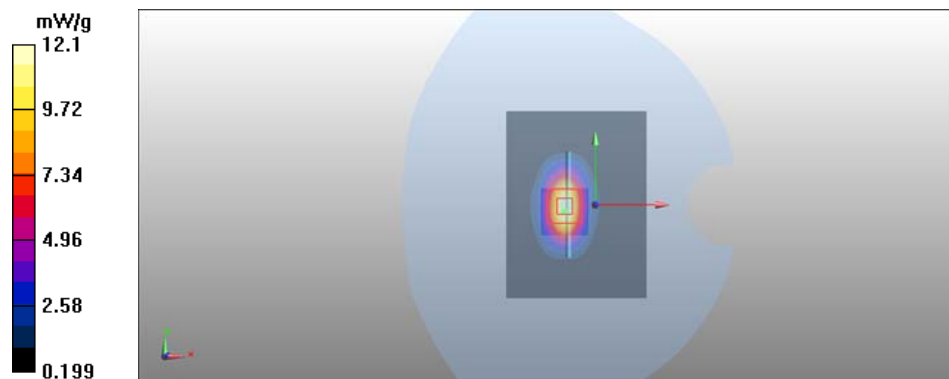
Peak SAR (extrapolated) = 20.5 W/kg

SAR(1 g) = 10.8 mW/g

SAR(10 g) = 5.6 mW/g

Power Drift = 0.184 dB

Maximum value of SAR (measured) = 12.1 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-10 09:28:51, Date/Time: 2011-08-10 09:34:43

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1900 MHz; σ = 1.4 mho/m; ϵ_r = 39.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 12.8 mW/g

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

Reference Value = 93.7 V/m

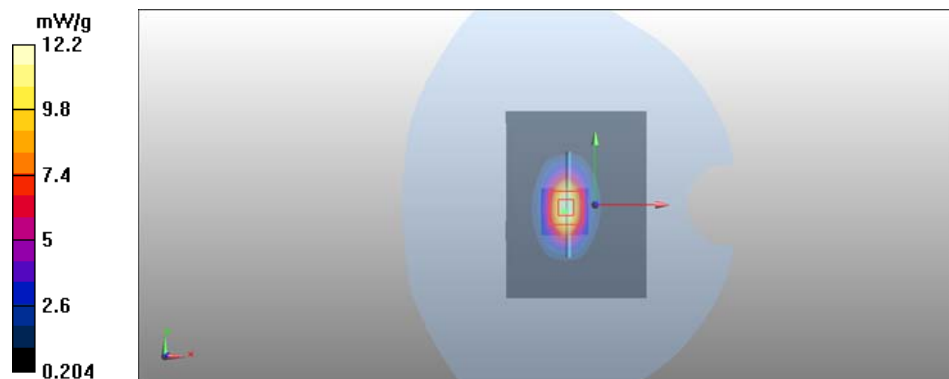
Peak SAR (extrapolated) = 20.7 W/kg

SAR(1 g) = 10.9 mW/g

SAR(10 g) = 5.59 mW/g

Power Drift = 0.058 dB

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



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-11 09:39:28, Date/Time: 2011-08-11 09:45:20

Test Laboratory: TCC Nokia

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 21.9 C

Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ϵ_r = 39.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 12.6 mW/g

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

Reference Value = 94.5 V/m

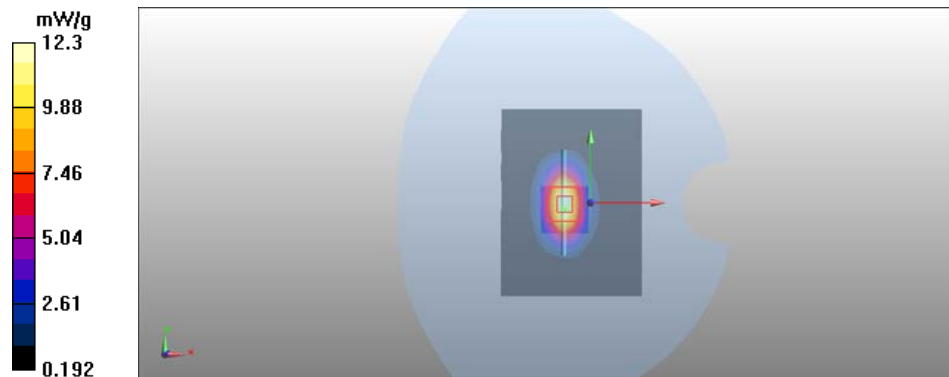
Peak SAR (extrapolated) = 20.8 W/kg

SAR(1 g) = 10.9 mW/g

SAR(10 g) = 5.65 mW/g

Power Drift = 0.080 dB

Maximum value of SAR (measured) = 12.3 mW/g



Date/Time: 2011-08-26 11:59:21, Date/Time: 2011-08-26 11:52:26

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: SN:5d007

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900; Medium Notes: Liquid Temperature: 21.8 C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(4.76, 4.76, 4.76); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM HB; Type:; Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

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

Reference Value = 93.8 V/m

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 10.6 mW/g

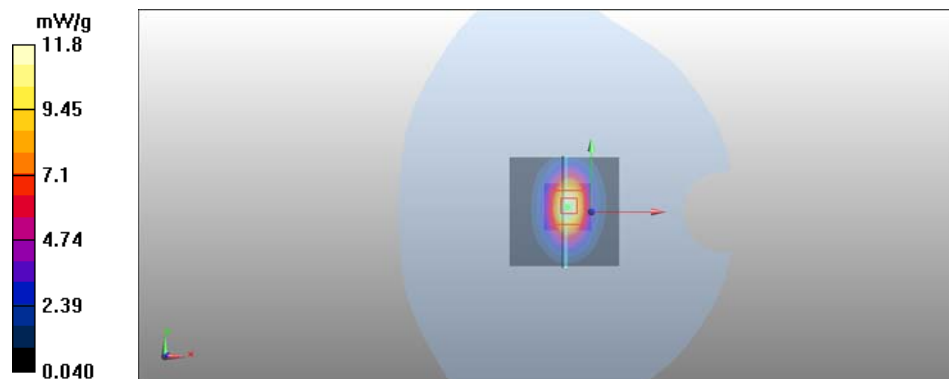
SAR(10 g) = 5.56 mW/g

Power Drift = 0.014 dB

Maximum value of SAR (measured) = 12.1 mW/g

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

Maximum value of SAR (interpolated) = 11.8 mW/g



Date/Time: 2011-08-16 09:56:02, Date/Time: 2011-08-16 10:02:00

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:749

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 22.1$ C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 16.6 mW/g

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

Reference Value = 91 V/m

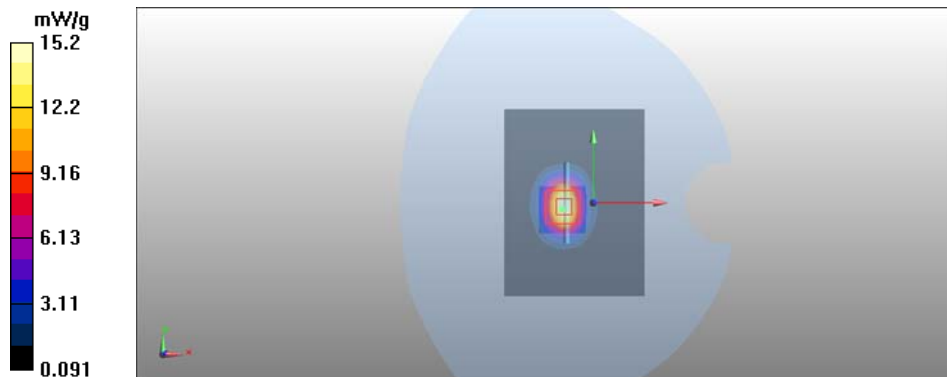
Peak SAR (extrapolated) = 28.3 W/kg

SAR(1 g) = 13.5 mW/g

SAR(10 g) = 6.25 mW/g

Power Drift = 0.015 dB

Maximum value of SAR (measured) = 15.2 mW/g



Date/Time: 2011-08-09 06:54:05, Date/Time: 2011-08-09 06:59:52

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 835 MHz; σ = 0.98 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

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

Maximum value of SAR (interpolated) = 2.6 mW/g

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

Reference Value = 51.9 V/m

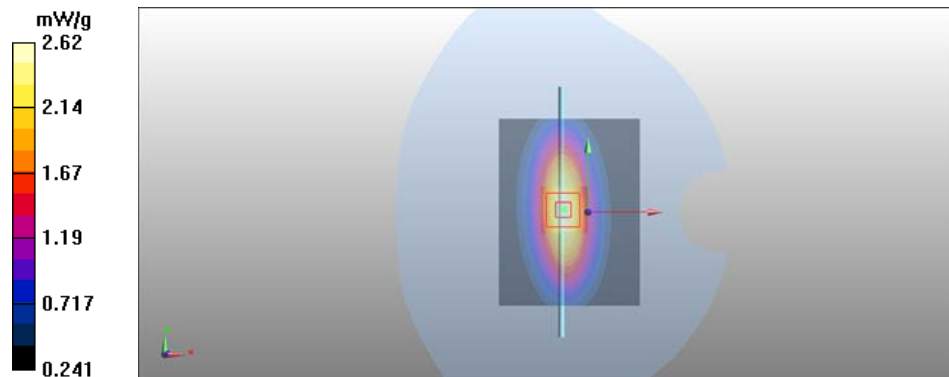
Peak SAR (extrapolated) = 3.65 W/kg

SAR(1 g) = 2.43 mW/g

SAR(10 g) = 1.59 mW/g

Power Drift = 0.055 dB

Maximum value of SAR (measured) = 2.62 mW/g



Date/Time: 2011-08-17 09:39:22, Date/Time: 2011-08-17 09:45:41

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:749

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

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

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

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

Reference Value = 85.1 V/m

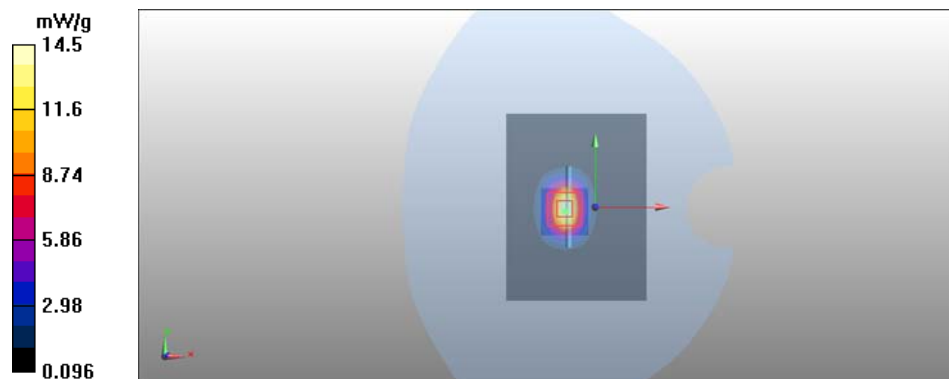
Peak SAR (extrapolated) = 25.9 W/kg

SAR(1 g) = 12.7 mW/g

SAR(10 g) = 5.87 mW/g

Power Drift = -0.030 dB

Maximum value of SAR (measured) = 14.5 mW/g



APPENDIX B: MEASUREMENT SCANS

Date/Time: 2011-08-04 13:42:39, Date/Time: 2011-08-04 13:46:48

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 849 MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM - Left/Cheek – High – BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.844 mW/g

GSM - Left/Cheek – High – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.29 V/m

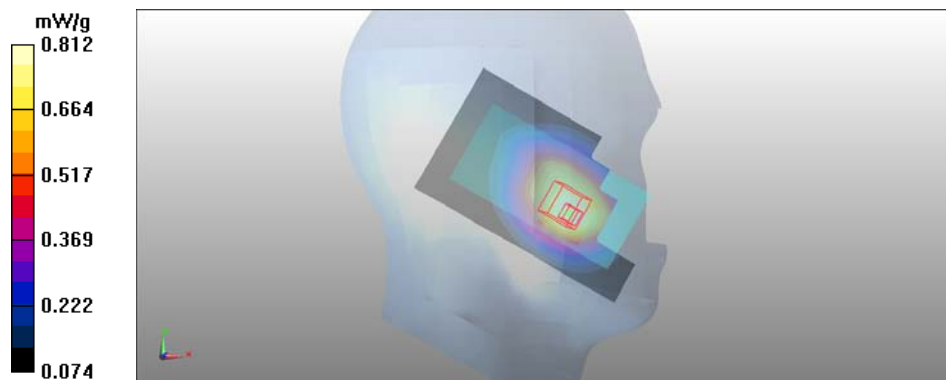
Peak SAR (extrapolated) = 1.1 W/kg

SAR(1 g) = 0.771 mW/g

SAR(10 g) = 0.555 mW/g

Power Drift = -0.044 dB

Maximum value of SAR (measured) = 0.812 mW/g



Date/Time: 2011-08-04 12:30:44, Date/Time: 2011-08-04 12:40:43

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM - Left/Tilt - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.511 mW/g

GSM - Left/Tilt - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.5 V/m

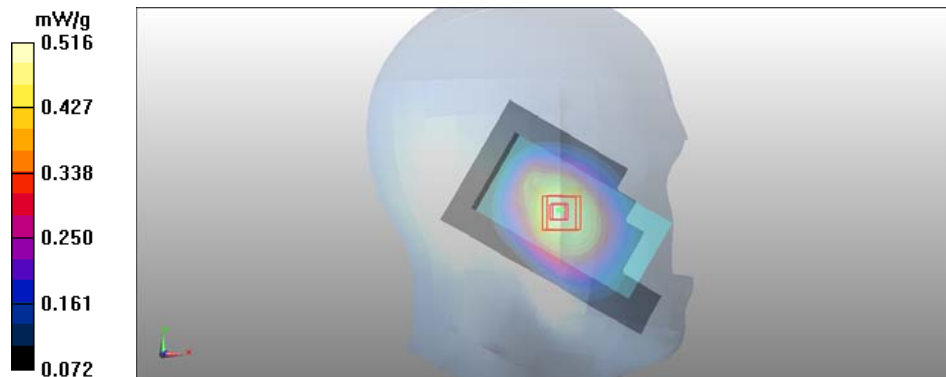
Peak SAR (extrapolated) = 0.617 W/kg

SAR(1 g) = 0.490 mW/g

SAR(10 g) = 0.368 mW/g

Power Drift = 0.020 dB

Maximum value of SAR (measured) = 0.516 mW/g



Date/Time: 2011-08-04 12:50:05, Date/Time: 2011-08-04 12:57:33

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM - Right/Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.815 mW/g

GSM - Right/Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.7 V/m

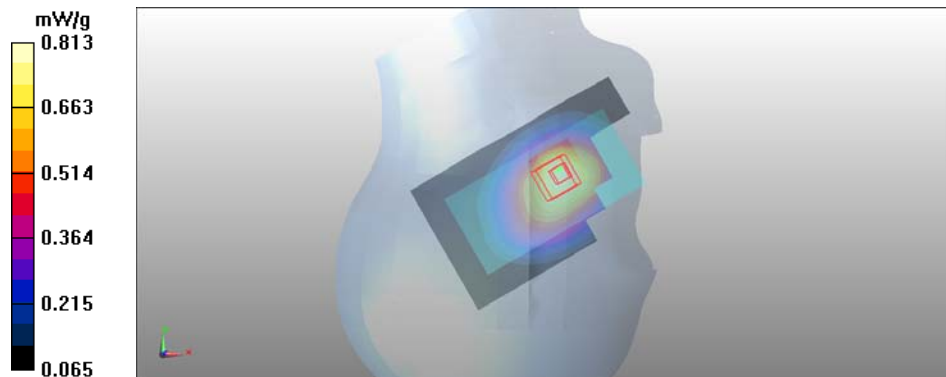
Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.763 mW/g

SAR(10 g) = 0.541 mW/g

Power Drift = 0.055 dB

Maximum value of SAR (measured) = 0.813 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-04 13:04:29, Date/Time: 2011-08-04 13:08:56

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM - Right/Tilt - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

GSM - Right/Tilt - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 16.4 V/m

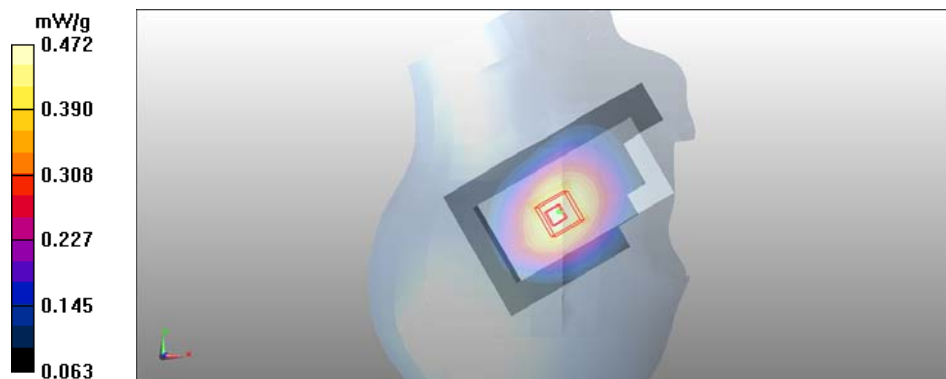
Peak SAR (extrapolated) = 0.568 W/kg

SAR(1 g) = 0.449 mW/g

SAR(10 g) = 0.336 mW/g

Power Drift = -0.041 dB

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



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-04 11:28:02, Date/Time: 2011-08-04 11:35:15

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

2-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.804 mW/g

2-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.41 V/m

Peak SAR (extrapolated) = 1.06 W/kg

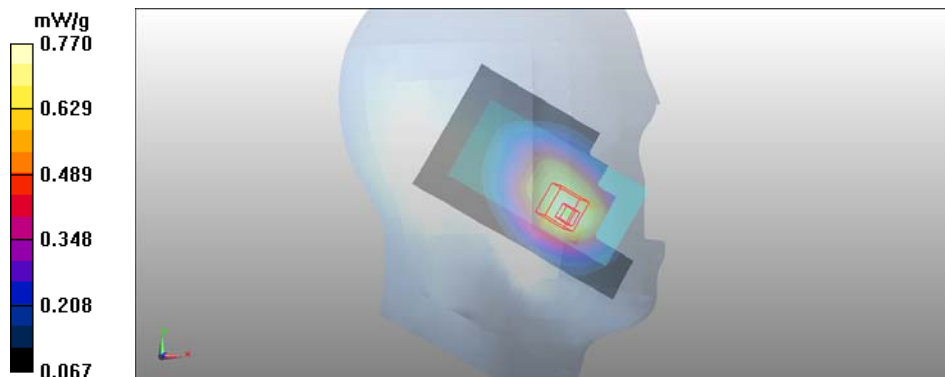
SAR(1 g) = 0.731 mW/g

SAR(10 g) = 0.520 mW/g

Power Drift = 0.036 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) = 0.770 mW/g



Date/Time: 2011-08-04 11:42:04, Date/Time: 2011-08-04 11:49:15

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 3-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.80027

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

3-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.797 mW/g

3-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.49 V/m

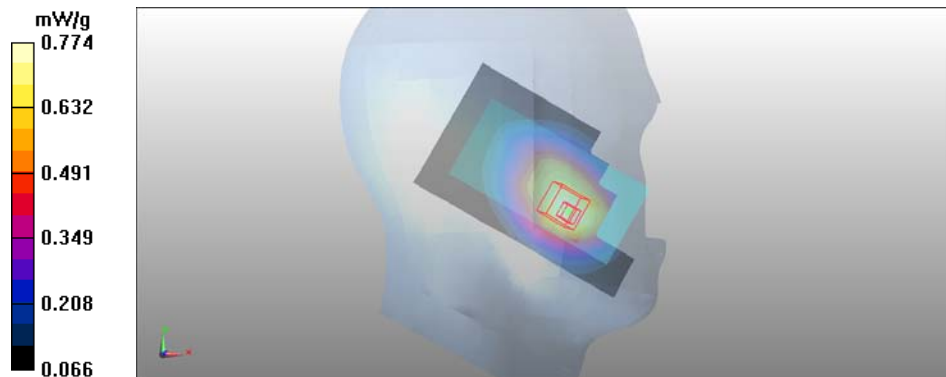
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.736 mW/g

SAR(10 g) = 0.521 mW/g

Power Drift = -0.048 dB

Maximum value of SAR (measured) = 0.774 mW/g



Date/Time: 2011-08-04 11:56:21, Date/Time: 2011-08-04 12:03:34

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium: HSL850; Medium Notes: t= 21.6 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

4-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

4-slot GPRS- Left/Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.51 V/m

Peak SAR (extrapolated) = 1.06 W/kg

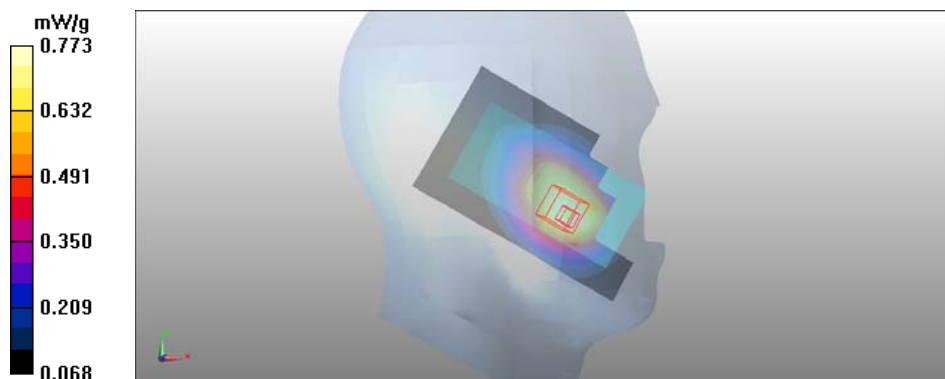
SAR(1 g) = 0.732 mW/g

SAR(10 g) = 0.522 mW/g

Power Drift = -0.000415 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) = 0.773 mW/g



Date/Time: 2011-08-25 10:53:12, Date/Time: 2011-08-25 11:00:53

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 1-slot 8PSK EGPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 835; Medium Notes: Liquid Temperature: 21.4 °C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(6.06, 6.06, 6.06); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM LB; Type:: Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

1-slot 8PSK EGPRS - Left/Cheek – Middle – BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.109 mW/g

1-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 3.24 V/m

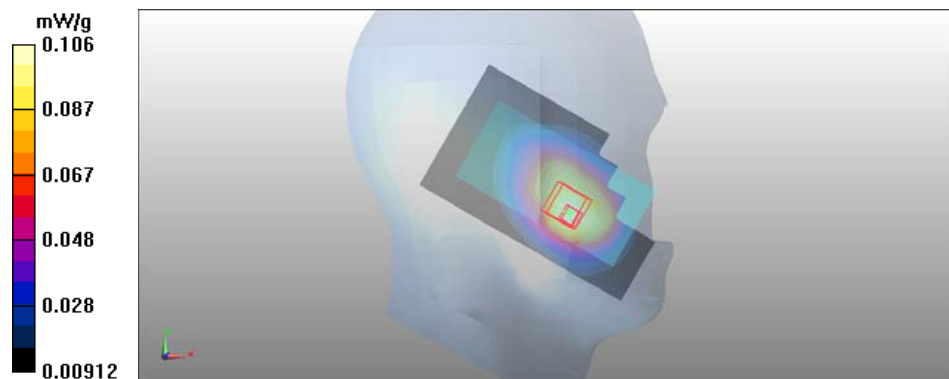
Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.100 mW/g

SAR(10 g) = 0.071 mW/g

Power Drift = -0.062 dB

Maximum value of SAR (measured) = 0.106 mW/g



Date/Time: 2011-08-25 11:15:06, Date/Time: 2011-08-25 11:22:47

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 2-slot 8PSK EGPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.15

Medium: Head 835; Medium Notes: Liquid Temperature: 21.4 °C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(6.06, 6.06, 6.06); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM LB; Type:: Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

2-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.212 mW/g

2-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.54 V/m

Peak SAR (extrapolated) = 0.267 W/kg

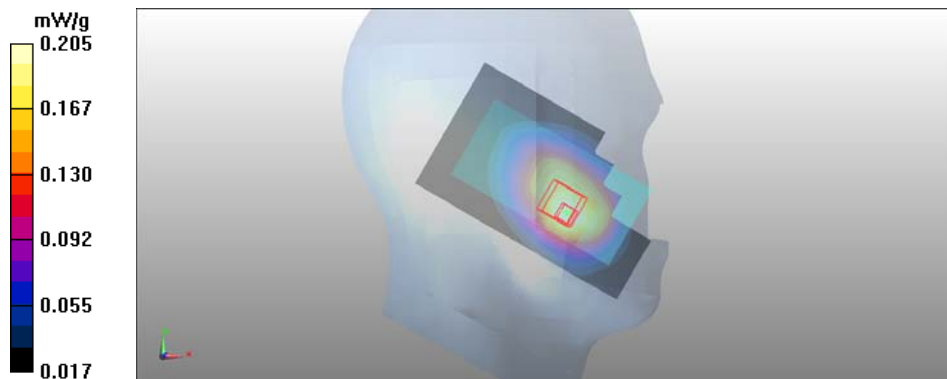
SAR(1 g) = 0.194 mW/g

SAR(10 g) = 0.138 mW/g

Power Drift = -0.076 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) = 0.205 mW/g



Date/Time: 2011-08-25 11:33:21, Date/Time: 2011-08-25 11:41:04

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 3-slot 8PSK EGPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.8

Medium: Head 835; Medium Notes: Liquid Temperature: 21.4 °C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(6.06, 6.06, 6.06); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM LB; Type:: Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

3-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

3-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.53 V/m

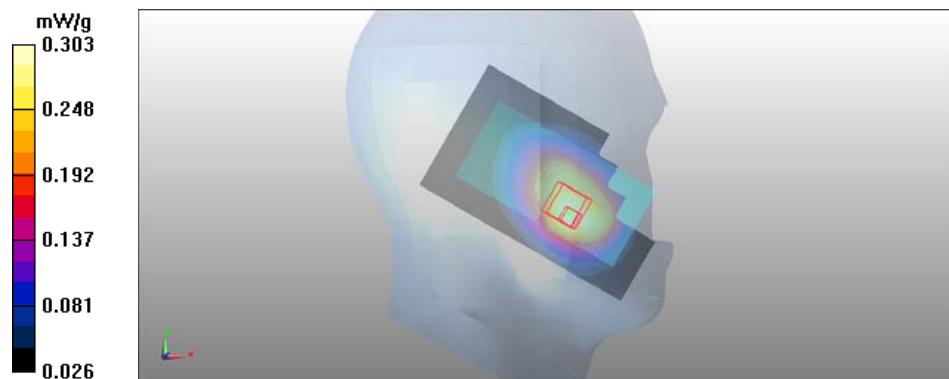
Peak SAR (extrapolated) = 0.402 W/kg

SAR(1 g) = 0.287 mW/g

SAR(10 g) = 0.203 mW/g

Power Drift = -0.043 dB

Maximum value of SAR (measured) = 0.303 mW/g



Date/Time: 2011-08-25 11:49:59, Date/Time: 2011-08-25 11:57:41

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot 8PSK EGPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:2.075

Medium: Head 835; Medium Notes: Liquid Temperature: 21.4 °C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 41.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(6.06, 6.06, 6.06); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM LB; Type:: Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

4-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

4-slot 8PSK EGPRS - Left /Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.28 V/m

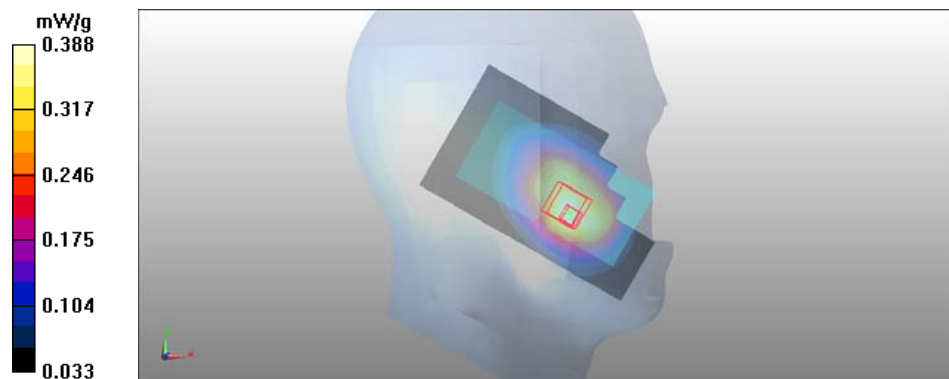
Peak SAR (extrapolated) = 0.518 W/kg

SAR(1 g) = 0.369 mW/g

SAR(10 g) = 0.262 mW/g

Power Drift = -0.049 dB

Maximum value of SAR (measured) = 0.388 mW/g



Date/Time: 2011-08-05 10:10:31, Date/Time: 2011-08-05 10:17:42

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 22.1 C

Medium parameters used: f = 835 MHz; σ = 0.896 mho/m; ϵ_r = 39.6; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA -Left/Cheek - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.961 mW/g

WCDMA -Left/Cheek - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10 V/m

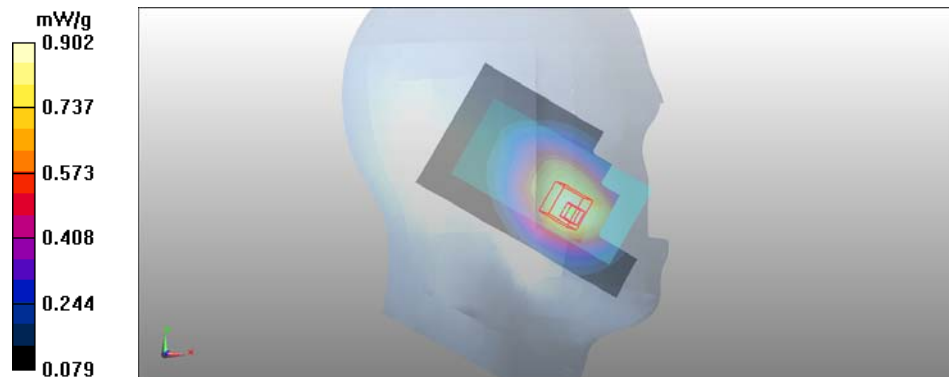
Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.857 mW/g

SAR(10 g) = 0.608 mW/g

Power Drift = -0.290 dB

Maximum value of SAR (measured) = 0.902 mW/g



Date/Time: 2011-08-05 10:24:37, Date/Time: 2011-08-05 10:28:47

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 22.1 C

Medium parameters used: f = 835 MHz; σ = 0.896 mho/m; ϵ_r = 39.6; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA -Left/Tilt - Middle – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA -Left/Tilt - Middle – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.8 V/m

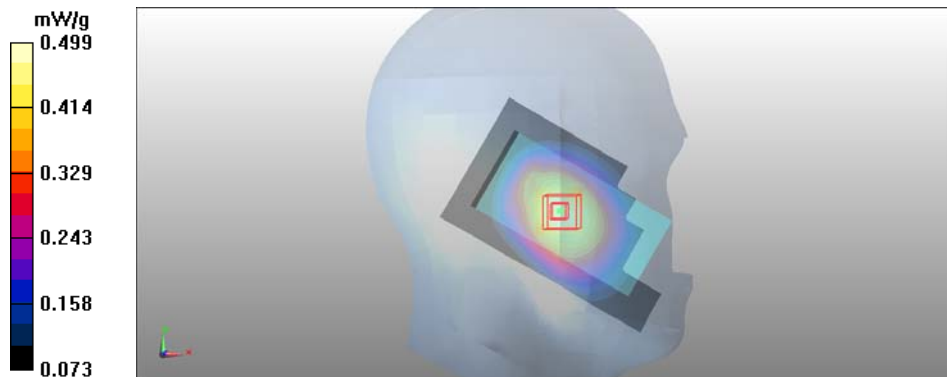
Peak SAR (extrapolated) = 0.589 W/kg

SAR(1 g) = 0.475 mW/g

SAR(10 g) = 0.360 mW/g

Power Drift = -0.115 dB

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



Date/Time: 2011-08-05 11:42:00, Date/Time: 2011-08-05 11:46:25

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 22.1 C

Medium parameters used: f = 847 MHz; $\sigma = 0.905$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Cheek - High – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.940 mW/g

WCDMA - Right/Cheek - High – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.92 V/m

Peak SAR (extrapolated) = 1.26 W/kg

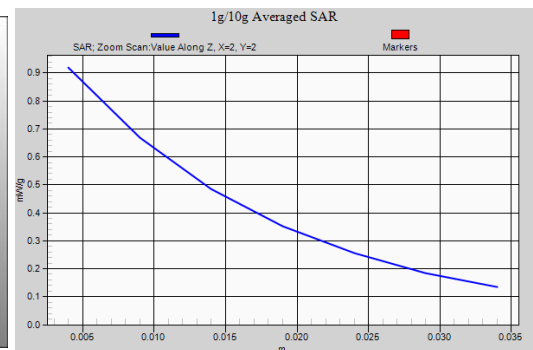
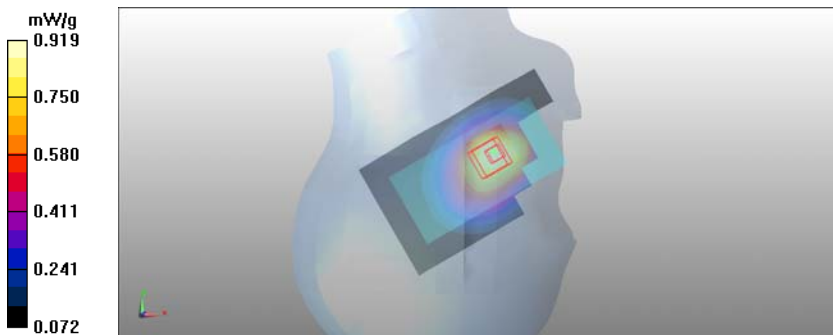
SAR(1 g) = 0.862 mW/g

SAR(10 g) = 0.606 mW/g

Power Drift = -0.038 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) = 0.919 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-05 11:54:00, Date/Time: 2011-08-05 11:58:27

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 22.1 C

Medium parameters used: f = 835 MHz; σ = 0.896 mho/m; ϵ_r = 39.6; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASYS2, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA - Right/Tilt - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.7 V/m

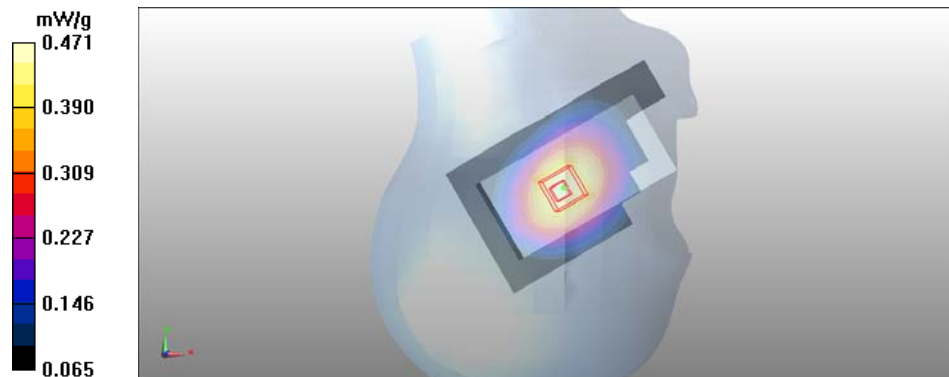
Peak SAR (extrapolated) = 0.559 W/kg

SAR(1 g) = 0.449 mW/g

SAR(10 g) = 0.339 mW/g

Power Drift = 0.097 dB

Maximum value of SAR (measured) = 0.471 mW/g



Date/Time: 2011-08-05 12:13:29, Date/Time: 2011-08-05 12:17:54

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL850; Medium Notes: t= 22.1 C

Medium parameters used: f = 835 MHz; $\sigma = 0.896$ mho/m; $\epsilon_r = 39.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(6.09, 6.09, 6.09); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Cheek - Middle - BP-3L LG/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA - Right/Cheek - Middle - BP-3L LG /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.8 V/m

Peak SAR (extrapolated) = 1.09 W/kg

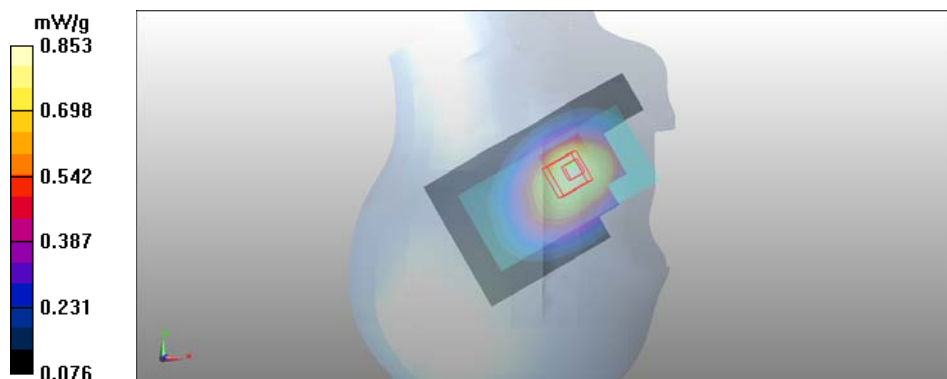
SAR(1 g) = 0.811 mW/g

SAR(10 g) = 0.582 mW/g

Power Drift = -0.161 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) = 0.853 mW/g



Date/Time: 2011-08-13 13:18:12, Date/Time: 2011-08-13 13:35:05

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.82 V/m

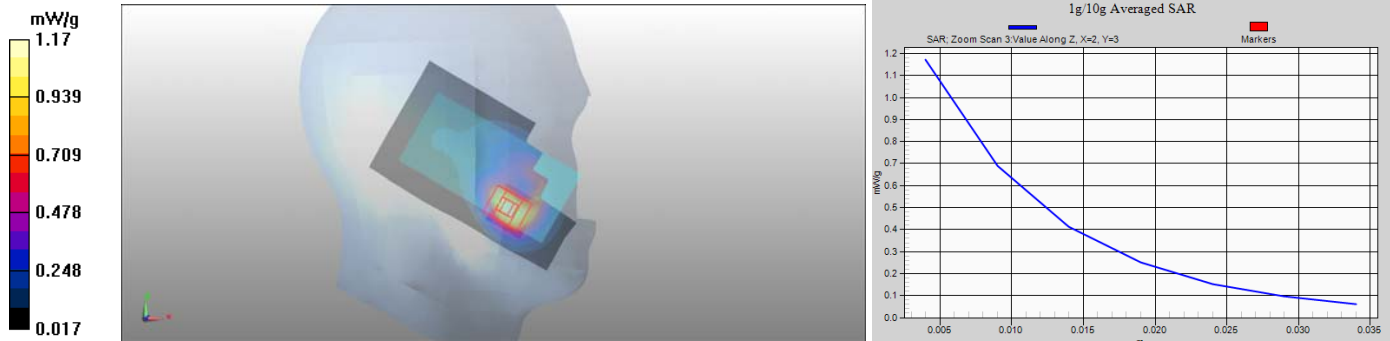
Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 1.04 mW/g

SAR(10 g) = 0.559 mW/g

Power Drift = -0.263 dB

Maximum value of SAR (measured) = 1.17 mW/g



Date/Time: 2011-08-12 17:19:28, Date/Time: 2011-08-12 17:24:22

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.209 mW/g

WCDMA - Left/Tilt - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.7 V/m

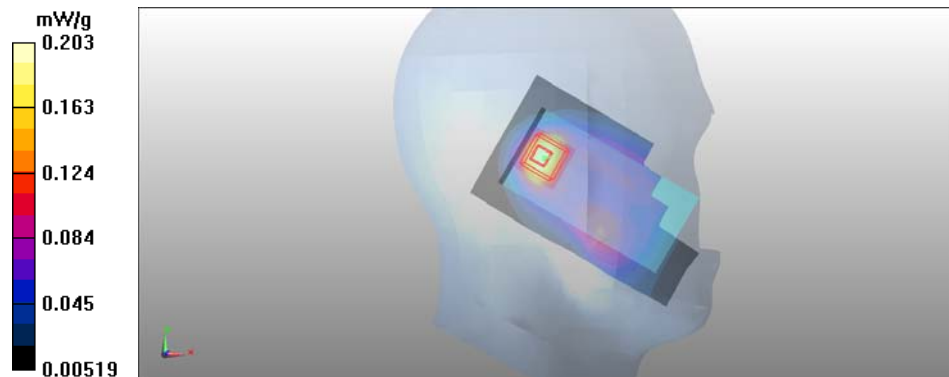
Peak SAR (extrapolated) = 0.311 W/kg

SAR(1 g) = 0.186 mW/g

SAR(10 g) = 0.107 mW/g

Power Drift = 0.019 dB

Maximum value of SAR (measured) = 0.203 mW/g



Date/Time: 2011-08-13 09:59:50, Date/Time: 2011-08-13 10:07:13, Date/Time: 2011-08-13 10:14:04

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.778 mW/g

WCDMA - Right/Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.6 V/m

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.671 mW/g

SAR(10 g) = 0.389 mW/g

Power Drift = -0.039 dB

Maximum value of SAR (measured) = 0.738 mW/g

WCDMA - Right/Cheek - Middle - BP-3L Sony /Zoom Scan 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.6 V/m

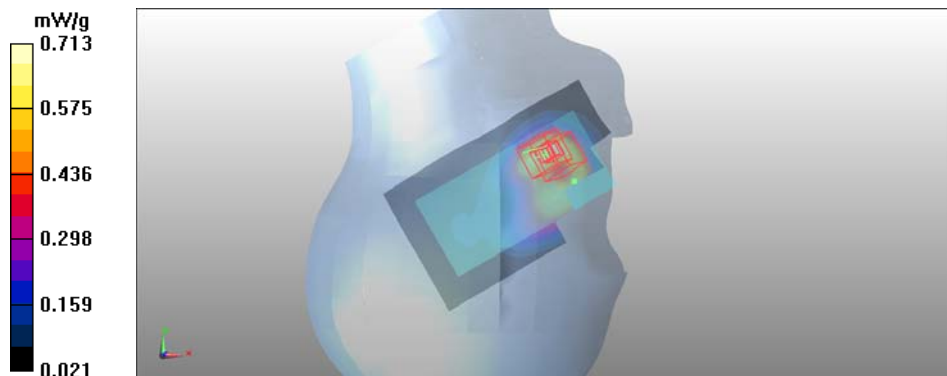
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.659 mW/g

SAR(10 g) = 0.367 mW/g

Power Drift = -0.039 dB

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



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-13 10:28:21, Date/Time: 2011-08-13 10:33:19

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Tilt - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA - Right/Tilt - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.5 V/m

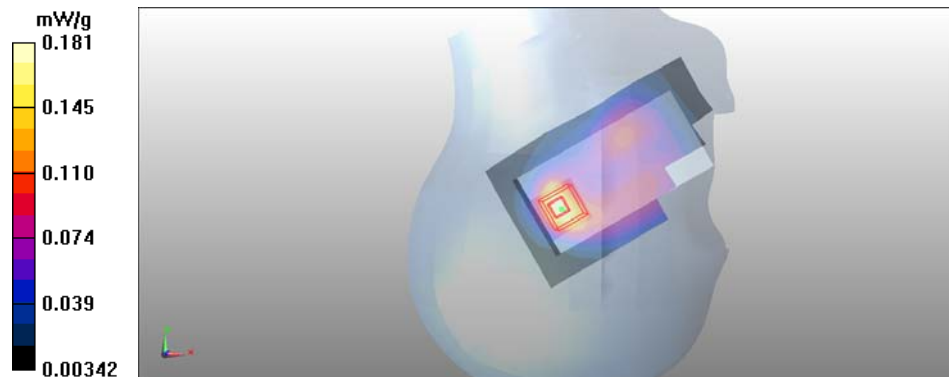
Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.164 mW/g

SAR(10 g) = 0.095 mW/g

Power Drift = -0.000756 dB

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



Date/Time: 2011-08-13 11:54:53, Date/Time: 2011-08-13 11:59:50, Date/Time: 2011-08-13 12:11:20

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 22.0 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.19, 5.19, 5.19); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Middle - BP-3L LG/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1 mW/g

WCDMA - Left/Cheek - Middle - BP-3L LG/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.93 V/m

Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = 0.983 mW/g

SAR(10 g) = 0.518 mW/g

Power Drift = -0.049 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) = 1.11 mW/g

Configuration/WCDMA - Left/Cheek - Middle - BP-3L LG/Zoom Scan 2 (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.93 V/m

Peak SAR (extrapolated) = 1.2 W/kg

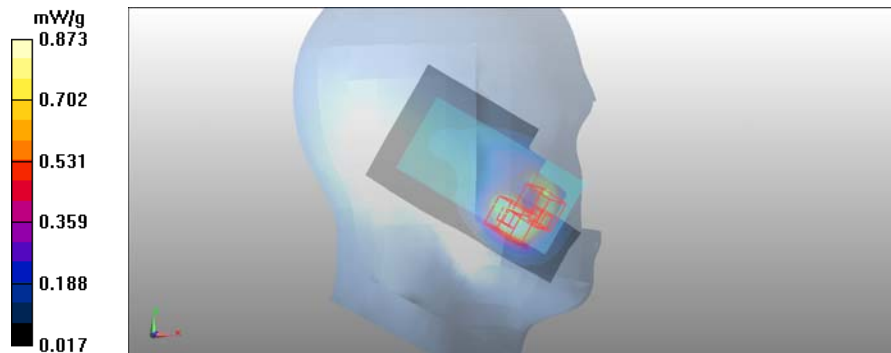
SAR(1 g) = 0.628 mW/g

SAR(10 g) = 0.390 mW/g

Power Drift = -0.049 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) = 0.873 mW/g



Date/Time: 2011-08-10 14:43:24, Date/Time: 2011-08-10 14:50:45

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ϵ_r = 39.4; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

GSM - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.678 mW/g

GSM - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.04 V/m

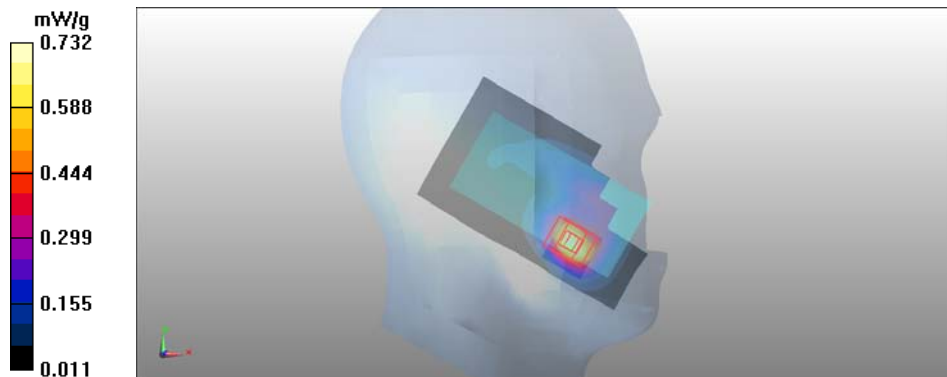
Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.666 mW/g

SAR(10 g) = 0.353 mW/g

Power Drift = -0.243 dB

Maximum value of SAR (measured) = 0.732 mW/g



Date/Time: 2011-08-10 15:00:31, Date/Time: 2011-08-10 15:07:51

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ϵ_r = 39.4; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

2-slot GPRS - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.638 mW/g

2-slot GPRS - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.78 V/m

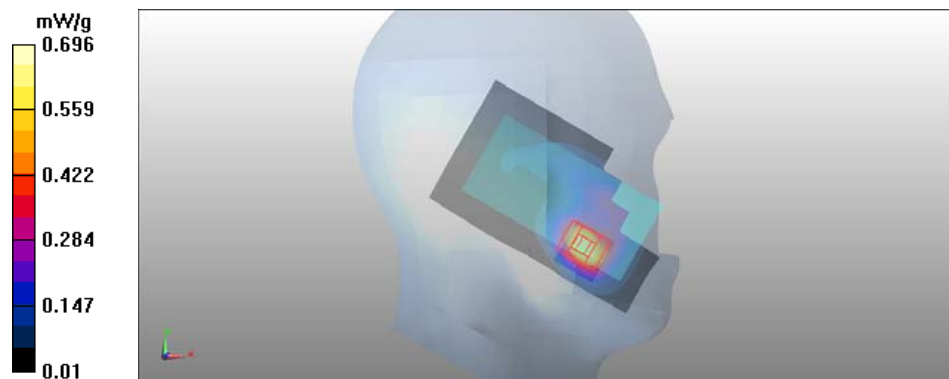
Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.632 mW/g

SAR(10 g) = 0.334 mW/g

Power Drift = -0.074 dB

Maximum value of SAR (measured) = 0.696 mW/g



Date/Time: 2011-08-10 15:16:36, Date/Time: 2011-08-10 15:25:27

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 3-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ϵ_r = 39.4; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

3-slot GPRS - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.652 mW/g

3-slot GPRS - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.72 V/m

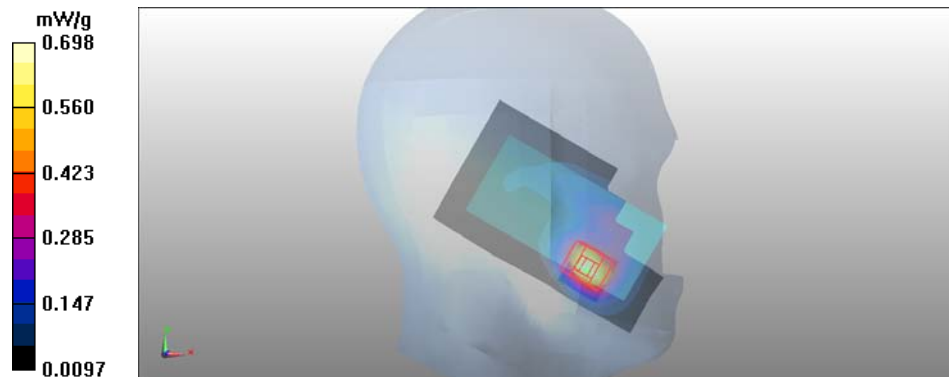
Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.633 mW/g

SAR(10 g) = 0.335 mW/g

Power Drift = 0.010 dB

Maximum value of SAR (measured) = 0.698 mW/g



Date/Time: 2011-08-11 12:22:57, Date/Time: 2011-08-11 12:30:19

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:2.1

Medium: HSL1900; Medium Notes: $t = 21.9$ C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS - Left/Cheek - Low - BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.711 mW/g

4-slot GPRS - Left/Cheek - Low - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.24 V/m

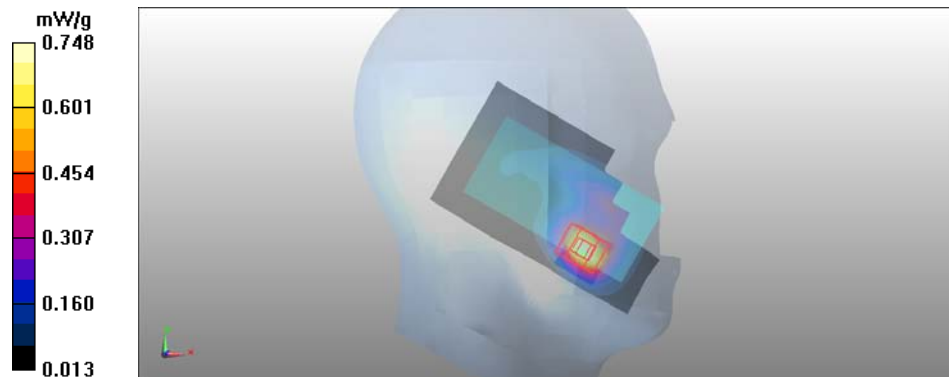
Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.689 mW/g

SAR(10 g) = 0.366 mW/g

Power Drift = -0.179 dB

Maximum value of SAR (measured) = 0.748 mW/g



Date/Time: 2011-08-11 10:05:55, Date/Time: 2011-08-11 10:13:18

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: HSL1900; Medium Notes: $t = 21.9$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS - Left/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.097 mW/g

4-slot GPRS - Left/Tilt - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.26 V/m

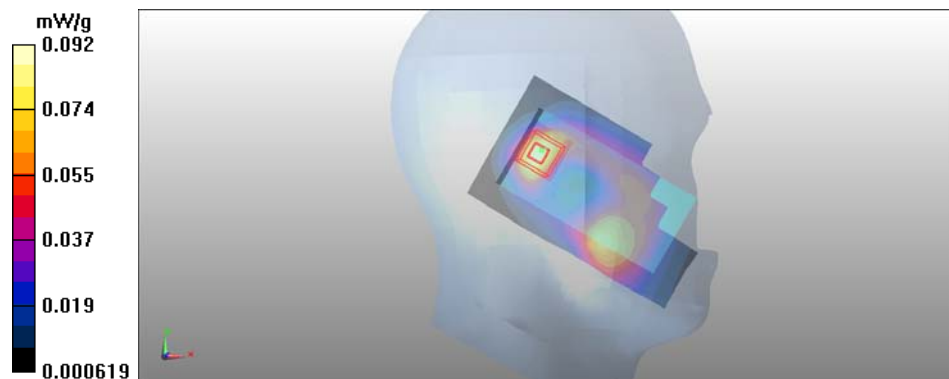
Peak SAR (extrapolated) = 0.144 W/kg

SAR(1 g) = 0.084 mW/g

SAR(10 g) = 0.047 mW/g

Power Drift = -0.297 dB

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



Date/Time: 2011-08-11 11:48:46, Date/Time: 2011-08-11 11:56:13

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: HSL1900; Medium Notes: t= 21.9 C

Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ϵ_r = 39.3; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS - Right/Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

4-slot GPRS - Right/Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.91 V/m

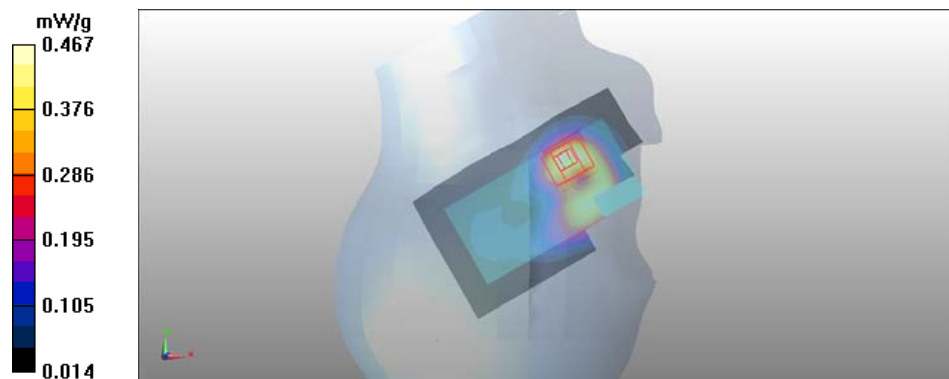
Peak SAR (extrapolated) = 0.760 W/kg

SAR(1 g) = 0.448 mW/g

SAR(10 g) = 0.256 mW/g

Power Drift = -0.241 dB

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



Date/Time: 2011-08-11 12:04:07, Date/Time: 2011-08-11 12:08:59

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: HSL1900; Medium Notes: t= 21.9 C

Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ϵ_r = 39.3; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS - Right/Tilt - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.106 mW/g

4-slot GPRS - Right/Tilt - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.42 V/m

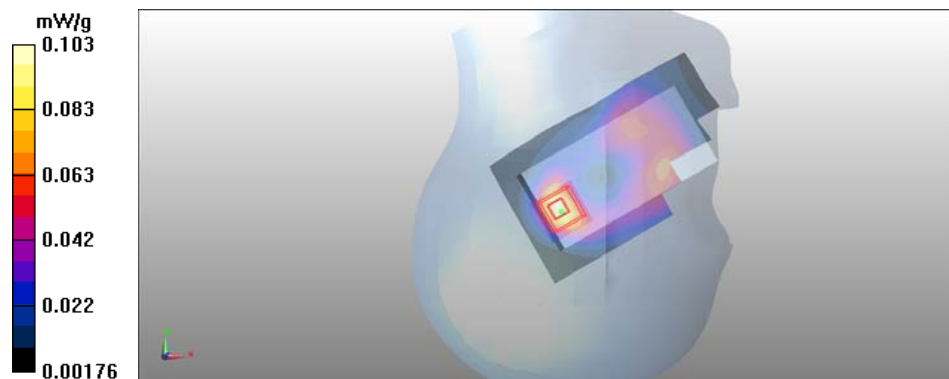
Peak SAR (extrapolated) = 0.160 W/kg

SAR(1 g) = 0.092 mW/g

SAR(10 g) = 0.050 mW/g

Power Drift = -0.084 dB

Maximum value of SAR (measured) = 0.103 mW/g



Date/Time: 2011-08-26 12:39:44, Date/Time: 2011-08-26 12:47:34

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 1-slot 8PSK EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Liquid Temperature: 21.8 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(4.76, 4.76, 4.76); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM HB; Type:; Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

1-slot 8PSK EGPRS1900 - Left/Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid:

dx=15mm, dy=15mm

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

1-slot 8PSK EGPRS1900 - Left/Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 3.16 V/m

Peak SAR (extrapolated) = 0.285 W/kg

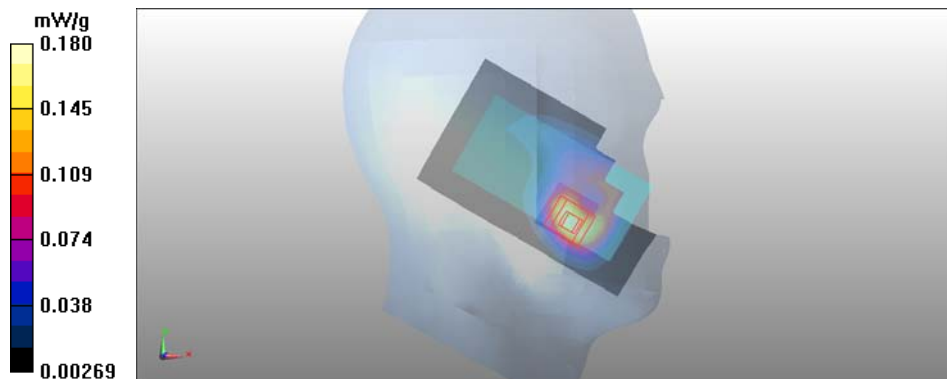
SAR(1 g) = 0.168 mW/g

SAR(10 g) = 0.090 mW/g

Power Drift = 0.289 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) = 0.180 mW/g



Date/Time: 2011-08-26 13:24:46, Date/Time: 2011-08-26 13:32:34

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 2-slot 8PSK EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium: Head 1900; Medium Notes: Liquid Temperature: 21.8 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(4.76, 4.76, 4.76); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM HB; Type:; Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

2-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.347 mW/g

2-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.66 V/m

Peak SAR (extrapolated) = 0.549 W/kg

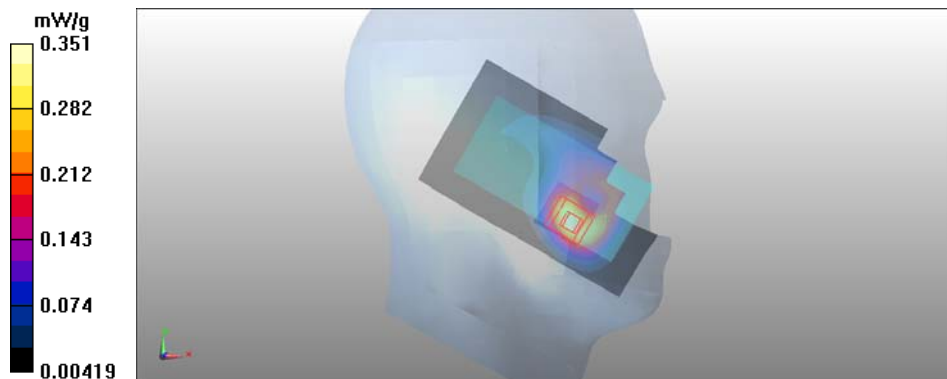
SAR(1 g) = 0.323 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = -0.199 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) = 0.351 mW/g



Date/Time: 2011-08-26 13:44:22, Date/Time: 2011-08-26 13:52:12

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 3-slot 8PSK EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.8

Medium: Head 1900; Medium Notes: Liquid Temperature: 21.8 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(4.76, 4.76, 4.76); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM HB; Type:; Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

3-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.498 mW/g

3-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.54 V/m

Peak SAR (extrapolated) = 0.782 W/kg

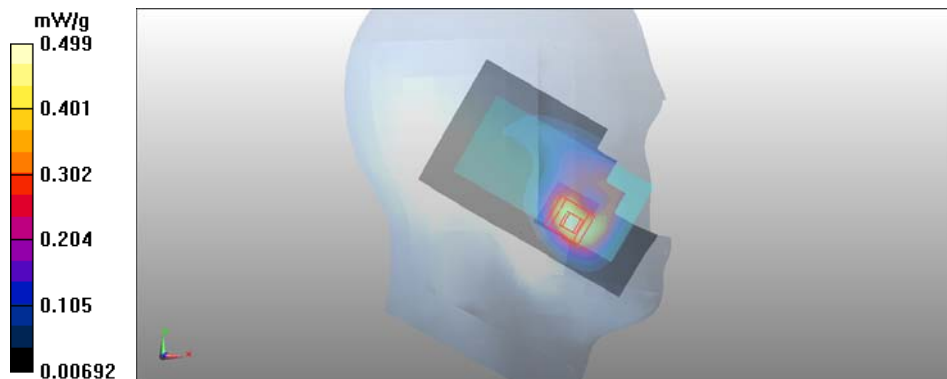
SAR(1 g) = 0.457 mW/g

SAR(10 g) = 0.246 mW/g

Power Drift = -0.173 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) = 0.499 mW/g



Date/Time: 2011-08-26 14:18:38, Date/Time: 2011-08-26 14:26:28

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot 8PSK EGPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.08

Medium: Head 1900; Medium Notes: Liquid Temperature: 21.8 C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1675
- ConvF(4.76, 4.76, 4.76); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn671; Calibrated: 2010-09-16
- Phantom: SAM HB; Type:; Serial:
- Measurement SW: DASY4, V4.7 Build 80; SEMCAD X Version 14.0 Build 61

4-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid:

dx=15mm, dy=15mm

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

4-slot 8PSK EGPRS1900 - Left /Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.31 V/m

Peak SAR (extrapolated) = 0.997 W/kg

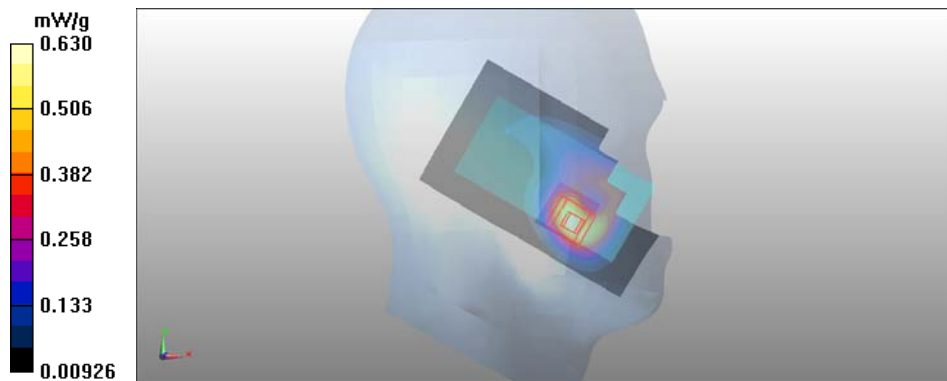
SAR(1 g) = 0.582 mW/g

SAR(10 g) = 0.312 mW/g

Power Drift = -0.395 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) = 0.630 mW/g



Date/Time: 2011-08-08 09:55:16, Date/Time: 2011-08-08 10:10:02

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.997 mW/g

WCDMA - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm,

dy=7.5mm, dz=5mm

Reference Value = 7.25 V/m

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 0.919 mW/g

SAR(10 g) = 0.487 mW/g

Power Drift = -0.108 dB

Maximum value of SAR (measured) = 1.000 mW/g



Date/Time: 2011-08-08 10:49:53, Date/Time: 2011-08-08 10:54:43

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.114 mW/g

WCDMA - Left/Tilt - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.68 V/m

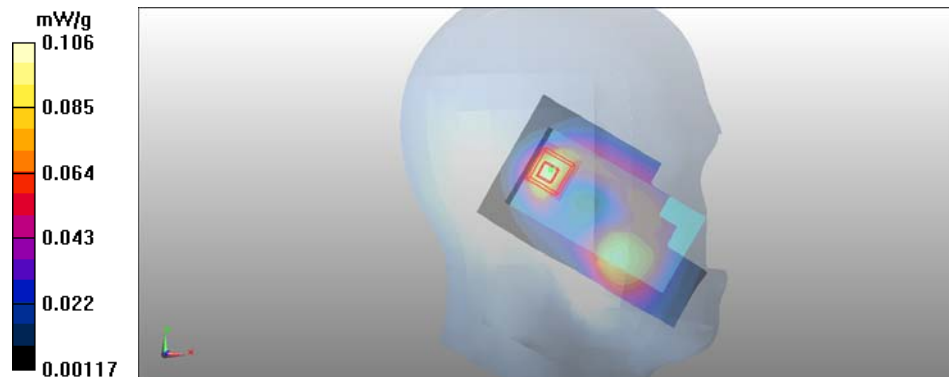
Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.097 mW/g

SAR(10 g) = 0.054 mW/g

Power Drift = -0.059 dB

Maximum value of SAR (measured) = 0.106 mW/g



Date/Time: 2011-08-08 12:37:47, Date/Time: 2011-08-08 12:59:56, Date/Time: 2011-08-08 13:07:21

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Cheek - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.651 mW/g

WCDMA - Right/Cheek - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.93 V/m

Peak SAR (extrapolated) = 0.906 W/kg

SAR(1 g) = 0.541 mW/g

SAR(10 g) = 0.312 mW/g

Power Drift = -0.00348 dB

Maximum value of SAR (measured) = 0.553 mW/g

WCDMA - Right/Cheek - Middle - BP-3L Sony /Zoom Scan 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.93 V/m

Peak SAR (extrapolated) = 0.834 W/kg

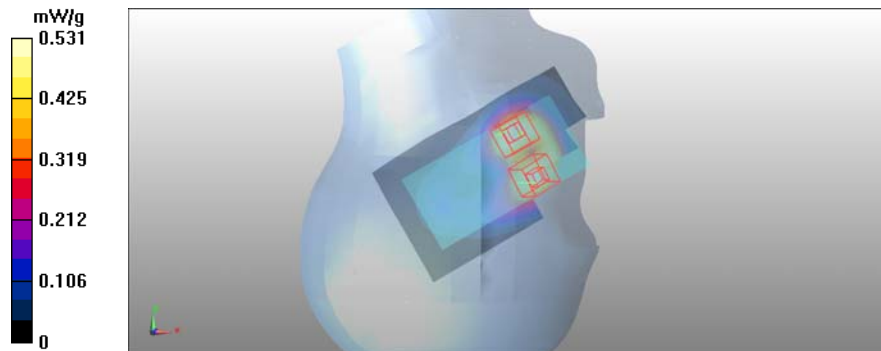
SAR(1 g) = 0.500 mW/g

SAR(10 g) = 0.289 mW/g

Power Drift = -0.00348 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) = 0.531 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-08 13:15:32, Date/Time: 2011-08-08 13:20:28

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 22.0 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Right/Tilt - Middle - BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.139 mW/g

WCDMA - Right/Tilt - Middle - BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.51 V/m

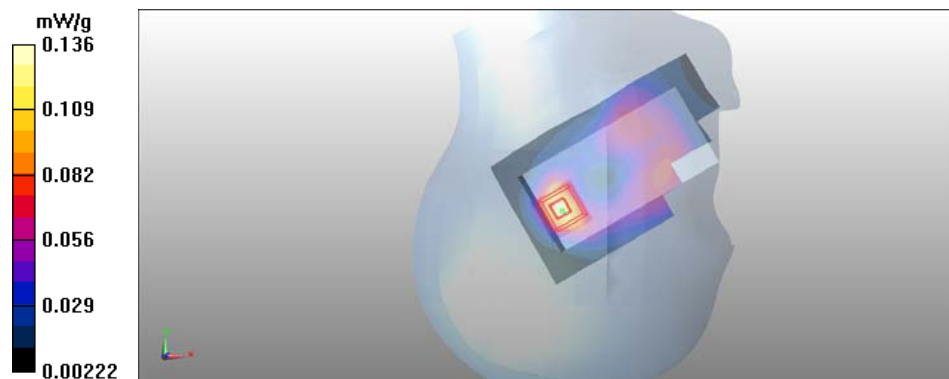
Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.122 mW/g

SAR(10 g) = 0.066 mW/g

Power Drift = 0.081 dB

Maximum value of SAR (measured) = 0.136 mW/g



Date/Time: 2011-08-09 11:21:51, Date/Time: 2011-08-09 11:37:07

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 22.0\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.37\text{ mho/m}$; $\epsilon_r = 39.3$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.03, 5.03, 5.03); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Middle - BP-3L LG/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.857 mW/g

WCDMA - Left/Cheek - Middle - BP-3L LG/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.56 V/m

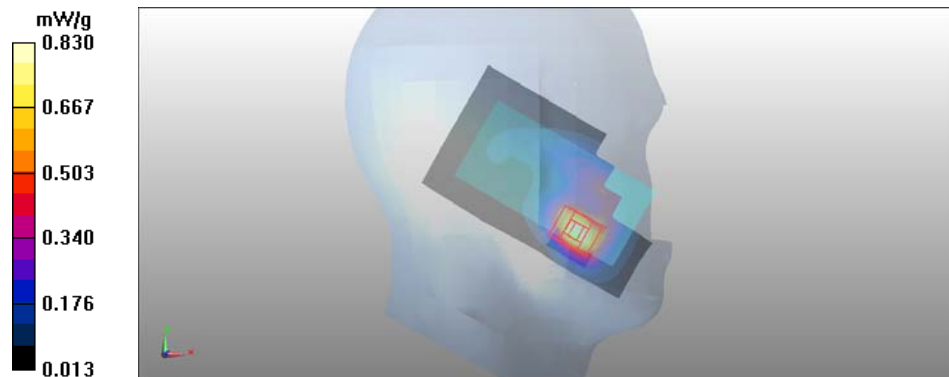
Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.760 mW/g

SAR(10 g) = 0.409 mW/g

Power Drift = -0.089 dB

Maximum value of SAR (measured) = 0.830 mW/g



Date/Time: 2011-08-16 15:38:35, Date/Time: 2011-08-16 15:45:18

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t= 22.1 C

Medium parameters used: f = 2442 MHz; σ = 1.79 mho/m; ϵ_r = 37.6; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Left/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WLAN - Left/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.18 V/m

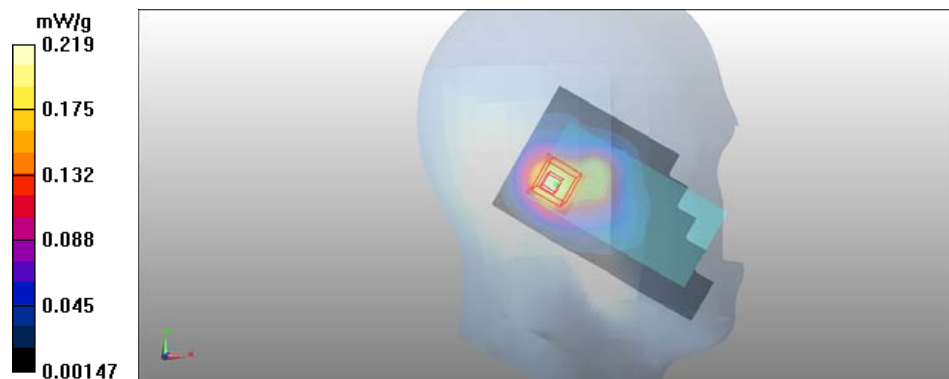
Peak SAR (extrapolated) = 0.394 W/kg

SAR(1 g) = 0.208 mW/g

SAR(10 g) = 0.111 mW/g

Power Drift = 0.054 dB

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



Date/Time: 2011-08-16 15:57:17, Date/Time: 2011-08-16 16:01:04

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 22.1$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Left/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.211 mW/g

WLAN - Left/Tilt - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.61 V/m

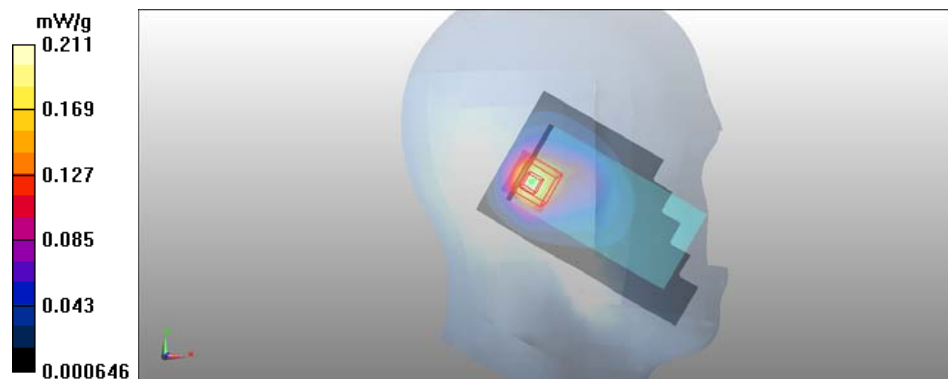
Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.194 mW/g

SAR(10 g) = 0.101 mW/g

Power Drift = 0.212 dB

Maximum value of SAR (measured) = 0.211 mW/g



Date/Time: 2011-08-16 14:58:37, Date/Time: 2011-08-16 15:05:09

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t= 22.1 C

Medium parameters used: f = 2442 MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Right/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

WLAN - Right/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.1 V/m

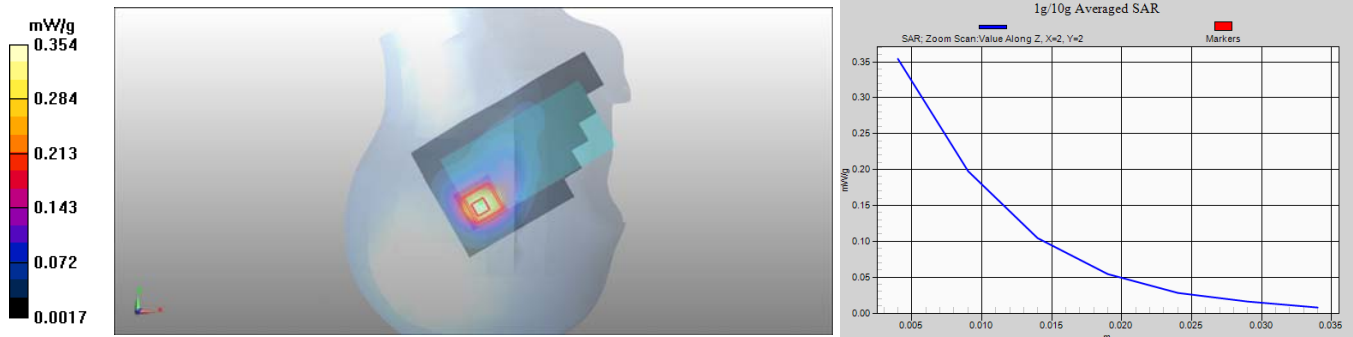
Peak SAR (extrapolated) = 0.673 W/kg

SAR(1 g) = 0.331 mW/g

SAR(10 g) = 0.164 mW/g

Power Drift = 0.073 dB

Maximum value of SAR (measured) = 0.354 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-16 15:18:43, Date/Time: 2011-08-16 15:22:23

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 22.1$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Right/Tilt - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.297 mW/g

WLAN - Right/Tilt - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.4 V/m

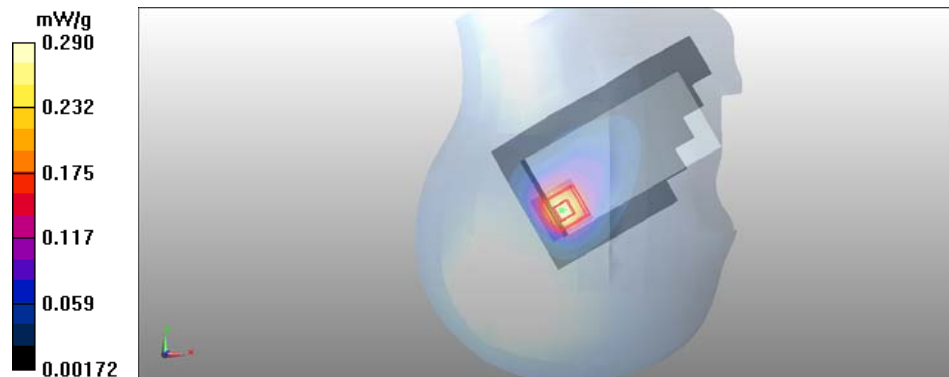
Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.262 mW/g

SAR(10 g) = 0.129 mW/g

Power Drift = -0.040 dB

Maximum value of SAR (measured) = 0.290 mW/g



Date/Time: 2011-08-16 17:33:08, Date/Time: 2011-08-16 17:36:47

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 n-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t= 22.1 C

Medium parameters used: f = 2442 MHz; σ = 1.79 mho/m; ϵ_r = 37.6; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Right/Cheek - Middle - BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.145 mW/g

WLAN - Right/Cheek - Middle - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.53 V/m

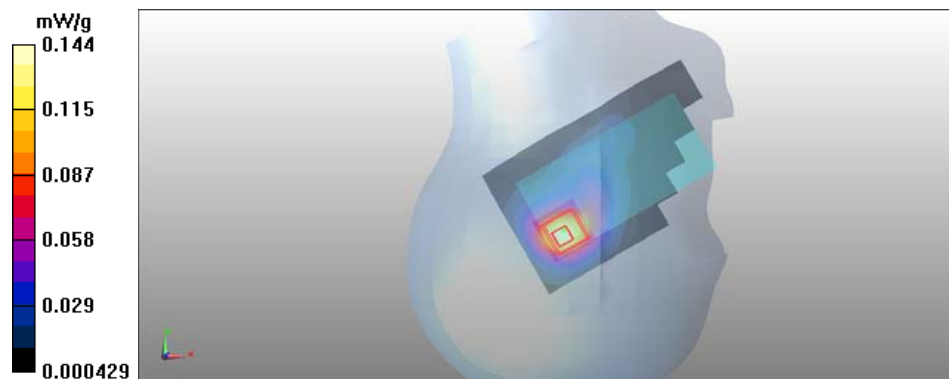
Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.137 mW/g

SAR(10 g) = 0.067 mW/g

Power Drift = 0.102 dB

Maximum value of SAR (measured) = 0.144 mW/g



Date/Time: 2011-08-16 18:36:32, Date/Time: 2011-08-16 18:40:14

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 22.1$ C

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 37.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN - Right/Cheek - High - BP-3L LG/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.344 mW/g

WLAN - Right/Cheek - High - BP-3L LG/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.1 V/m

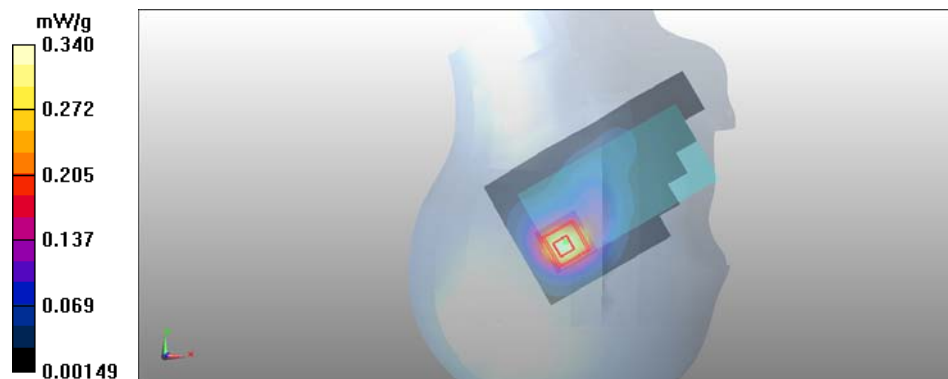
Peak SAR (extrapolated) = 0.660 W/kg

SAR(1 g) = 0.322 mW/g

SAR(10 g) = 0.160 mW/g

Power Drift = -0.00634 dB

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



Date/Time: 2011-08-09 14:40:25, Date/Time: 2011-08-09 14:47:31

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 837 MHz; σ = 0.981 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

GSM/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 10.5 V/m

Peak SAR (extrapolated) = 0.924 W/kg

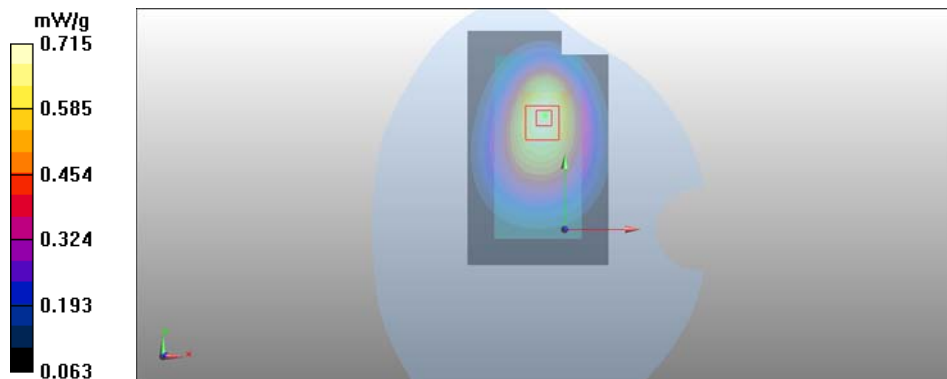
SAR(1 g) = 0.676 mW/g

SAR(10 g) = 0.484 mW/g

Power Drift = 0.090 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) = 0.715 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-09 14:55:42, Date/Time: 2011-08-09 14:59:21

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 837 MHz; σ = 0.981 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony /Area Scan (61x101x1): Measurement

grid: dx=15mm, dy=15mm

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

GSM/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement

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

Reference Value = 10.3 V/m

Peak SAR (extrapolated) = 0.672 W/kg

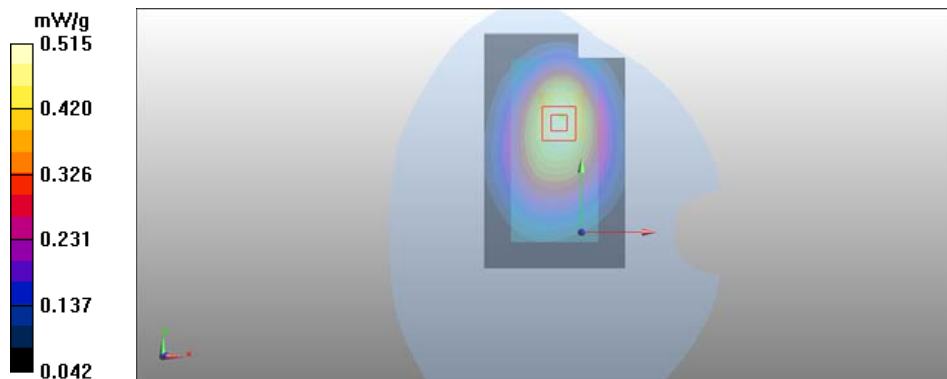
SAR(1 g) = 0.489 mW/g

SAR(10 g) = 0.349 mW/g

Power Drift = 0.019 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) = 0.515 mW/g



Date/Time: 2011-08-09 15:35:31, Date/Time: 2011-08-09 15:39:11

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 849 MHz; σ = 0.987 mho/m; ϵ_r = 53.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM/Body - High - No Accessory - Back Facing Phantom – BP-3L Sony /Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.933 mW/g

GSM/Body - High - No Accessory - Back Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 10.1 V/m

Peak SAR (extrapolated) = 1.17 W/kg

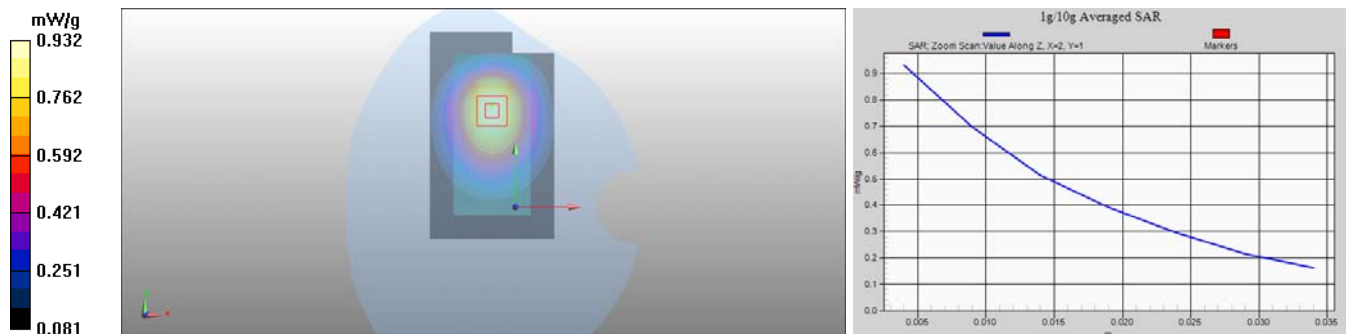
SAR(1 g) = 0.882 mW/g

SAR(10 g) = 0.629 mW/g

Power Drift = -0.051 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) = 0.932 mW/g



Date/Time: 2011-08-09 15:06:11, Date/Time: 2011-08-09 15:09:51

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 837 MHz; σ = 0.981 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASYS2, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

GSM/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.785 mW/g

GSM/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.74 V/m

Peak SAR (extrapolated) = 0.982 W/kg

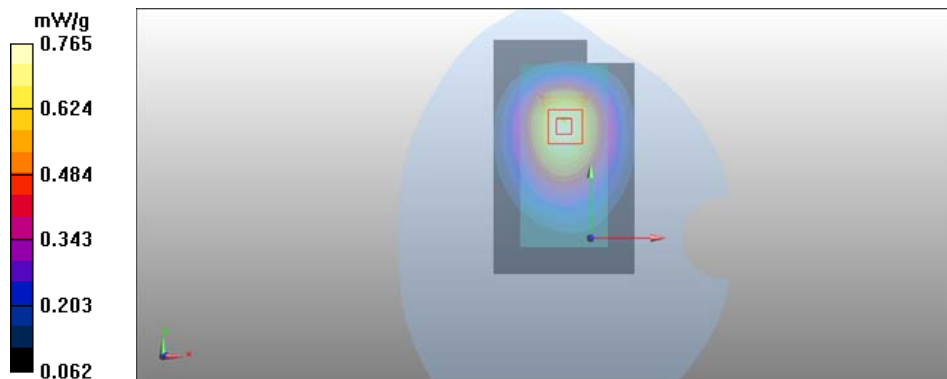
SAR(1 g) = 0.726 mW/g

SAR(10 g) = 0.516 mW/g

Power Drift = 0.035 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) = 0.765 mW/g



Date/Time: 2011-08-09 11:50:55, Date/Time: 2011-08-09 11:57:52

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 835 MHz; σ = 0.98 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony /Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.819 mW/g

WCDMA/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 10.9 V/m

Peak SAR (extrapolated) = 1.05 W/kg

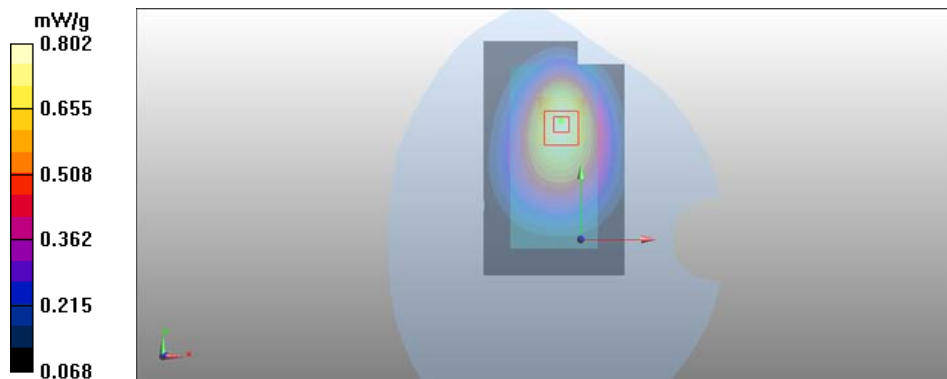
SAR(1 g) = 0.755 mW/g

SAR(10 g) = 0.538 mW/g

Power Drift = -0.443 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) = 0.802 mW/g



Date/Time: 2011-08-09 12:08:12, Date/Time: 2011-08-09 12:11:52

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 835 MHz; σ = 0.98 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony / Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

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

WCDMA/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 8.94 V/m

Peak SAR (extrapolated) = 0.851 W/kg

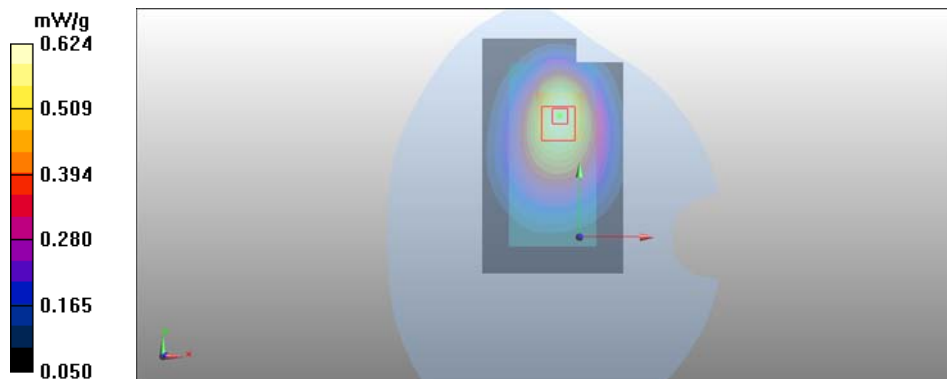
SAR(1 g) = 0.589 mW/g

SAR(10 g) = 0.414 mW/g

Power Drift = -0.028 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) = 0.624 mW/g



Date/Time: 2011-08-09 12:53:22, Date/Time: 2011-08-09 12:57:02

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 847 MHz; σ = 0.987 mho/m; ϵ_r = 53.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA/Body - High - No Accessory - Back Facing Phantom – BP-3L Sony /Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.990 mW/g

WCDMA/Body - High - No Accessory - Back Facing Phantom – BP-3L Sony/ Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 12.4 V/m

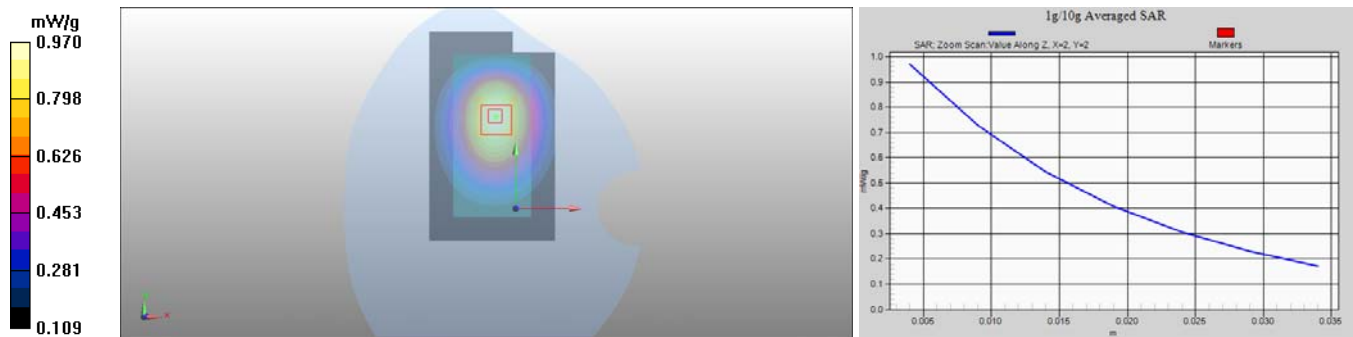
Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.917 mW/g

SAR(10 g) = 0.662 mW/g

Power Drift = -0.136 dB

Maximum value of SAR (measured) = 0.970 mW/g



Date/Time: 2011-08-09 12:19:12, Date/Time: 2011-08-09 12:22:52

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 835 MHz; σ = 0.98 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony /Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

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

WCDMA/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 9.86 V/m

Peak SAR (extrapolated) = 0.931 W/kg

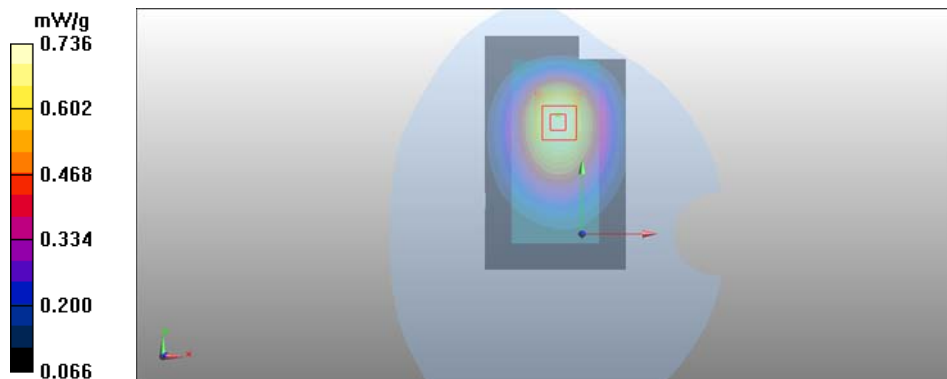
SAR(1 g) = 0.698 mW/g

SAR(10 g) = 0.500 mW/g

Power Drift = -0.072 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) = 0.736 mW/g



Date/Time: 2011-08-09 13:26:38, Date/Time: 2011-08-09 13:30:17

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: BSL850; Medium Notes: t= 22.0 C

Medium parameters used: f = 847 MHz; σ = 0.987 mho/m; ϵ_r = 53.2; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194
- ConvF(5.95, 5.95, 5.95); Calibrated: 2010-09-09
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2010-09-09
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, V52.6 Build 2; SEMCAD X Version 14.0 Build 61

WCDMA/Body - High - No Accessory - Back Facing Phantom – BP-3L LG/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.957 mW/g

WCDMA/Body - High - No Accessory - Back Facing Phantom – BP-3L LG/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 12.6 V/m

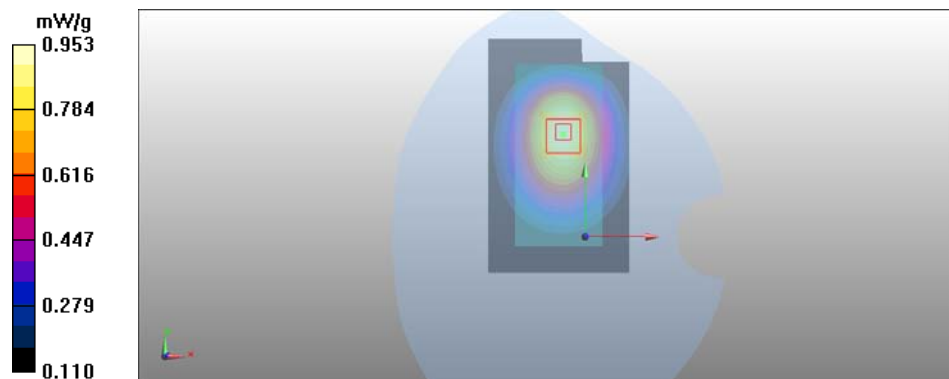
Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.898 mW/g

SAR(10 g) = 0.650 mW/g

Power Drift = -0.086 dB

Maximum value of SAR (measured) = 0.953 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-15 11:02:06, Date/Time: 2011-08-15 11:09:27

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 22.2 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.91, 4.91, 4.91); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - No Accessory - Display Facing Phantom - BP-3L Sony/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.423 mW/g

WCDMA/Body - Middle - No Accessory - Display Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 7.71 V/m

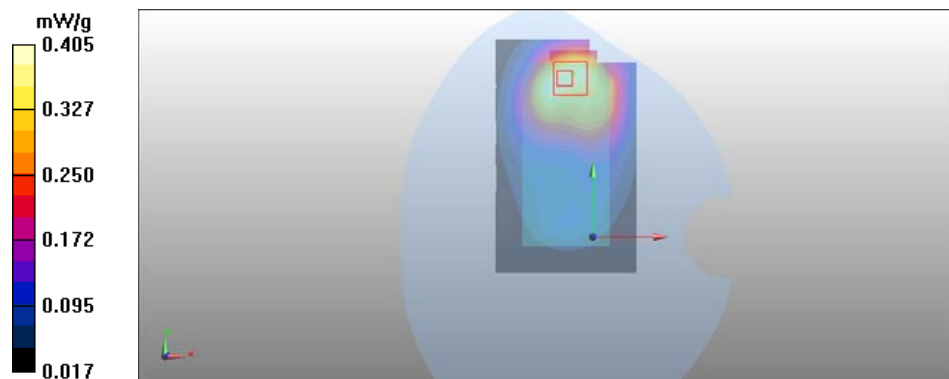
Peak SAR (extrapolated) = 0.548 W/kg

SAR(1 g) = 0.378 mW/g

SAR(10 g) = 0.248 mW/g

Power Drift = -0.386 dB

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



Date/Time: 2011-08-15 11:22:15, Date/Time: 2011-08-15 11:26:24

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 22.2 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.91, 4.91, 4.91); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Display Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

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

WCDMA/Body - Middle - WH-102 - Display Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 7.16 V/m

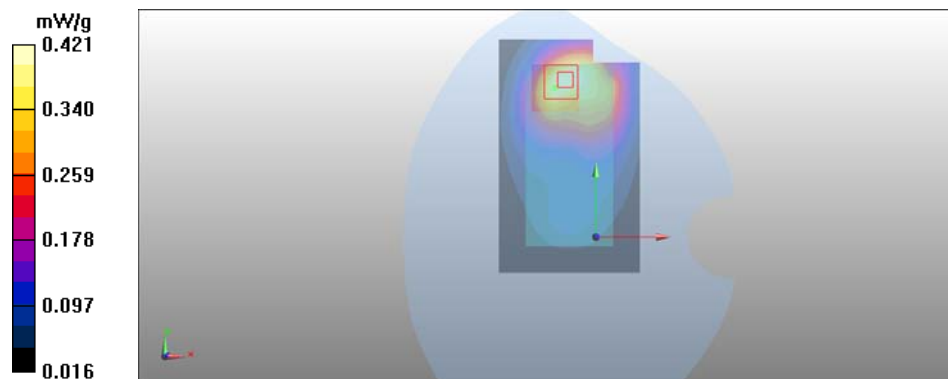
Peak SAR (extrapolated) = 0.571 W/kg

SAR(1 g) = 0.390 mW/g

SAR(10 g) = 0.247 mW/g

Power Drift = 0.041 dB

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



Date/Time: 2011-08-15 11:50:15, Date/Time: 2011-08-15 11:54:24

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 22.2 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.91, 4.91, 4.91); Calibrated: 2011-02-17

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

- Electronics: DAE4 Sn555; Calibrated: 2011-02-22

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

- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.734 mW/g

WCDMA/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 6.25 V/m

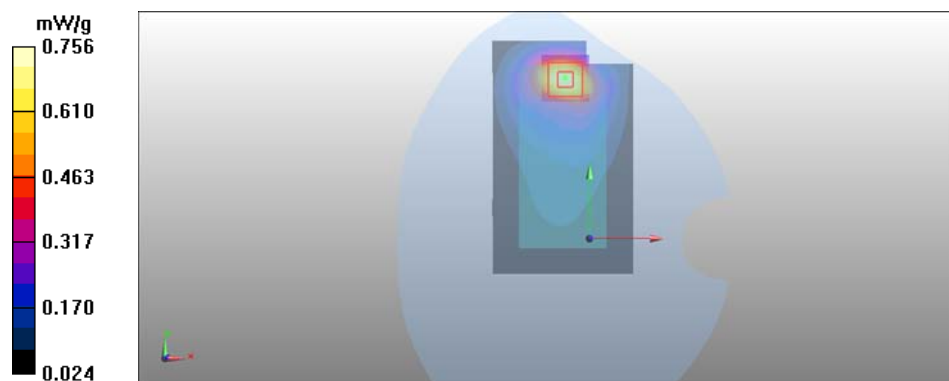
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.685 mW/g

SAR(10 g) = 0.413 mW/g

Power Drift = 0.043 dB

Maximum value of SAR (measured) = 0.756 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-15 11:38:04, Date/Time: 2011-08-15 11:42:27

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 22.2 C

Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.91, 4.91, 4.91); Calibrated: 2011-02-17

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

- Electronics: DAE4 Sn555; Calibrated: 2011-02-22

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

- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.749 mW/g

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.06 V/m

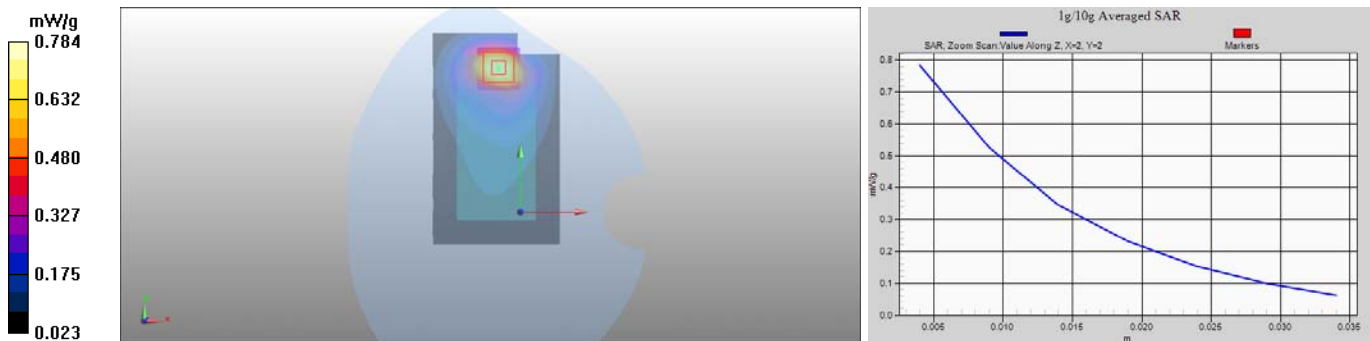
Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.709 mW/g

SAR(10 g) = 0.426 mW/g

Power Drift = 0.066 dB

Maximum value of SAR (measured) = 0.784 mW/g



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-15 13:24:08, Date/Time: 2011-08-15 13:32:39

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 22.2$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.91, 4.91, 4.91); Calibrated: 2011-02-17

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

- Electronics: DAE4 Sn555; Calibrated: 2011-02-22

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

- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L LG/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L LG/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.71 V/m

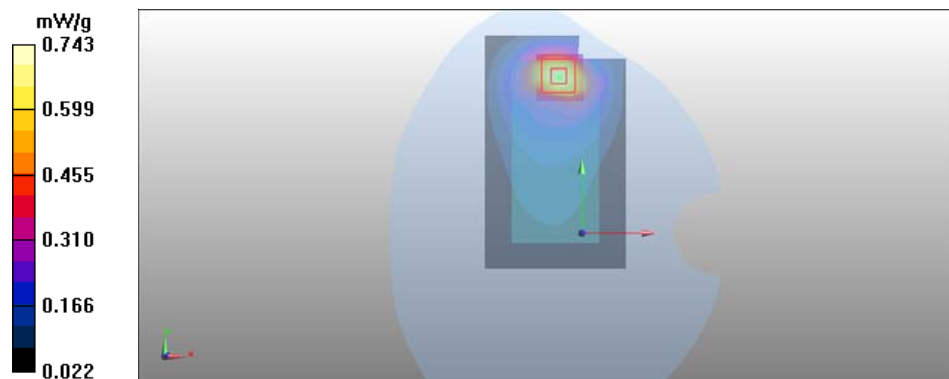
Peak SAR (extrapolated) = 1 W/kg

SAR(1 g) = 0.671 mW/g

SAR(10 g) = 0.405 mW/g

Power Drift = -0.156 dB

Maximum value of SAR (measured) = 0.743 mW/g



Date/Time: 2011-08-11 14:36:15, Date/Time: 2011-08-11 14:43:08

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: BSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.286 mW/g

4-slot GPRS/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony /Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.17 V/m

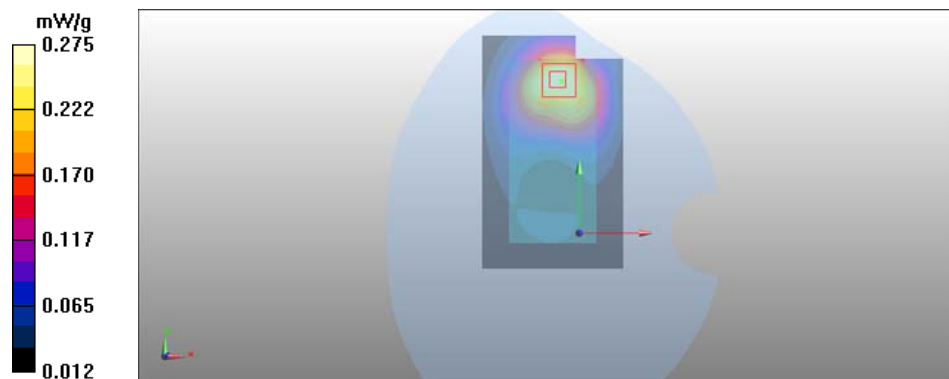
Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.257 mW/g

SAR(10 g) = 0.166 mW/g

Power Drift = -0.130 dB

Maximum value of SAR (measured) = 0.275 mW/g



Date/Time: 2011-08-11 14:49:49, Date/Time: 2011-08-11 14:53:55

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: BSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS/Body - Middle - WH-102 - Display Facing Phantom – BP-3L sony/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.275 mW/g

4-slot GPRS/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 4.79 V/m

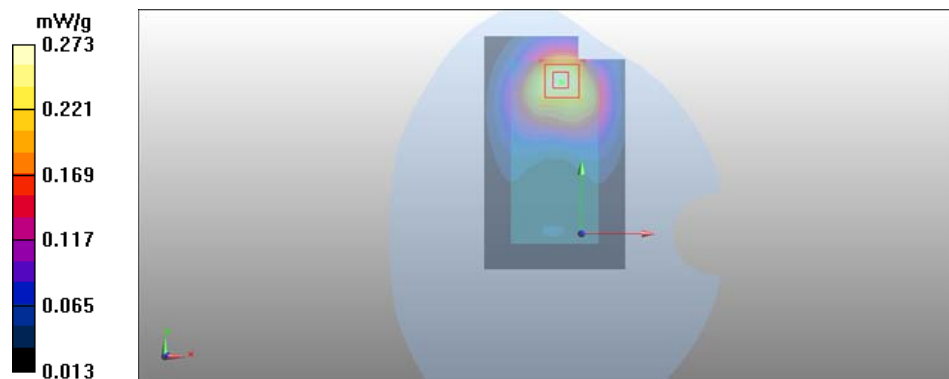
Peak SAR (extrapolated) = 0.376 W/kg

SAR(1 g) = 0.253 mW/g

SAR(10 g) = 0.162 mW/g

Power Drift = 0.175 dB

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



Date/Time: 2011-08-11 15:13:44, Date/Time: 2011-08-11 15:17:50

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: BSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS/Body - Middle - No Accessory - Back Facing Phantom – BP-3L Sony/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.474 mW/g

4-slot GPRS/Body - Middle - No Accessory - Back Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.2 V/m

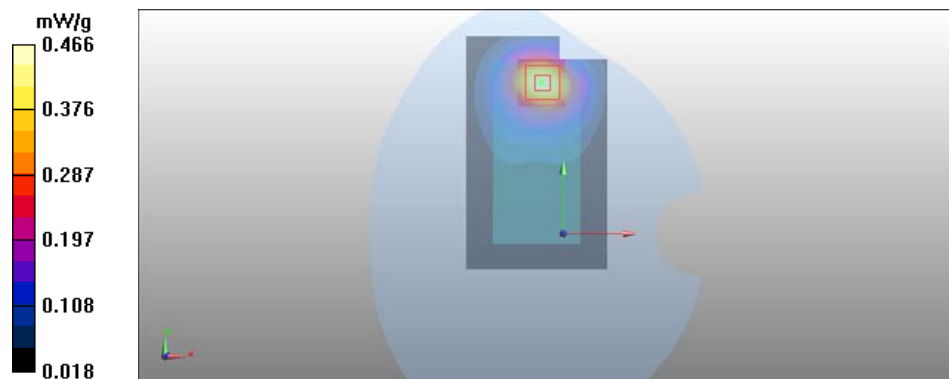
Peak SAR (extrapolated) = 0.653 W/kg

SAR(1 g) = 0.425 mW/g

SAR(10 g) = 0.257 mW/g

Power Drift = -0.053 dB

Maximum value of SAR (measured) = 0.466 mW/g



Date/Time: 2011-08-11 15:01:19, Date/Time: 2011-08-11 15:06:05

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:2.1

Medium: BSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

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

4-slot GPRS/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 4.82 V/m

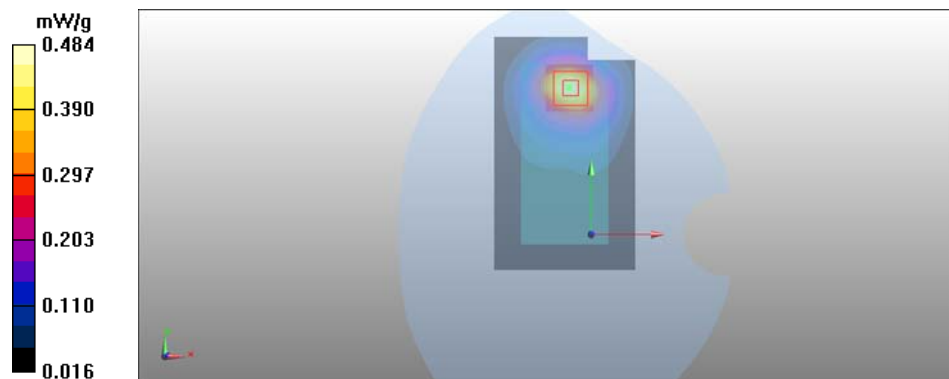
Peak SAR (extrapolated) = 0.679 W/kg

SAR(1 g) = 0.436 mW/g

SAR(10 g) = 0.260 mW/g

Power Drift = -0.079 dB

Maximum value of SAR (measured) = 0.484 mW/g



Date/Time: 2011-08-09 17:22:04, Date/Time: 2011-08-09 17:35:37

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 22.2\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.49\text{ mho/m}$; $\epsilon_r = 53$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

WCDMA/Body - Middle - No Accessory - Display Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 6.66 V/m

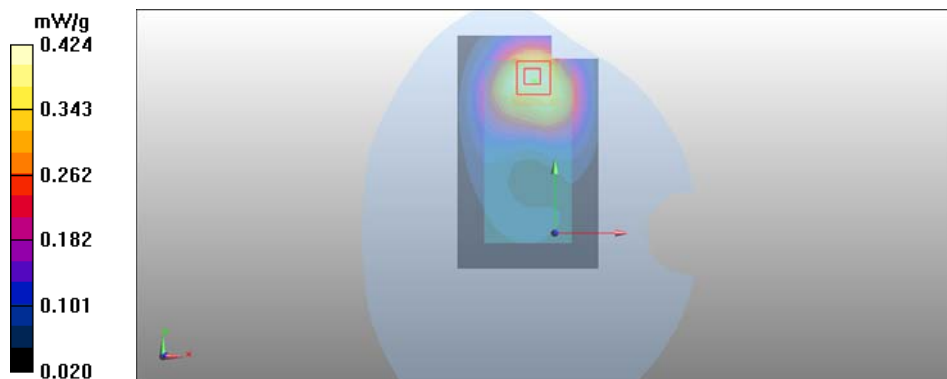
Peak SAR (extrapolated) = 0.599 W/kg

SAR(1 g) = 0.404 mW/g

SAR(10 g) = 0.259 mW/g

Power Drift = -0.153 dB

Maximum value of SAR (measured) = 0.424 mW/g



Date/Time: 2011-08-09 17:42:41, Date/Time: 2011-08-09 17:46:48

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 22.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.409 mW/g

WCDMA/Body - Middle - WH-102 - Display Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.86 V/m

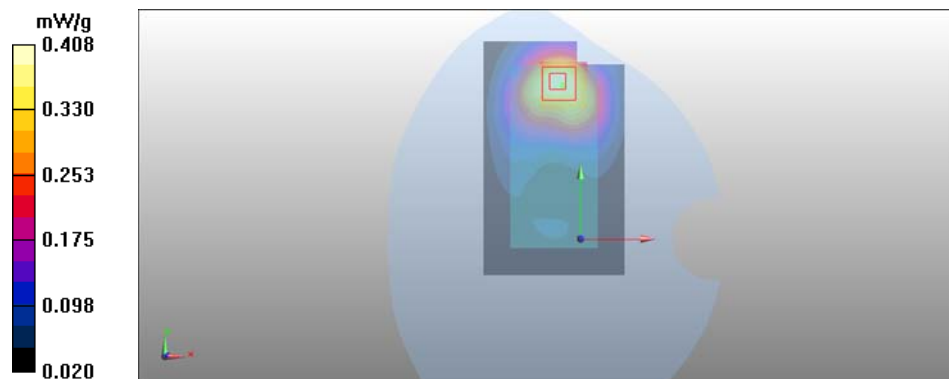
Peak SAR (extrapolated) = 0.569 W/kg

SAR(1 g) = 0.381 mW/g

SAR(10 g) = 0.243 mW/g

Power Drift = 0.112 dB

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



SAR Report

FCC_RM-763_01

Applicant: Nokia Corporation

Type: RM-763

Copyright © 2011 TCC Nokia

Date/Time: 2011-08-09 18:05:56, Date/Time: 2011-08-09 18:10:06

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 22.2\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.49\text{ mho/m}$; $\epsilon_r = 53$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - No Accessory - Back Facing Phantom – BP-3L Sony/Area Scan (61x101x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

WCDMA/Body - Middle - No Accessory - Back Facing Phantom – BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.84 V/m

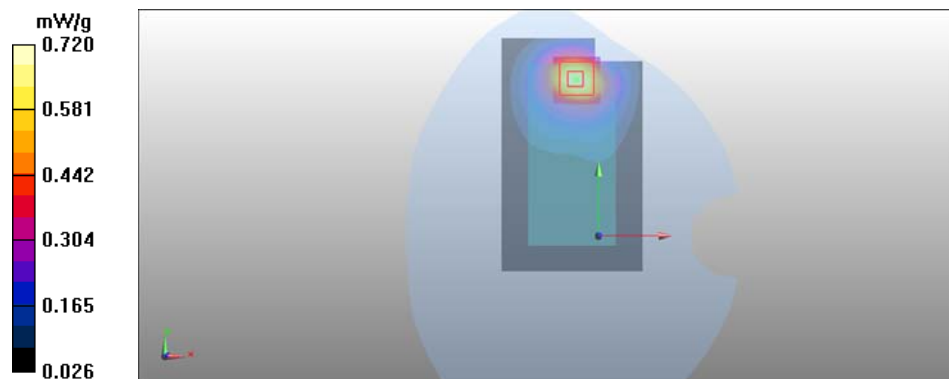
Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.649 mW/g

SAR(10 g) = 0.387 mW/g

Power Drift = -0.122 dB

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



Date/Time: 2011-08-09 17:54:30, Date/Time: 2011-08-09 17:58:39

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 22.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony/Area Scan (61x101x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.703 mW/g

WCDMA/Body - Middle - WH-102 - Back Facing Phantom/ - BP-3L SonyZoom Scan (5x5x7)/Cube 0: Measurement

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

Reference Value = 5.51 V/m

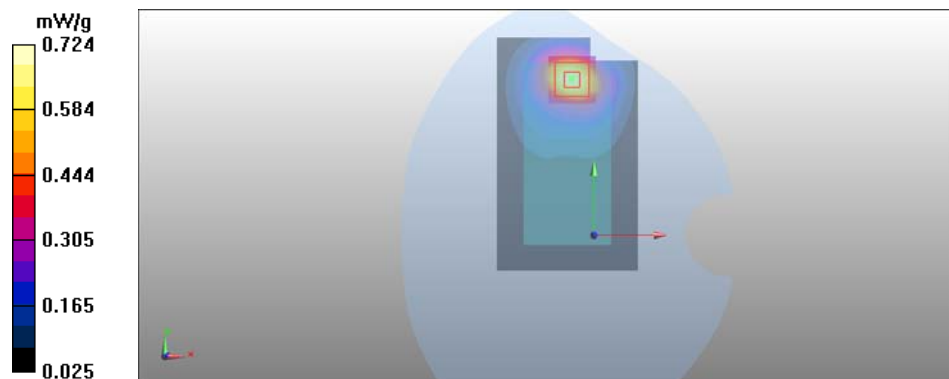
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.652 mW/g

SAR(10 g) = 0.388 mW/g

Power Drift = 0.053 dB

Maximum value of SAR (measured) = 0.724 mW/g



Date/Time: 2011-08-10 12:47:07, Date/Time: 2011-08-10 13:00:38

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 22.0$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.61, 4.61, 4.61); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555; Calibrated: 2011-02-22
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L LG/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.796 mW/g

WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L LG/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.23 V/m

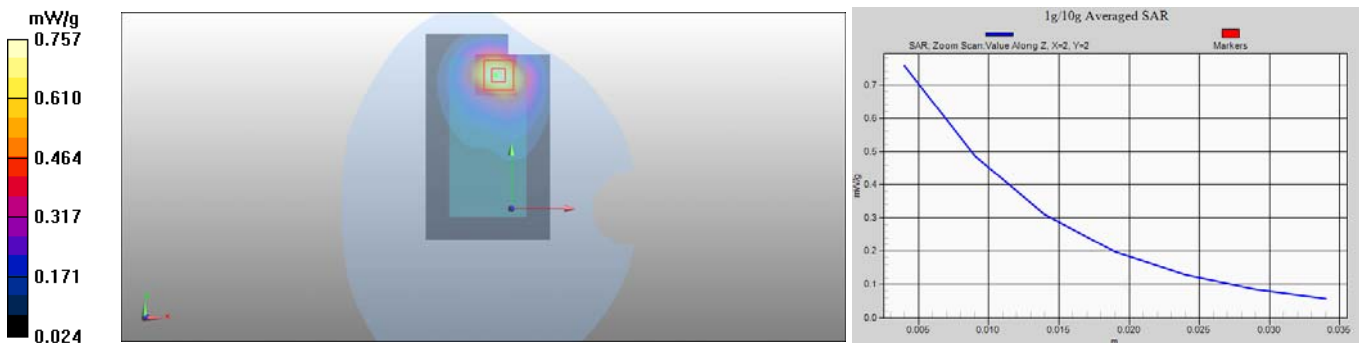
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.682 mW/g

SAR(10 g) = 0.406 mW/g

Power Drift = -0.123 dB

Maximum value of SAR (measured) = 0.757 mW/g



Date/Time: 2011-08-17 11:50:37, Date/Time: 2011-08-17 11:54:18

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - High - No Accessory - Display Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

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

WLAN/Body - High - No Accessory - Display Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 4.06 V/m

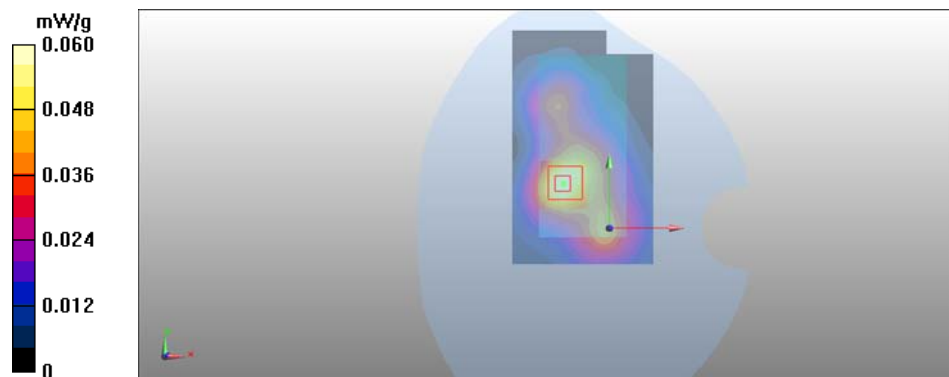
Peak SAR (extrapolated) = 0.094 W/kg

SAR(1 g) = 0.056 mW/g

SAR(10 g) = 0.033 mW/g

Power Drift = 0.224 dB

Maximum value of SAR (measured) = 0.060 mW/g



Date/Time: 2011-08-17 10:43:40, Date/Time: 2011-08-17 10:47:19

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - Middle - WH-102 - Display Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.045 mW/g

WLAN/Body - Middle - WH-102 - Display Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 3.69 V/m

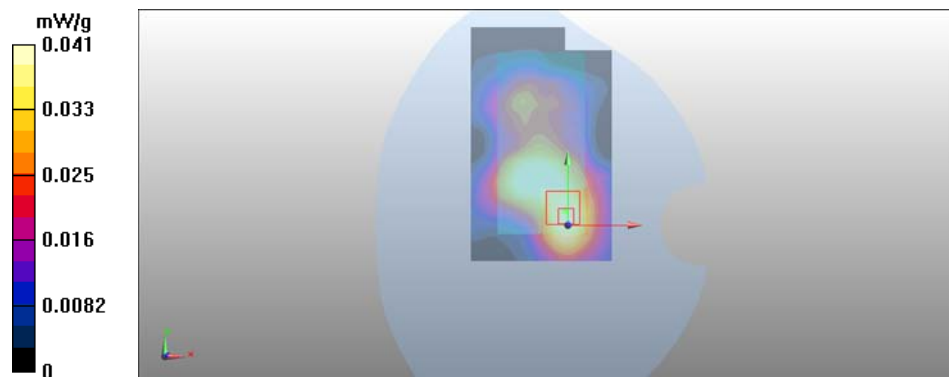
Peak SAR (extrapolated) = 0.067 W/kg

SAR(1 g) = 0.038 mW/g

SAR(10 g) = 0.022 mW/g

Power Drift = 0.074 dB

Maximum value of SAR (measured) = 0.041 mW/g



Date/Time: 2011-08-17 11:12:52, Date/Time: 2011-08-17 11:16:32

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.053 mW/g

WLAN/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 5.02 V/m

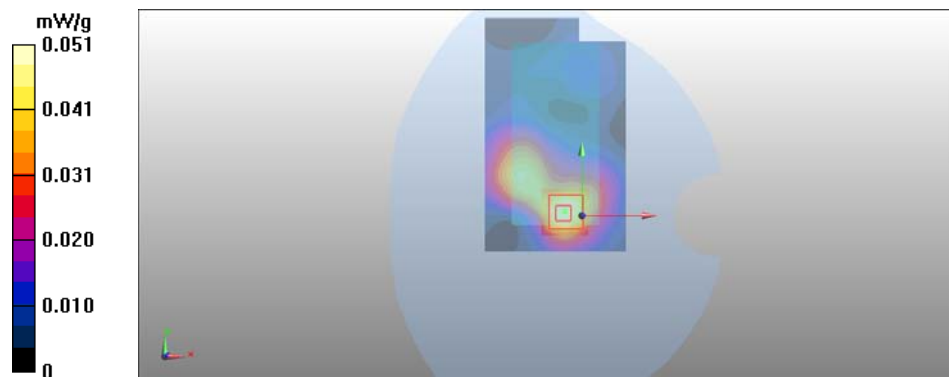
Peak SAR (extrapolated) = 0.084 W/kg

SAR(1 g) = 0.047 mW/g

SAR(10 g) = 0.026 mW/g

Power Drift = 0.114 dB

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



Date/Time: 2011-08-17 11:01:43, Date/Time: 2011-08-17 11:05:21

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (61x101x1): Measurement grid:
dx=15mm, dy=15mm

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

WLAN/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.76 V/m

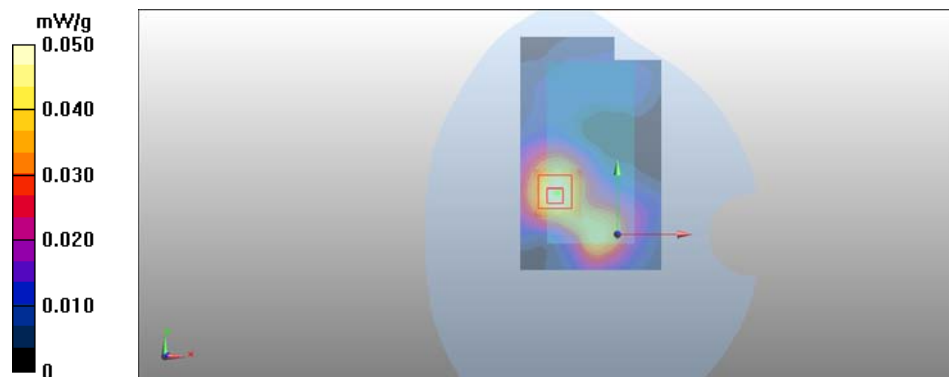
Peak SAR (extrapolated) = 0.087 W/kg

SAR(1 g) = 0.047 mW/g

SAR(10 g) = 0.027 mW/g

Power Drift = 0.051 dB

Maximum value of SAR (measured) = 0.050 mW/g



Date/Time: 2011-08-17 12:32:44, Date/Time: 2011-08-17 12:39:42

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 n-mode

Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2442$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - Middle - No Accessory - Display Facing Phantom - BP-3L Sony/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.023 mW/g

WLAN/Body - Middle - No Accessory - Display Facing Phantom - BP-3L Sony/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 2.32 V/m

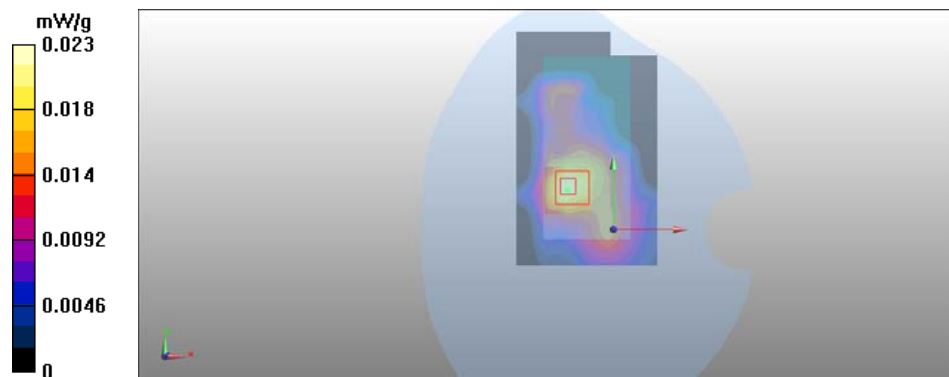
Peak SAR (extrapolated) = 0.038 W/kg

SAR(1 g) = 0.021 mW/g

SAR(10 g) = 0.012 mW/g

Power Drift = 0.481 dB

Maximum value of SAR (measured) = 0.023 mW/g



Date/Time: 2011-08-17 14:49:39, Date/Time: 2011-08-17 14:53:26

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WLAN2450 b-mode

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2010-09-08
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

WLAN/Body - High - No Accessory - Display Facing Phantom - BP-3L LG/Area Scan (61x101x1): Measurement

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

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

WLAN/Body - High - No Accessory - Display Facing Phantom - BP-3L LG/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 4.23 V/m

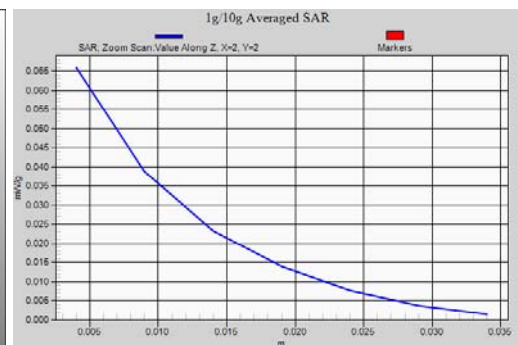
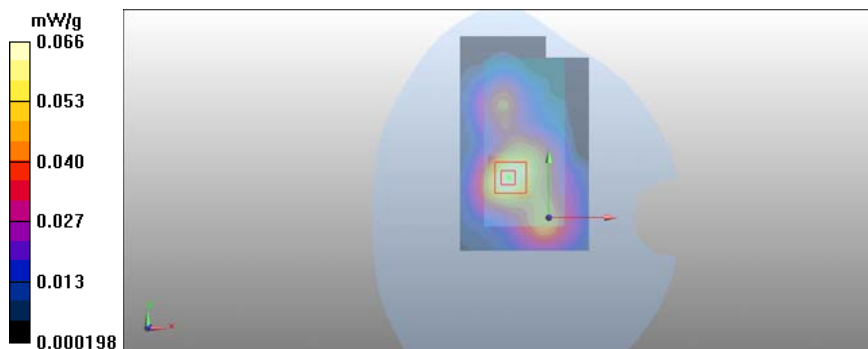
Peak SAR (extrapolated) = 0.103 W/kg

SAR(1 g) = 0.061 mW/g

SAR(10 g) = 0.036 mW/g

Power Drift = 0.357 dB

Maximum value of SAR (measured) = 0.066 mW/g



Date/Time: 2011-08-04 12:50:05, Date/Time: 2011-08-16 14:58:37

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850, Communication System: WLAN2450 b-mode

Frequency: 836.6 MHz, Frequency: 2442 MHz; Duty Cycle: 1:8.30042, Duty Cycle: 1:1

Medium: HSL850, Medium: HSL2450; Medium Notes: t= 21.6 C, Medium Notes: t= 22.1 C

Medium parameters used: f = 837 MHz; σ = 0.908 mho/m; ϵ_r = 39.9; ρ = 1000 kg/m³, Medium parameters used: f = 2442 MHz; σ = 1.79 mho/m; ϵ_r = 37.6; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194, Probe: EX3DV4 - SN3573
- ConvF(6.09, 6.09, 6.09), ConvF(6.69, 6.69, 6.69); Calibrated: 2010-09-09, Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn793; Calibrated: 2010-09-09, Calibrated: 2010-09-08
- Phantom: SAM 3, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1126
- Measurement SW: DASY52, V52.6 Build 2, Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

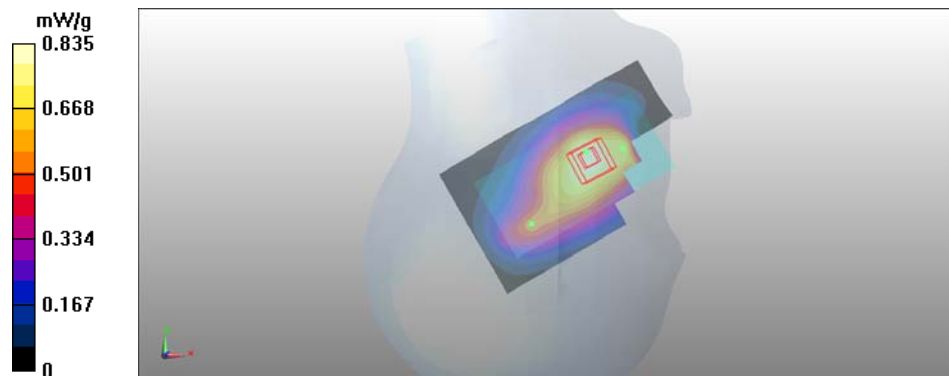
GSM - Right/Cheek – Middle – BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Right/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.785 mW/g

SAR(10 g) = 0.552 mW/g

Maximum value of SAR (measured) = 0.835 mW/g



Date/Time: 2011-08-05 11:42:00, Date/Time: 2011-08-16 14:58:37

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850, Communication System: WLAN2450 b-mode

Frequency: 846.6 MHz, Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL850, Medium: HSL2450; Medium Notes: t= 22.1 C

Medium parameters used: f = 847 MHz; σ = 0.905 mho/m; ϵ_r = 39.5; ρ = 1000 kg/m³, Medium parameters used:
f = 2442 MHz; σ = 1.79 mho/m; ϵ_r = 37.6; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3194, Probe: EX3DV4 - SN3573
- ConvF(6.09, 6.09, 6.09), ConvF(6.69, 6.69, 6.69); Calibrated: 2010-09-09, Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn793; Calibrated: 2010-09-09, Calibrated: 2010-09-08
- Phantom: SAM 3, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1126
- Measurement SW: DASY52, V52.6 Build 2, Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

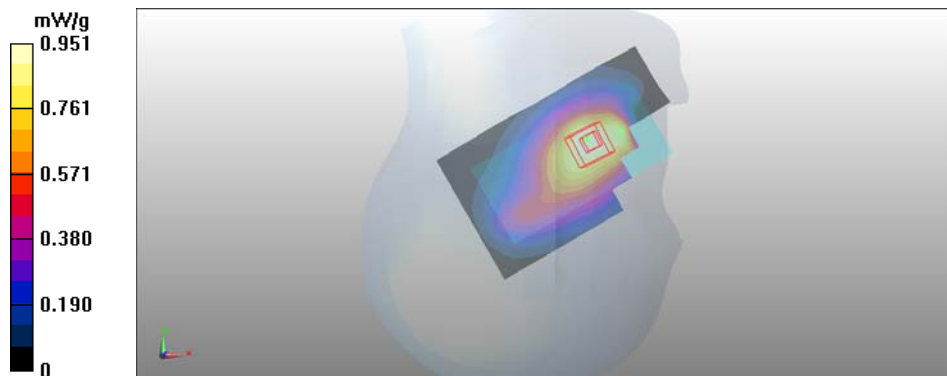
WCDMA - Right/Cheek -High - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Right/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.899 mW/g

SAR(10 g) = 0.629 mW/g

Maximum value of SAR (measured) = 0.951 mW/g



Date/Time: 2011-08-13 13:18:12, Date/Time: 2011-08-16 15:38:35

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100, Communication System: WLAN2450 b-mode

Frequency: 1732.4 MHz, Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: HSL1800, Medium: HSL2450; Medium Notes: $t = 22.0$ C, Medium Notes: $t = 22.1$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.34$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 2442$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(5.19, 5.19, 5.19), ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 4, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1018, Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

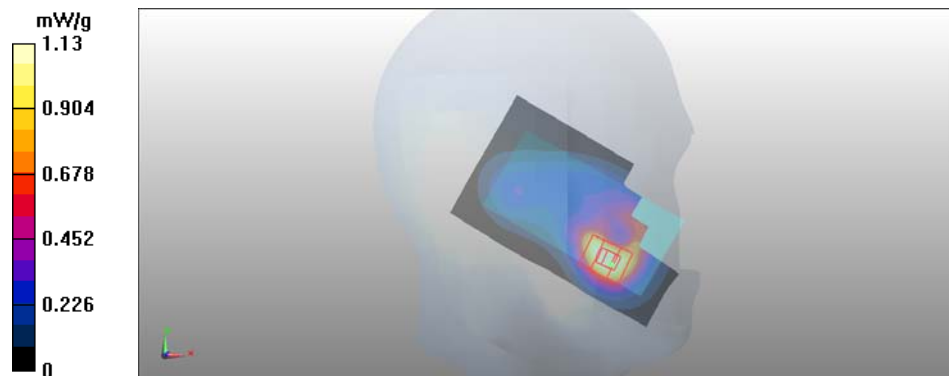
WCDMA - Left/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 1.02 mW/g

SAR(10 g) = 0.595 mW/g

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



Date/Time: 2011-08-11 12:22:57, Date/Time: 2011-08-16 15:38:35

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900, Communication System: WLAN2450 b-mode

Frequency: 1850.2 MHz, Frequency: 2442 MHz; Duty Cycle: 1:2.1, Duty Cycle: 1:1

Medium: HSL1900, Medium: HSL2450; Medium Notes: $t = 21.9$ C, Medium Notes: $t = 22.1$ C

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 2442$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(5.03, 5.03, 5.03), ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 1, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1449, Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

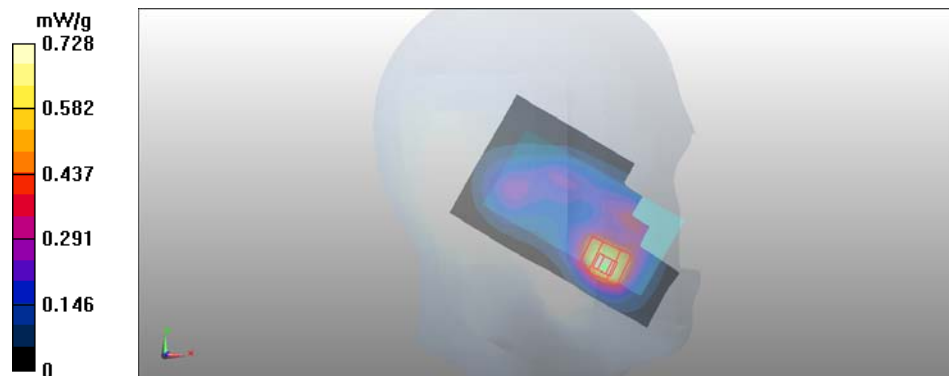
4-slot GPRS - Left/Cheek - Low - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.629 mW/g

SAR(10 g) = 0.359 mW/g

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



Date/Time: 2011-08-08 09:55:16, Date/Time: 2011-08-16 15:38:35

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

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

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

Medium: HSL1900, Medium: HSL2450; Medium Notes: $t = 22.0$ C, Medium Notes: $t = 22.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.5$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 2442$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(5.03, 5.03, 5.03), ConvF(6.69, 6.69, 6.69); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 1, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1449, Serial: TP-1126
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

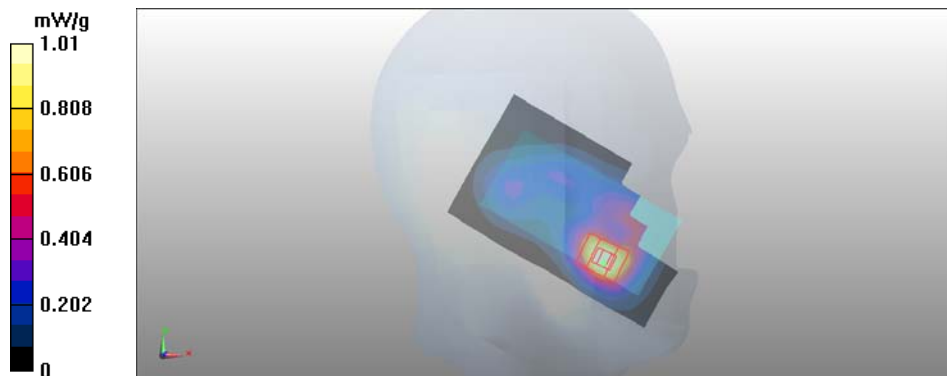
WCDMA - Left/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Middle - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.908 mW/g

SAR(10 g) = 0.510 mW/g

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



Date/Time: 2011-08-09 15:35:31, Date/Time: 2011-08-17 11:12:52

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: GSM850, Communication System: WLAN2450 b-mode

Frequency: 848.8 MHz, Frequency: 2442 MHz; Duty Cycle: 1:8.30042, Duty Cycle: 1:1

Medium: BSL850, Medium: BSL2450; Medium Notes: $t = 22.0$ C, Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 2442$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194, Probe: EX3DV4 - SN3573
- ConvF(5.95, 5.95, 5.95), ConvF(6.8, 6.8, 6.8); Calibrated: 2010-09-09, Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn793; Calibrated: 2010-09-09, Calibrated: 2010-09-08
- Phantom: SAM 1, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1570
- Measurement SW: DASY52, V52.6 Build 2, Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

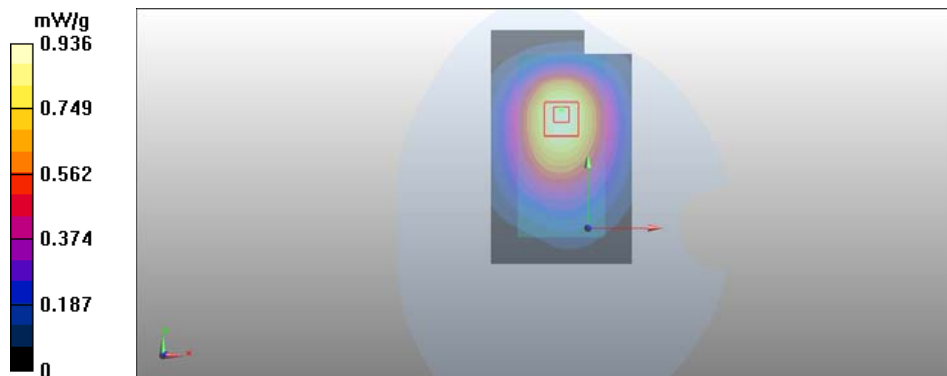
GSM/Body - High - No Accessory - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

WLAN/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.884 mW/g

SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 0.936 mW/g



Date/Time: 2011-08-09 12:53:22, Date/Time: 2011-08-17 11:12:52

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA850, Communication System: WLAN2450 b-mode

Frequency: 846.6 MHz, Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL850, Medium: BSL2450; Medium Notes: t= 22.0 C, Medium Notes: t= 21.3 C

Medium parameters used: f = 847 MHz; σ = 0.987 mho/m; ϵ_r = 53.2; ρ = 1000 kg/m³, Medium parameters used: f = 2442 MHz; σ = 1.96 mho/m; ϵ_r = 50.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3194, Probe: EX3DV4 - SN3573
- ConvF(5.95, 5.95, 5.95), ConvF(6.8, 6.8, 6.8); Calibrated: 2010-09-09, Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn793; Calibrated: 2010-09-09, Calibrated: 2010-09-08
- Phantom: SAM 1, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1570
- Measurement SW: DASY52, V52.6 Build 2, Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

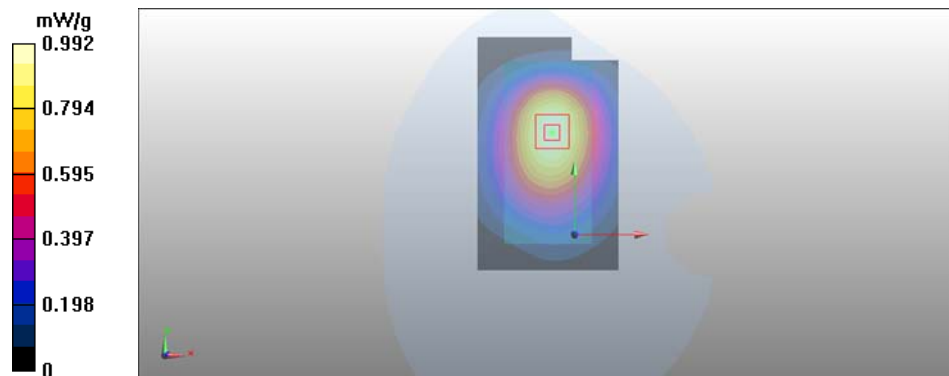
WCDMA/Body - High - No Accessory - Back Facing Phantom – BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

WLAN/Body - Middle - No Accessory - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.935 mW/g

SAR(10 g) = 0.658 mW/g

Maximum value of SAR (measured) = 0.992 mW/g



Date/Time: 2011-08-15 11:38:04, Date/Time: 2011-08-17 11:01:43

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: WCDMA1700/2100, Communication System: WLAN2450 b-mode

Frequency: 1732.4 MHz, Frequency: 2442 MHz; Duty Cycle: 1:1

Medium: BSL1800, Medium: BSL2450; Medium Notes: t= 22.2 C, Medium Notes: t= 21.3 C

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.43 mho/m; ϵ_r = 51; ρ = 1000 kg/m³, Medium parameters used: f = 2442 MHz; σ = 1.96 mho/m; ϵ_r = 50.6; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(4.91, 4.91, 4.91), ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 3, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

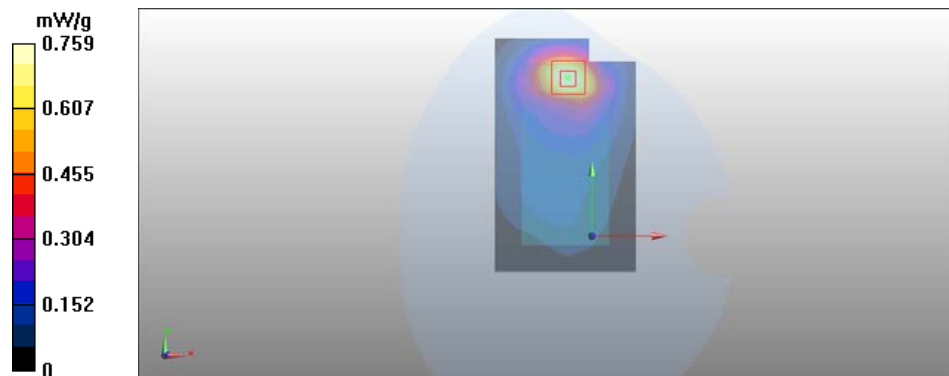
WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

WLAN/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.686 mW/g

SAR(10 g) = 0.403 mW/g

Maximum value of SAR (measured) = 0.759 mW/g



Date/Time: 2011-08-11 15:01:19, Date/Time: 2011-08-17 11:01:43

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

Communication System: 4-slot GPRS1900, Communication System: WLAN2450 b-mode

Frequency: 1880 MHz, Frequency: 2442 MHz; Duty Cycle: 1:2.1, Duty Cycle: 1:1

Medium: BSL1900, Medium: BSL2450; Medium Notes: t= 22.0 C, Medium Notes: t= 21.3 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³, Medium parameters used: f = 2442 MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(4.61, 4.61, 4.61), ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 2, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP - 1177, Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

4-slot GPRS1900/Body - Middle - WH-102 - Back Facing Phantom – BP-3L Sony/Area Scan (7x11x1):

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

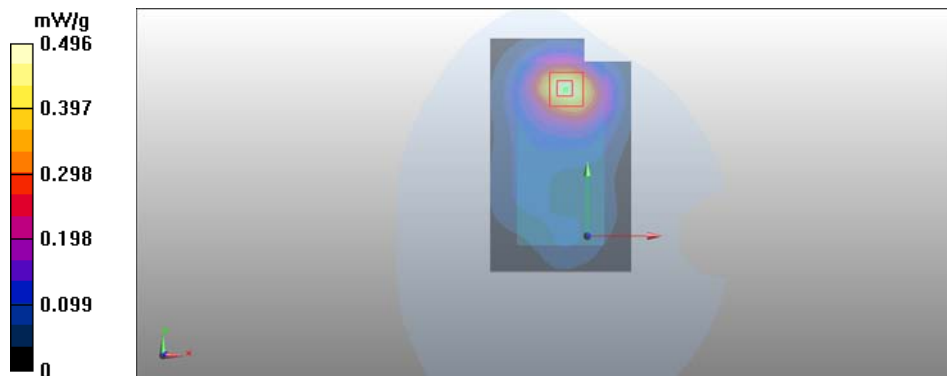
WLAN /Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid:

dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.438 mW/g

SAR(10 g) = 0.246 mW/g

Maximum value of SAR (measured) = 0.496 mW/g



Date/Time: 2011-08-10 12:47:07, Date/Time: 2011-08-17 11:01:43

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621109/5

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

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

Medium: BSL1900, Medium: BSL2450; Medium Notes: t= 22.0 C, Medium Notes: t= 21.3 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³, Medium parameters used:
f = 2442 MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3573
- ConvF(4.61, 4.61, 4.61), ConvF(6.8, 6.8, 6.8); Calibrated: 2011-02-17
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- Electronics: DAE4 Sn555, Electronics: DAE4 Sn793; Calibrated: 2011-02-22, Calibrated: 2010-09-08
- Phantom: SAM 2, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP - 1177, Serial: TP-1570
- Measurement SW: DASY4, V4.7 Build 55; SEMCAD X Version 14.0 Build 61

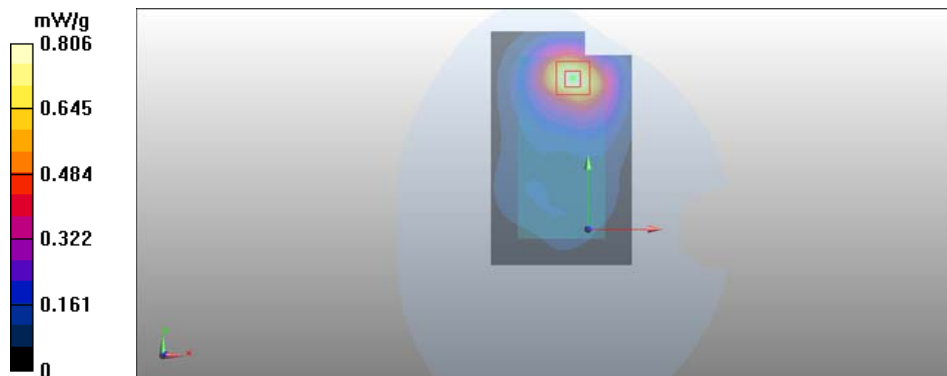
WCDMA/Body - Middle - WH-102 - Back Facing Phantom - BP-3L LG/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

WLAN/Body - Middle - WH-102 - Back Facing Phantom - BP-3L Sony/Area Scan (7x11x1): Measurement grid:
dx=15mm, dy=15mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.720 mW/g

SAR(10 g) = 0.410 mW/g

Maximum value of SAR (measured) = 0.806 mW/g



APPENDIX C: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621099/8 and 004402/13/621110/3, HW: 0200, SW: ch104_11w28_1

C.1. WCDMA850 Test results

Average power

Ch / f (MHz)	P [dBm]
4133	23.22
4175	22.94
4232	23.15

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	20.20	19.81	21.27	20.41	22.15
4175	19.26	19.73	19.84	19.25	21.46
4232	19.22	19.81	20.66	19.88	21.62

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. In addition, to ensure linearity of the PA output, a further 1 dB power reduction for all Subtest modes is implemented. 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	1.0dB

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621099/8 and 004402/13/621110/3, HW: 0200, SW: ch104_11w28_1

C.3. WCDMA1700/2100 Test results

Average power

Ch	P [dBm]
1313	22.53
1450	22.34
1512	22.30

C.4. HSUPA1700/2100 Test results

Average power

Ch	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1313	19.76	20.03	21.07	20.27	21.76
1450	19.46	20.30	21.09	20.35	21.93
1512	19.46	20.08	20.89	20.12	21.78

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	0.0dB

Test Laboratory: TCC Nokia

Type: RM-763; Serial: 004402/13/621099/8 and 004402/13/621110/3, HW: 0200, SW: ch104_11w28_1

C.5. WCDMA1900 Test results

Average power

Ch / f (MHz)	P [dBm]
9263	22.57
9400	22.61
9537	22.62

C.6. 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	20.12	20.38	21.44	20.88	22.13
9400	19.94	20.29	21.09	19.84	22.04
9537	19.47	20.00	20.75	19.83	21.79

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	0.0dB

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia GmbH (Ulm)**

Certificate No: **ET3-1675_Sep10**

CALIBRATION CERTIFICATE

Object **ET3DV6 - SN:1675**

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

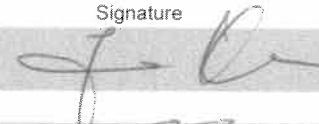
Calibration date: **September 9, 2010**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

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

Issued: September 9, 2010

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

DASY/EASY - Parameters of Probe: ET3DV6 SN:1675

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	6.06	6.06	6.06	0.38	2.39 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.21	5.21	5.21	0.51	2.69 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.76	4.76	4.76	0.72	2.17 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.24	4.24	4.24	0.99	1.70 ± 11.0%

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

DASY/EASY - Parameters of Probe: ET3DV6 SN:1675

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	6.02	6.02	6.02	0.29	3.06 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.58	4.58	4.58	0.61	3.05 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.45	4.45	4.45	0.99	2.17 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	3.88	3.88	3.88	0.99	1.63 ± 11.0%

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia Salo TCC**

Certificate No: **ES3-3194_Sep10**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3194**

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 9, 2010**

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

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

Calibration Equipment used (M&TE critical for calibration)

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

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

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

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

Issued: September 9, 2010

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

DASY/EASY - Parameters of Probe: ES3DV3 SN:3194

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	6.09	6.09	6.09	0.99	1.05 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.14	5.14	5.14	0.45	1.74 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.93	4.93	4.93	0.44	1.85 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.30	4.30	4.30	0.41	1.99 ± 11.0%

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

DASY/EASY - Parameters of Probe: ES3DV3 SN:3194

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^c	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.95	5.95	5.95	0.84	1.15 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.81	4.81	4.81	0.35	2.12 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.58	4.58	4.58	0.35	2.32 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.24	4.24	4.24	0.77	1.20 ± 11.0%

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



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 Salo TCC Certificate No: ES3-3165_Feb11

CALIBRATION CERTIFICATE

Object ES3DV3 - SN:3165

Calibration procedure(s) QA CAL-01.v7, QA CAL-23.v4, QA CAL-25.v3
Calibration procedure for dosimetric E-field probes

Calibration date: February 17, 2011

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 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	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	01-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	23-Apr-10 (No. DAE4-654_Apr10)	Apr-11
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

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

Issued: February 22, 2011

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3165

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unci. (k=2)
835	41.5	0.90	6.09	6.09	6.09	0.43	1.44	± 12.0 %
1750	40.1	1.37	5.19	5.19	5.19	0.35	1.84	± 12.0 %
1900	40.0	1.40	5.03	5.03	5.03	0.64	1.34	± 12.0 %
2450	39.2	1.80	4.44	4.44	4.44	0.79	1.13	± 12.0 %

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3- SN:3165

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	55.2	0.97	6.04	6.04	6.04	0.50	1.43	± 12.0 %
1750	53.4	1.49	4.91	4.91	4.91	0.36	2.50	± 12.0 %
1900	53.3	1.52	4.61	4.61	4.61	0.34	2.38	± 12.0 %
2450	52.7	1.95	4.18	4.18	4.18	0.79	0.83	± 12.0 %

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.



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 Salo TCC

Certificate No: EX3-3573_Feb11

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3573

Calibration procedure(s) QA CAL-01.v7, QA CAL-23.v4, QA CAL-25.v3
Calibration procedure for dosimetric E-field probes

Calibration date: February 17, 2011

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 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	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	01-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	01-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	23-Apr-10 (No. DAE4-654_Apr10)	Apr-11
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

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

Issued: February 22, 2011

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3573

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	41.5	0.90	8.39	8.39	8.39	0.71	0.69	± 12.0 %
1750	40.1	1.37	7.66	7.66	7.66	0.79	0.65	± 12.0 %
1900	40.0	1.40	7.37	7.37	7.37	0.79	0.66	± 12.0 %
2450	39.2	1.80	6.69	6.69	6.69	0.74	0.63	± 12.0 %

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: EX3DV4- SN:3573

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	55.2	0.97	8.42	8.42	8.42	0.70	0.77	± 12.0 %
1750	53.4	1.49	7.56	7.56	7.56	0.79	0.69	± 12.0 %
1900	53.3	1.52	7.16	7.16	7.16	0.79	0.68	± 12.0 %
2450	52.7	1.95	6.80	6.80	6.80	0.79	0.62	± 12.0 %

^C Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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

.



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia Salo TCC**

Certificate No: **D835V2-480_Oct09**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 480**

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

Calibration date: **October 19, 2009**

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: October 19, 2009

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

DASY5 Validation Report for Head TSL

Date/Time: 19.10.2009 10:11:32

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:480

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

Medium: HSL900

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ mho/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.04, 6.04, 6.04); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

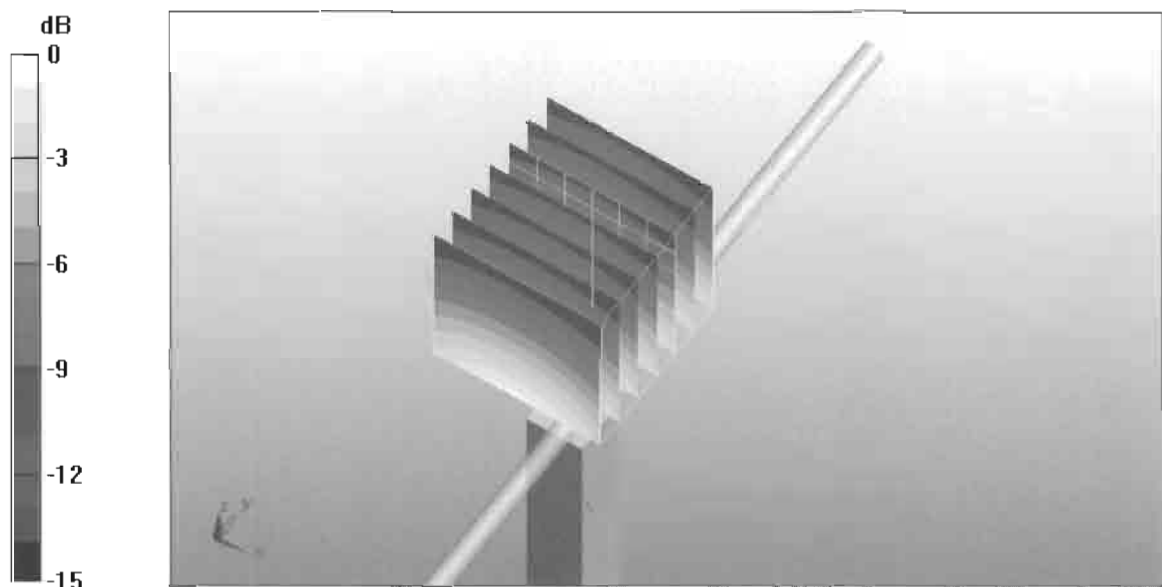
Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.6 V/m; Power Drift = 0.00856 dB

Peak SAR (extrapolated) = 3.53 W/kg

SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.76 mW/g



0 dB = 2.76mW/g

DASY5 Validation Report for Body

Date/Time: 19.10.2009 13:40:30

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:480

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

Medium: MSL900

Medium parameters used: $f = 835$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 53.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.97, 5.97, 5.97); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

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

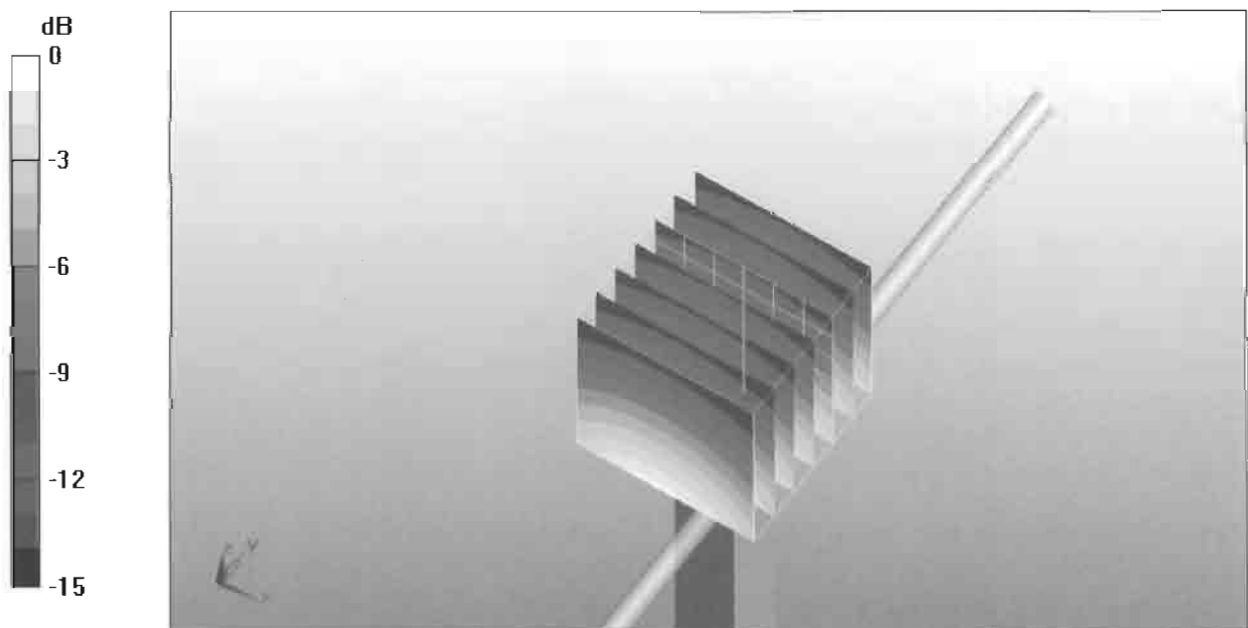
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.5 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.52 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.94 mW/g



0 dB = 2.94mW/g



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia GmbH (Ulm)**

Certificate No: **D835V2-474_Jun11**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 474**

Calibration procedure(s) **QA CAL-05.v8**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **June 14, 2011**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 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-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	8-Jun-11 (No. DAE4-601_Jun11)	Jun-12

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

Calibrated by: **Dimce Iliev** **Laboratory Technician**

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

Issued: June 14, 2011

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

DASY5 Validation Report for Head TSL

Date: 14.06.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 474

Communication System: CW; Frequency: 835 MHz

Medium: HSL900V2

Medium parameters used: $f = 835$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.07, 6.07, 6.07); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 08.06.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

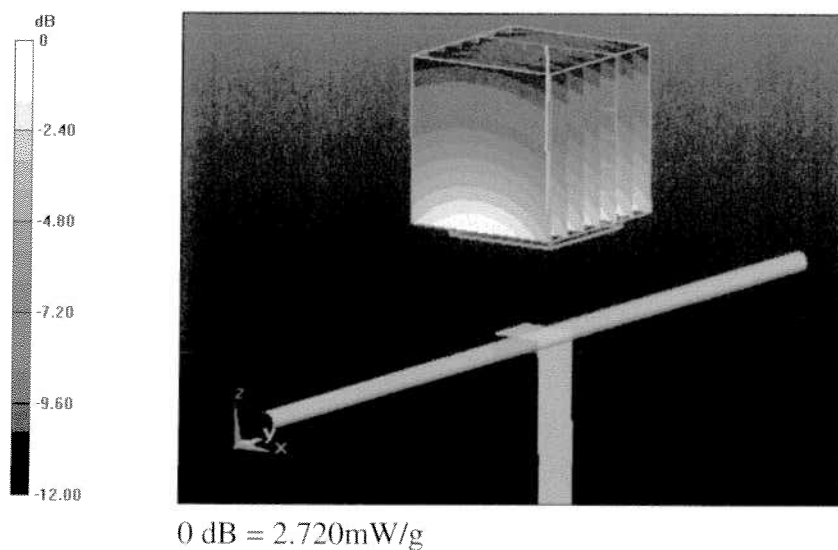
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.048 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.439 W/kg

SAR(1 g) = 2.33 mW/g; SAR(10 g) = 1.53 mW/g

Maximum value of SAR (measured) = 2.718 mW/g



DASY5 Validation Report for Body TSL

Date: 14.06.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 474

Communication System: CW; Frequency: 835 MHz

Medium: MSL900V2

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.02, 6.02, 6.02); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 08.06.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

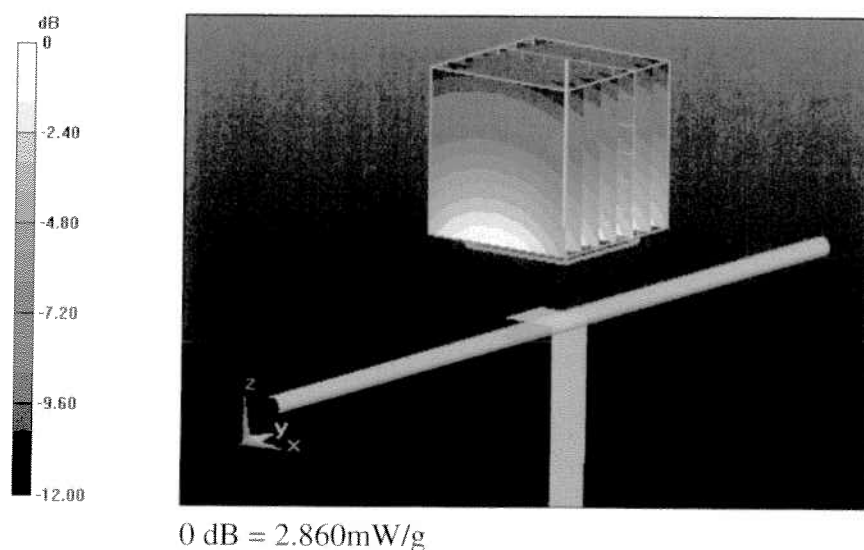
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.624 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.578 W/kg

SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.859 mW/g





Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia Salo TCC**

Certificate No: **D1800V2-256_Oct09**

CALIBRATION CERTIFICATE

Object **D1800V2 - SN: 256**

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

Calibration date: **October 20, 2009**

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: October 21, 2009

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

DASY5 Validation Report for Head TSL

Date/Time: 20.10.2009 10:26:59

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:256

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL U11 BB

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.25, 5.25, 5.25); 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

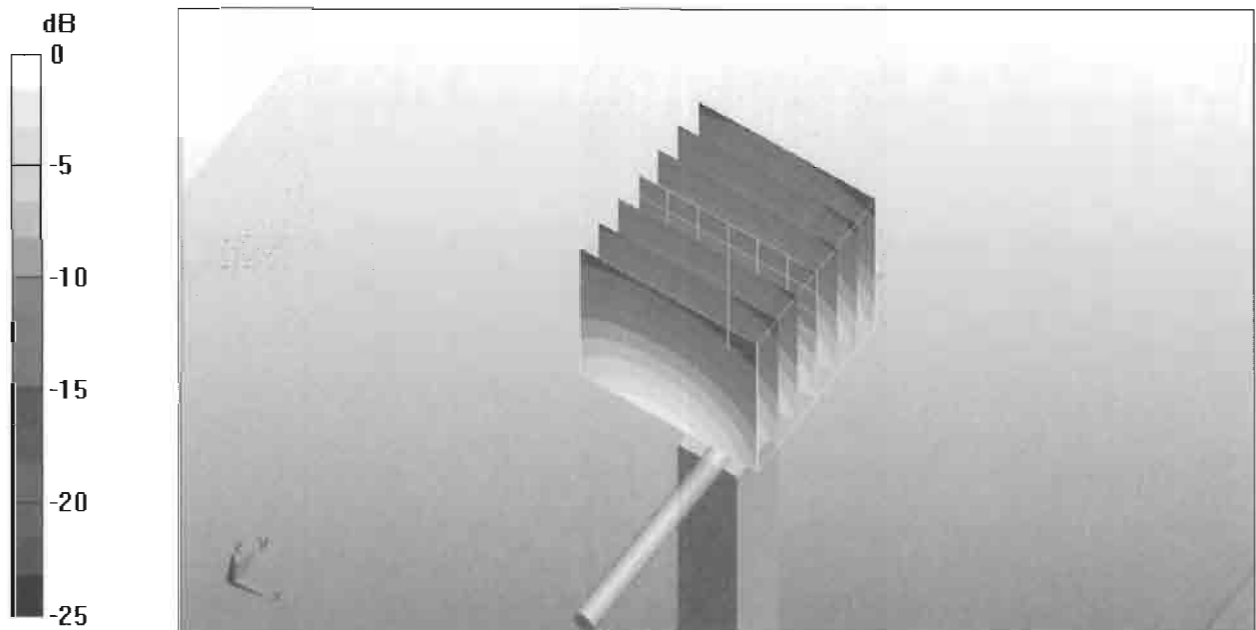
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.2 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 9.9 mW/g; SAR(10 g) = 5.21 mW/g

Maximum value of SAR (measured) = 12.4 mW/g



0 dB = 12.4mW/g

DASY5 Validation Report for Body

Date/Time: 20.10.2009 14:52:33

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:256

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: MSL U10 BB

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.8, 4.8, 4.8); 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

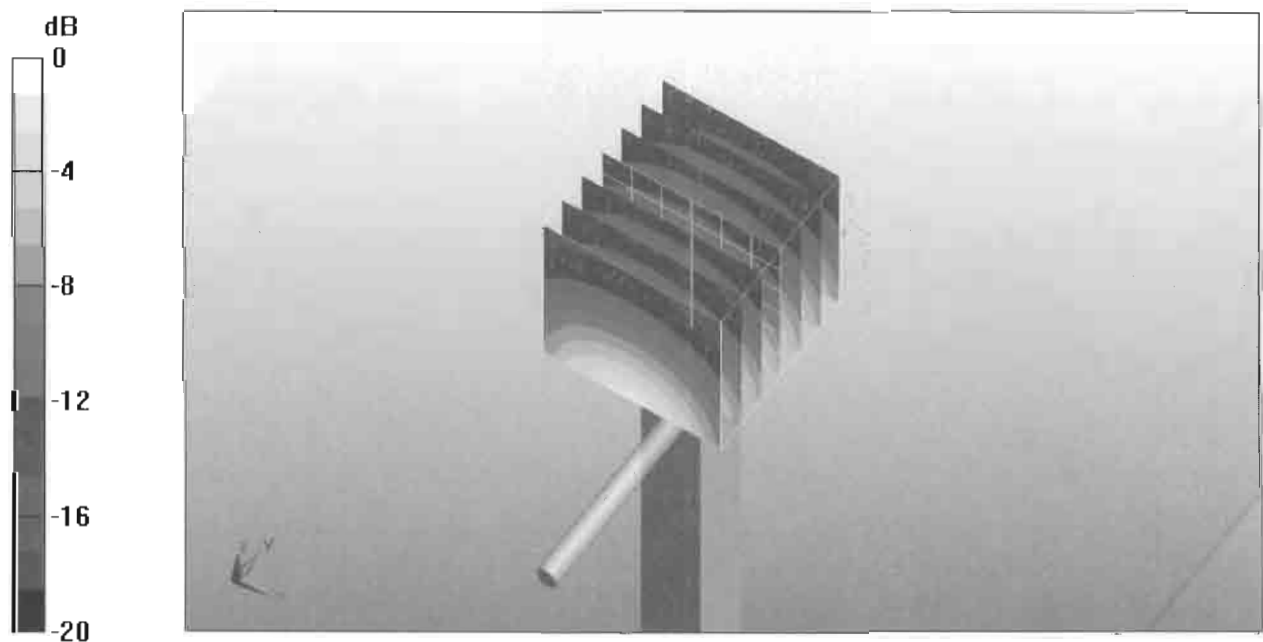
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.2 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 16.8 W/kg

SAR(1 g) = 9.61 mW/g; SAR(10 g) = 5.07 mW/g

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



0 dB = 12.2mW/g



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia Salo TCC**

Certificate No: **D1900V2-5d013_Mar10**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d013**

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

Calibration date: **March 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 $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV3	SN: 3205	26-Jun-09 (No. ES3-3205_Jun09)	Jun-10
DAE4	SN: 601	02-Mar-10 (No. DAE4-601_Mar10)	Mar-11
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

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

Issued: March 23, 2010

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

DASY5 Validation Report for Head TSL

Date/Time: 23.03.2010 10:16:39

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d013

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

Medium: HSL U11 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

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: 02.03.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

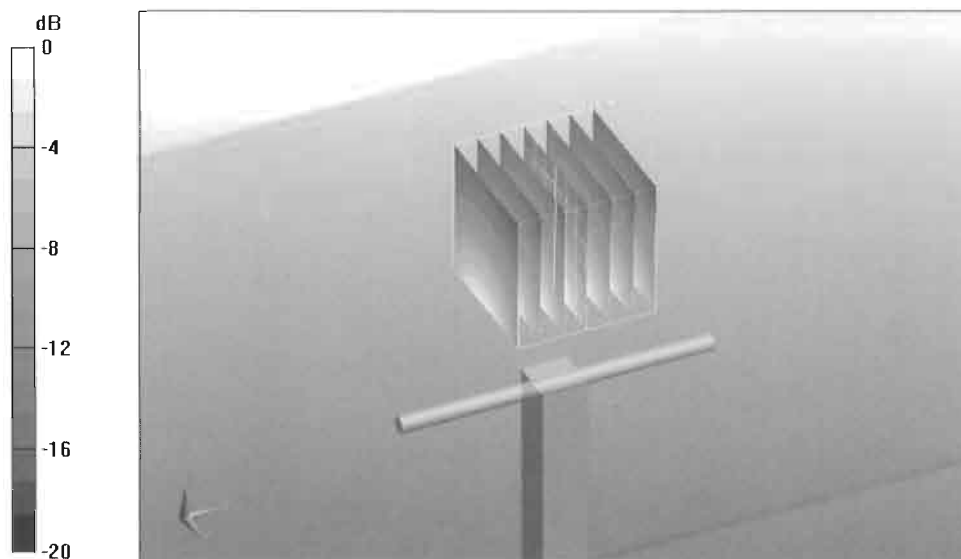
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.4 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.32 mW/g

Maximum value of SAR (measured) = 12.6 mW/g



0 dB = 12.6mW/g

DASY5 Validation Report for Body

Date/Time: 23.03.2010 13:12:18

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d013

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

Medium: MSL U11 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 55$; $\rho = 1000$ kg/m³

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: 02.03.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

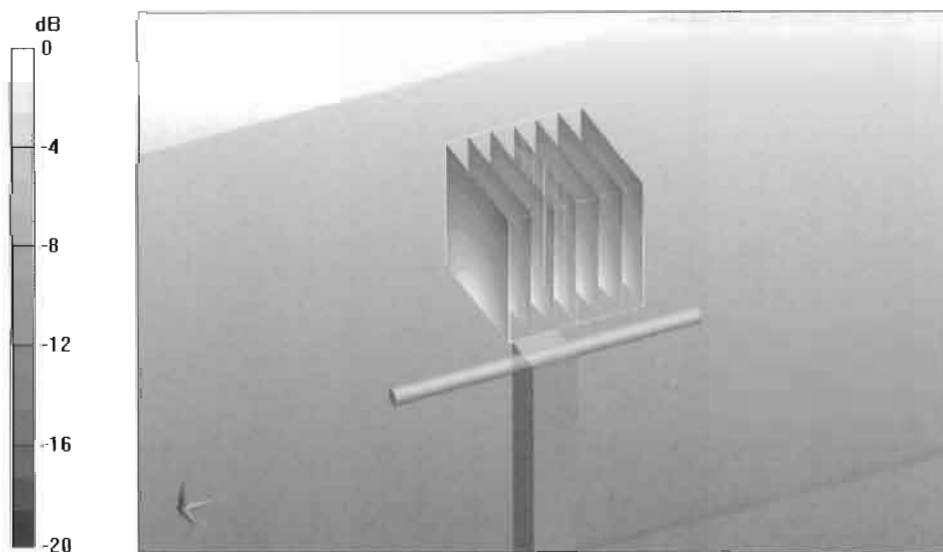
Pin250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.9 V/m; Power Drift = 0.00956 dB

Peak SAR (extrapolated) = 17.5 W/kg

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.58 mW/g

Maximum value of SAR (measured) = 12.7 mW/g



0 dB = 12.7mW/g



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

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

Client **Nokia GmbH (Ulm)**

Certificate No: **D1900V2-5d007_Jun11**

CALIBRATION CERTIFICATE

Object **D1900V2 - SN: 5d007**

Calibration procedure(s) **QA CAL-05.v8**
Calibration procedure for dipole validation kits above 700 MHz

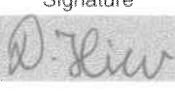
Calibration date: **June 16, 2011**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	8-Jun-11 (No. DAE4-601_Jun11)	Jun-12
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by: **Dimce Iliev** **Laboratory Technician** 

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

Issued: June 16, 2011

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

DASY5 Validation Report for Head TSL

Date: 15.06.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d007

Communication System: CW; Frequency: 1900 MHz

Medium: HSL U12 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.01, 5.01, 5.01); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 08.06.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

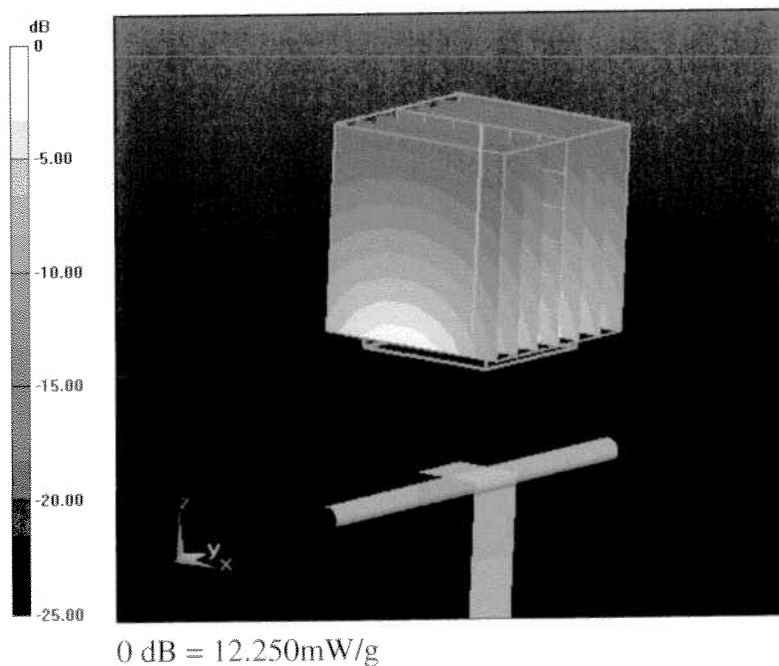
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.068 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 18.126 W/kg

SAR(1 g) = 9.95 mW/g; SAR(10 g) = 5.19 mW/g

Maximum value of SAR (measured) = 12.246 mW/g



DASY5 Validation Report for Body TSL

Date: 16.06.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d007

Communication System: CW; Frequency: 1900 MHz

Medium: MSL U12 BB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.62, 4.62, 4.62); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 08.06.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

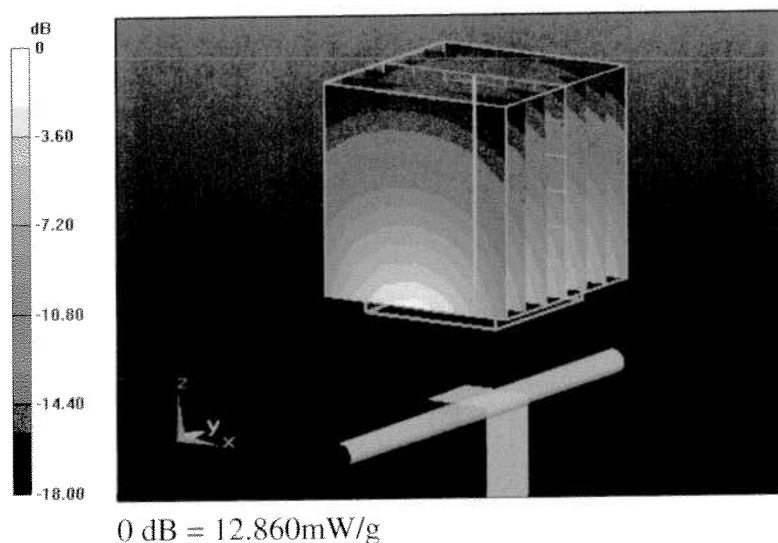
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.029 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 18.022 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.3 mW/g

Maximum value of SAR (measured) = 12.863 mW/g





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 Salo TCC** Certificate No: **D2450V2-749_Oct09**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 749**

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

Calibration date: **October 21, 2009**

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: October 22, 2009

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

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749

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

Medium: HSL U11 BB

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.78 \text{ mho/m}$; $\epsilon_r = 39.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

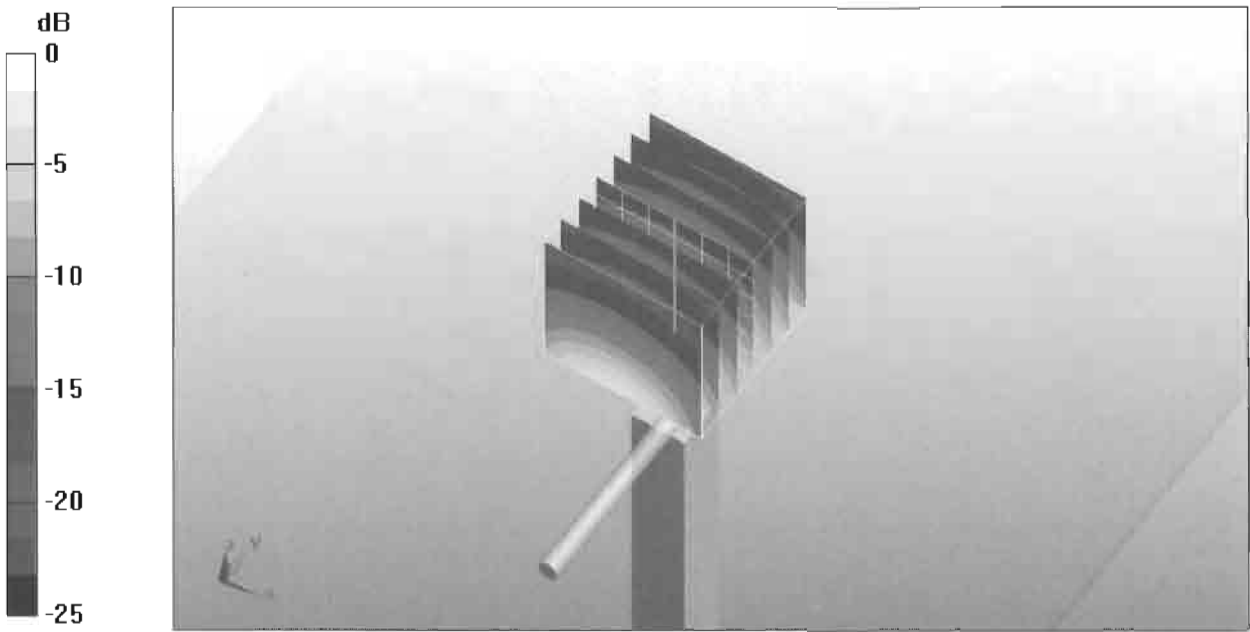
Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.7 V/m; Power Drift = 0.078 dB

Peak SAR (extrapolated) = 26.8 W/kg

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.18 mW/g

Maximum value of SAR (measured) = 16.9 mW/g



0 dB = 16.9mW/g

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:749

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

Medium: MSL U10 BB

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 52.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.31, 4.31, 4.31); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

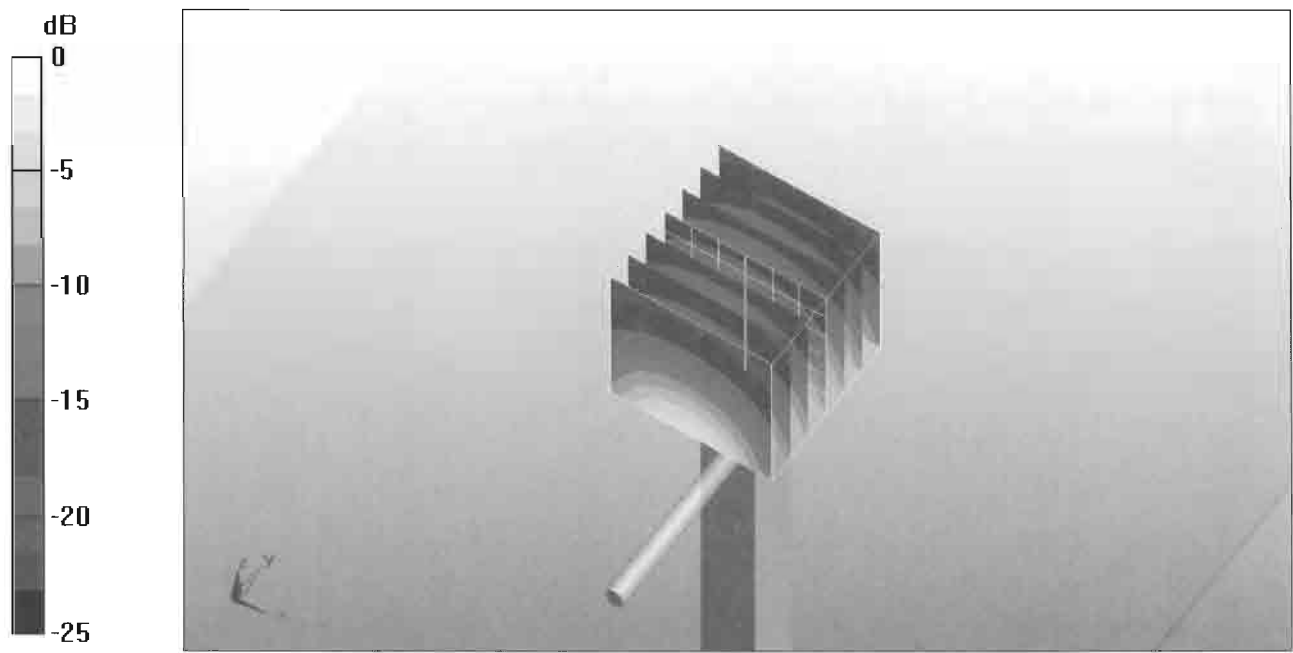
Pin250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.9 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 25.8 W/kg

SAR(1 g) = 12.5 mW/g; SAR(10 g) = 5.81 mW/g

Maximum value of SAR (measured) = 16.4 mW/g



0 dB = 16.4mW/g