

SAR Compliance Test Report

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Tested device:	RM-937		
FCC ID:	PYAC	IC:	-
Supplement reports:	SAR_Photo_RM-937_02		
Testing has been carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC published RF exposure KDB procedures 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:			

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2013-08-26 to 2013-09-20
SN, HW and SW numbers of tested device	SN: 004402/47/288851/4, HW: 2010, SW: 1028.3500.1332.2000, DUT: 53608 SN: 004402/47/288853/0, HW: 2010, SW: 1028.3500.1332.2000, DUT: 53609 SN: 004402/47/288850/6, HW: 2010, SW: 1028.3500.1332.2000, DUT: 53615 SN: 004402/47/288855/5, HW: 2010, SW: 1028.3500.1332.2000, DUT: 17627
Batteries used in testing	-
Headsets used in testing	WH-208, DUT: 52444, 53622
Other accessories used in testing	-
State of sample	Prototype unit
Notes	-

1.2 Maximum Results

The maximum measured SAR values for Head, Body-Worn, Wireless Router (“Hotspot”) and 10-g Extremity SAR configurations are given in section 1.2.1, 1.2.2, 1.2.3 and 1.2.4 respectively. The device conforms to the requirements of the standards 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)	Reported* SAR value (1g avg)	SAR limit (1g avg)	Result	Plot #
2-slot GPRS850	251 / 848.8	30.30 dBm	Left, Cheek	0.172 W/kg	0.17 W/kg	1.6 W/kg	PASSED	1
WCDMA850	4233 / 846.6	23.83 dBm	Left, Cheek	0.193 W/kg	0.19 W/kg	1.6 W/kg	PASSED	2
2-slot GPRS1900	661 / 1880.0	27.16 dBm	Left, Cheek	0.114 W/kg	0.12 W/kg	1.6 W/kg	PASSED	3
WCDMA1900	9538 / 1907.6	23.55 dBm	Left, Cheek	0.206 W/kg	0.22 W/kg	1.6 W/kg	PASSED	4
WLAN2450	1 / 2412.0	16.75 dBm	Left, Cheek	1.06 W/kg	1.26 W/kg	1.6 W/kg	PASSED	5
WLAN5000	36 / 5180.0	13.02 dBm	Left, Tilt	1.13 W/kg	1.27 W/kg	1.6 W/kg	PASSED	6
2-slot GPRS850 + WLAN2450	-	-	Left, Cheek	1.10 W/kg	1.30 W/kg	1.6 W/kg	PASSED	7
WCDMA850 + WLAN2450	-	-	Left, Cheek	1.10 W/kg	1.30 W/kg	1.6 W/kg	PASSED	8

(Table continues)

(Table continues)

2-slot GPRS1900 + WLAN2450	-	-	Left, Cheek	1.10 W/kg	1.30 W/kg	1.6 W/kg	PASSED	9
WCDMA1900 + WLAN2450	-	-	Left, Cheek	1.11 W/kg	1.32 W/kg	1.6 W/kg	PASSED	10
2-slot GPRS850 + WLAN5000	-	-	Left, Tilt	1.13 W/kg	1.27 W/kg	1.6 W/kg	PASSED	6
WCDMA850 + WLAN5000	-	-	Left, Tilt	1.13 W/kg	1.27 W/kg	1.6 W/kg	PASSED	6
2-slot GPRS1900 + WLAN5000	-	-	Left, Tilt	1.13 W/kg	1.27 W/kg	1.6 W/kg	PASSED	6
WCDMA1900 + WLAN5000	-	-	Left, Tilt	1.13 W/kg	1.27 W/kg	1.6 W/kg	PASSED	6

1.2.2 Body Worn Configuration

Mode	Ch / f(MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	Reported* SAR value (1g avg)	SAR limit (1g avg)	Result	Plot#
2-slot GPRS850	251 / 848.8	30.30 dBm	15 mm	0.143 W/kg	0.15 W/kg	1.6 W/kg	PASSED	15
WCDMA850	4132 / 826.4	23.74 dBm	15 mm	0.173 W/kg	0.18 W/kg	1.6 W/kg	PASSED	16
2-slot GPRS1900	512 / 1850.2	27.02 dBm	15 mm	0.171 W/kg	0.18 W/kg	1.6 W/kg	PASSED	17
WCDMA1900	9262 / 1852.4	23.54 dBm	15 mm	0.331 W/kg	0.36 W/kg	1.6 W/kg	PASSED	18
WLAN2450	11 / 2462.0	16.56 dBm	15 mm	0.114 W/kg	0.14 W/kg	1.6 W/kg	PASSED	19
WLAN5000	112 / 5560.0	12.66 dBm	15 mm	0.159 W/kg	0.19 W/kg	1.6 W/kg	PASSED	20
2-slot GPRS850 + WLAN2450	-	-	15 mm	0.142 W/kg	0.17 W/kg	1.6 W/kg	PASSED	21
WCDMA850 + WLAN2450	-	-	15 mm	0.197 W/kg	0.21 W/kg	1.6 W/kg	PASSED	22
2-slot GPRS1900 + WLAN2450	-	-	15 mm	0.172 W/kg	0.19 W/kg	1.6 W/kg	PASSED	23
WCDMA1900 + WLAN2450	-	-	15 mm	0.340 W/kg	0.37 W/kg	1.6 W/kg	PASSED	24
2-slot GPRS850 + WLAN5000	-	-	15 mm	0.204 W/kg	0.25 W/kg	1.6 W/kg	PASSED	25
WCDMA850 + WLAN5000	-	-	15 mm	0.214 W/kg	0.24 W/kg	1.6 W/kg	PASSED	26
2-slot GPRS1900 + WLAN5000	-	-	15 mm	0.217 W/kg	0.26 W/kg	1.6 W/kg	PASSED	27
WCDMA1900 + WLAN5000	-	-	15 mm	0.370 W/kg	0.40 W/kg	1.6 W/kg	PASSED	28

1.2.3 Wireless Router Configuration

Mode	Ch / f(MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	Reported* SAR value (1g avg)	SAR limit (1g avg)	Result	Plot#
2-slot GPRS850	251 / 848.8	30.30 dBm	10 mm	0.239 W/kg	0.24 W/kg	1.6 W/kg	PASSED	29
WCDMA850	4233 / 846.6	23.83 dBm	10 mm	0.296 W/kg	0.30 W/kg	1.6 W/kg	PASSED	30
2-slot GPRS1900	810 / 1909.8	27.16 dBm	10 mm	0.350 W/kg	0.37 W/kg	1.6 W/kg	PASSED	31
WCDMA1900	9262 / 1852.4	23.54 dBm	10 mm	0.549 W/kg	0.59 W/kg	1.6 W/kg	PASSED	32
WLAN2450	6 / 2437.0	16.58 dBm	10 mm	0.191 W/kg	0.24 W/kg	1.6 W/kg	PASSED	33
2-slot GPRS850 + WLAN2450	-	-	10 mm	0.273 W/kg	0.28 W/kg	1.6 W/kg	PASSED	34
WCDMA850 + WLAN2450	-	-	10 mm	0.351 W/kg	0.36 W/kg	1.6 W/kg	PASSED	35
2-slot GPRS1900 + WLAN2450	-	-	10 mm	0.387 W/kg	0.41 W/kg	1.6 W/kg	PASSED	36
WCDMA1900 + WLAN2450	-	-	10 mm	0.556 W/kg	0.60 W/kg	1.6 W/kg	PASSED	37

1.2.4 10-g Extremity SAR

Mode	Ch / f(MHz)	Conducted power	Separation distance	Measured SAR value (10g avg)	Reported* SAR value (10g avg)	SAR limit (10g avg)	Result	Plot#
WLAN5000	64 / 5320.0	12.70 dBm	0 mm	0.732 W/kg	0.88 W/kg	4.0 W/kg	PASSED	38

* Reported SAR values are scaled to, or measured at, upper limit of power tuning tolerance.

1.2.5 Summary SAR data

	FCC-defined SAR values for the Grants of Equipment Authorization		
	PCE	DTS	NII
Maximum Head SAR values	0.22 W/kg	1.26 W/kg	1.27 W/kg
{Max + Max} Simultaneous Head SAR value	1.48 W/kg		
Maximum Body SAR values	0.36 W/kg	0.14 W/kg	0.19 W/kg
{Max + Max} Simultaneous Body SAR value	0.55 W/kg		
Maximum Product Specific (Wireless Router) SAR values	0.59 W/kg	0.24 W/kg	N/A
{Max + Max} Simultaneous Product Specific SAR value	0.83 W/kg		
Maximum Simultaneous SAR value	1.48 W/kg		
Head SAR: WCDMA1900 + WLAN2450			

Note:

PCE contains the highest results between all cellular modes (cellular, AWS and PCS bands)

DTS contains the highest results between WLAN 2.4GHz + RLAN 5725-5850MHz

NII contains the highest results between RLAN 5150-5250, 5250-5350 and 5470-5725

1.2.6 Maximum Drift

Maximum drift covered by 5% scaling up of the SAR values	Maximum drift during measurements
0.2dB	0.20dB

1.2.7 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	± 27.8%
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2. DESCRIPTION OF THE DEVICE UNDER TEST

Device category	Portable
Exposure environment	General population / uncontrolled

Modes of Operation	Bands	Modulation Mode	Duty Cycle	Transmitter Frequency Range (MHz)	Power Tuning Target (dBm)				Upper Limit of Power Tuning Tolerance (dBm)			
					1-slot	2-slot	3-slot	4-slot	1-slot	2-slot	3-slot	4-slot
GSM / GPRS	850	GMSK	1/8 to 4/8	824 – 849	32.50	30.00	28.20	27.00	32.85	30.35	28.55	27.35
	1900			1850 – 1910	30.00	27.00	25.20	24.00	30.35	27.35	25.55	24.35
EGPRS	850	GMSK	1/8 to 4/8	824 – 849	26.50	26.00	25.00	23.00	26.85	26.35	25.35	23.35
	1900			1850 – 1910	25.50	25.00	24.00	22.00	25.85	25.35	24.35	22.35
WCDMA	850 (Band V)		1	826 – 847	23.50				23.85			
WCDMA	1900 (Band II)		1	1852 – 1908	23.50				23.85			
HSUPA	850 (Band V)		1	826 – 847	See Appendix D for details							
HSUPA	1900 (Band II)		1	1852 – 1908	See Appendix D for details							
BT	2450	GFSK	1	2402 – 2480	7.00				8.50			
					Ch 1-11				Ch 1-11			
WLAN b-mode* 20MHz	2450	Up to 11Mbps QPSK	1	2412 – 2472	16.00				17.50			
WLAN g-mode* 20MHz	2450	Up to 54Mbps 64QAM	1	2412 – 2472	14.50				16.00			
WLAN n-mode* 20MHz	2450	Up to 72.2Mbps 64QAM	1	2412 – 2462 2412 – 2472	13.00				14.50			
					Ch 36-165				Ch 36-165			
WLAN a-mode* 20MHz	5000	Up to 54Mbps 64QAM	1	5150 – 5825	13.00				14.50			
WLAN n-mode* 20MHz	5000	Up to 72.2Mbps 64QAM	1	5150 – 5825	12.00				13.50			
					Ch 38-163				Ch 38-163			
WLAN n-mode* 40MHz	5000	Up to 150Mbps 64QAM	1	5150 – 5825	12.00				13.50			
					Ch 42-155				Ch 42-155			
WLAN ac-mode* 20MHz	5000	Up to 86.7Mbps 256QAM	1	5180 – 5805	7.00				8.50			
WLAN ac-mode* 40MHz	5000	Up to 180Mbps 256QAM	1	5180 – 5805	7.00				8.50			
WLAN ac-mode* 80MHz	5000	Up to 390Mbps 256QAM	1	5180 – 5805	7.00				8.50			

*Maximum tuning targets are presented above. See full details in Appendix I.

Outside of USA, the transmitter of the device is capable of operating also in GSM/GPRS/EGPRS900, GSM/GPRS/EGPRS1800, WCDMA900, WCDMA2100, LTE845 (Band 20), LTE900 (band 8), LTE1800 (Band 3), LTE2100 (Band 1) and LTE2500 (Band 7) 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 device has also HSUPA capabilities in all WCDMA bands listed above. HSUPA target powers are always lower than or equal to the corresponding WCDMA target power listed above, details of the HSUPA MPR scheme, power targets and power results can be found in Appendix D.

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 upper limit of power tuning tolerance is 8dBm (6.3mW), SAR testing was deemed unnecessary since $(6.3\text{mW}/5\text{mm}) \cdot \sqrt{2.48\text{GHz}} < 3.0$ (KDB447498 D01 General RF Exposure Guidelines v05 Section 4.3.1 Standalone SAR test exclusion considerations). Since WLAN2450 and BT use same frequency and antenna, WLAN2450 power is 8dB higher, and they can not transmit simultaneously, the WLAN2450+cellular bands combined SAR results can be regarded as conservative estimation of BT+cellular combined SARs. As WLAN2450+cellular combined SAR result are below limit, also BT+cellular combined SAR can be deemed to comply without further analysis and estimations required in KDB 447498 for simultaneous transmission exclusion.

This device has Wireless Router "Hotspot" mode capability.

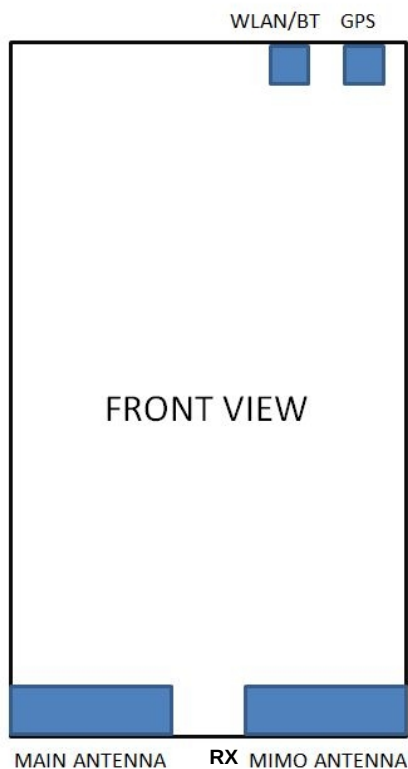
This device uses a single antenna for transmission of all cellular, AWS and PCS bands; a separate single antenna is used for WLAN. Simultaneous transmission of any singular cellular and PCS band is possible with WLAN in Head and Body-worn use according to the table below.

Simultaneous transmission capabilities in Head and Body-worn use		
	WLAN2450	WLAN5000
GSM/GPRS/EGPRS850	✓	✓
WCDMA850	✓	✓
GSM/GPRS/EGPRS1900	✓	✓
WCDMA1900	✓	✓

Simultaneous transmission capabilities in Wireless Router use		
	WLAN2450	WLAN5000
GSM/GPRS/EGPRS850	✓	✓
WCDMA850	✓	✓
GSM/GPRS/EGPRS1900	✓	✓
WCDMA1900	✓	✓

2.1 Description of the Antenna

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



3. TEST CONDITIONS

3.1 Temperature and Humidity

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

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester except for testing WLAN2450/WLAN5000 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.

This device was tested in all the available multi-slot GMSK GPRS modes; Dual Transfer Mode was not specifically tested as the average power in multi-slot GMSK GPRS mode is always greater than, or equal to, the average power in Dual Transfer Mode in Nokia devices.

The transmission mode of the device in all WCDMA tests was configured to 12.2kbps RMC with all TPC bits set as “1”. All WCDMA testing has been carried out in accordance with FCC KDB 941225: SAR Measurement Procedures for 3G Devices.

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

The conducted output power of the device was measured by a separate test laboratory on the same units as used for SAR testing. The results are given in Appendices G-J of this report.

The standard transmission mode of the device in all WLAN b-mode tests was DSSS QPSK 1Mbps. The standard transmission mode of the device in all WLAN a-mode tests was OFDM 6 Mbps; WLAN ac-mode OFDM 87.8 / 97.5 Mbps was additionally used for. The standard transmission modes used have maximum time-averaged output powers within 0.25dB of the highest time-averaged output power of all the WLAN a, b, g, n and ac modulation modes in this device as illustrated by the tables in Appendix J. All WLAN testing has been carried out in accordance with FCC KDB 248227: SAR Measurement Procedures for 802.11 a/b/g Transmitters.

Here is a summary list of the KDB documents used in the reported testing:

KDB941225 D05 SAR for LTE Devices v02r02
KDB 941225 D01 SAR Measurement Procedures for 3G Devices
KDB 248227: SAR Measurement Procedures for 802.11 a/b/g Transmitters
KDB 648474 D04 Handset SAR v01r01
KDB 941225 D06 v01 Hot Spot SAR
KDB 447498 D01 General RF Exposure Guidance v05r01
KDB 690783 D01 SAR Listings on Grants
KDB 865664 D01 SAR Measurement 100MHz to 6GHz v01r01
865664 D02 SAR reporting v01r01

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

The measurements were performed using an automated DASY near-field scanning system 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 date	Calibration expiry
DAE 4	710	2013-03	2014-03
DAE 4	705	2012-12	2013-12
DAE 4	887	2013-03	2014-03
DAE 4	1309	2013-01	2014-01
E-field Probe EX3DV4	3573	2013-01	2014-01
E-field Probe EX3DV4	3836	2013-03	2014-03
E-field Probe EX3DV4	3823	2012-12	2013-12
E-field Probe ES3DV3	3195	2013-03	2014-03
Dipole Validation Kit, D835V2	4d005	2012-03	2014-03
Dipole Validation Kit, D1900V2	509	2012-12	2014-12
Dipole Validation Kit, D2450V2	883	2012-02	2014-02
Dipole Validation Kit, D5GHzV2	1048	2012-12	2014-12
DASY5 software	Version 52.8	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration date	Calibration expiry
Signal Generator	SME06	829445	2013-04	2014-04
Signal Generator	E4432B	US40052231	2013-04	2014-04
Signal Generator	SME06	829445/008	2013-04	2014-04
Signal Generator	SMB100A	105735	2013-08	2014-08
Call Tester	CMU200	835352/008	-	-
Call Tester	CMU200	831593/001	-	-
Call Tester	CMU200	110735	-	-
Call Tester	CMW500	113277	-	-
Call Tester	CMW500	115794	-	-
Call Tester	SP6010	SP6010-0329	-	-
Call Tester	SP6010	SP6010-0299	-	-
Amplifier	ZHL-42W	QA1252001	-	-
Amplifier	AR 5S1G4M1	306024	-	-
Amplifier	ZHL-4240W	e060204/1	-	-
Amplifier	5S4G11	312661	-	-
RF Network Analyzer	8753ES	My40002096	2013-04	2014-04
RF Network Analyzer	8753ES	US39170317	2013-04	2014-04
RF Network Analyzer	E5071C	MY46104578	2013-04	2014-04
Network Analyzer	ENA E5071C	MY46213166	2012-08	2013-08
Dielectric Probe Kit	DAK-3.5	1042	-	-
Dielectric Probe Kit	85070C	2577	-	-
Dielectric Probe Kit	85070C	653	-	-
Dielectric Probe Kit	DAK-3.5	1065	-	-
Power Meter	R&S NRP	101293	2013-04	2014-04
Power Sensor	R&S NRP-Z51	102842	2013-04	2014-04
Power Meter	Agilent E4419B	My41291520	2013-04	2014-04
Power Sensor	Agilent 8482A	US37295411	2013-04	2014-04
Power Meter	R&S NRVD	840297/008	2013-04	2014-04
Power Sensor	R&S NRV-Z51	101135	2013-04	2014-04
Power Meter	NRP	100714	2013-08	2014-08
Power Sensor	NRP-Z92	100085	2013-08	2014-08

4.1.1 Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., butyl diglycol)
Calibration	Calibration certificate in Appendix E
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 Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

4.1.2 Isotropic E-field Probe Type EX3DV4

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

4.2 Phantoms

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

The phantom used for all Body SAR tests i.e. for both system checks and device testing, was a "Flat Phantom ELI"/"Triple Flat Phantom", also manufactured by SPEAG; this phantom conform to the requirements of FCC published RF exposure KDB procedures.

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 published RF Exposure KDB Procedures. All tests were carried out using simulants whose dielectric parameters were within $\pm 5\%$ of the recommended values. All tests were carried out within 24 hours of measuring the dielectric parameters.

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

4.3.1 Tissue Simulant Recipes

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

800MHz band

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

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

1900MHz band

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

2450MHz band

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

5000MHz band †

Ingredient	Head (% by weight)	Body (% by weight)
Water	50-65	60-80
Oil	10-30	-
Emulsifiers, Esters, Inhibitors	8-25	20-40
Sodium salt	0-1.5	0-1.5

† Recipe is proprietary to SPEAG. The proportions of the constituents have not been disclosed.

4.4 System validation and System checking

4.4.1 System validation status

Probe Calibration Point f / MHz	Test System	DASY SW	Dipole Type / SN	Probe Type / SN	DAE unit Type / SN	Validation done	
						Head tissue simulant	Body tissue simulant
835	TCC Beijing / SAR-1	V52.8	D835V2 / 4d005	EX3DV4 / 3836	DAE4 / 710	2013-03	2012-11
1900	TCC Beijing / SAR-3	V52.8	D1900V2 / 509	ES3DV3 / 3195	DAE4 / 887	2013-08	-
1900	TCC Beijing / SAR-4	V52.8	D1900V2 / 509	EX3DV4 / 3823	DAE4 / 705	2013-04	2013-02
2450	TCC Beijing / SAR-4	V52.8	D2450V2 / 883	EX3DV4 / 3823	DAE4 / 705	2013-03	2013-03
5200	TCC Salo / SAR-2	V52.8	D5GHzV2 / 1048	EX3DV4 / 3573	DAE4 / 1309	2013-02	2013-02
5300	TCC Salo / SAR-2	V52.8	D5GHzV2 / 1048	EX3DV4 / 3573	DAE4 / 1309	2013-02	2013-02
5500	TCC Salo / SAR-2	V52.8	D5GHzV2 / 1048	EX3DV4 / 3573	DAE4 / 1309	2013-02	2013-02
5600	TCC Salo / SAR-2	V52.8	D5GHzV2 / 1048	EX3DV4 / 3573	DAE4 / 1309	2013-02	2013-02
5800	TCC Salo / SAR-2	V52.8	D5GHzV2 / 1048	EX3DV4 / 3573	DAE4 / 1309	2013-02	2013-02

4.4.2 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 (except in the case of the 5000MHz dipole for which 100mW was supplied), which was placed under the flat section of the twin SAM phantom for head system checking, and under the flat phantom for body system checking. The system checking results (dielectric parameters and SAR values) are given in the table below.

System checking, head tissue simulant

f [MHz]	Description	SAR 1g [W/kg]	Estimated SAR 1g [W/kg]	Estimated SAR 1g Deviation	Dielectric Parameters		SAR 1g Deviation from target	Dielectric Parameters Deviation from target		Temp [°C]	Plot #
				dSAR [%]	ϵ_r	σ [S/m]	dSAR [%]	d ϵ_r [%]	d σ [%]		
	Tolerances			±3%			±10 %	±5 %	±5 %		
835	IEEE1528 / IEC62209				41.5	0.90					
	Reference result SN:4d005	2.32	-		41.5	0.89	TCC Beijing/SAR-1 EX3DV4 SN:3836 Head 835MHz				
	2013-08-26	2.13	-	-	40.4	0.90	-8.19	-2.65	1.12	22.0	1
	2013-08-27	2.13	-	-	40.6	0.90	-8.19	-2.17	1.12	21.8	-
1900	IEEE1528 / IEC62209				40.0	1.40					
	Reference result SN: 509	9.63	-		39.5	1.38	TCC Beijing/SAR-3 ES3DV3 SN:3195 Head 1900MHz				
	2013-08-26	9.83	-	-	38.0	1.36	2.08	-3.80	-1.45	20.5	2
	2013-08-27	9.80	-	-	39.5	1.40	1.77	0.00	1.45	20.9	-
	IEEE1528 / IEC62209				40.0	1.40					
	Reference result SN: 509	9.63	-		39.5	1.38	TCC Beijing/SAR-4 EX3DV4 SN:3823 Head 1900MHz				
	2013-08-29	9.42	-	-	39.0	1.37	-2.18	-1.27	-0.72	22.1	3
2450	IEEE1528 / IEC62209				39.2	1.80					
	Reference result SN:883	13.8	-		38.9	1.86	TCC Beijing/SAR-4 EX3DV4 SN:3823 Head 2450MHz				
	2013-08-26	14.9	-	-	37.6	1.86	7.97	-3.34	0.00	21.9	4
5200	IEEE1528 / IEC62209*				36.0	4.66					
	Reference result SN:1048	8.04	-		34.6	4.46	TCC Salo/SAR-2 EX3DV4 SN:3573 Head 5200MHz				
	2013-09-03	7.50	-	-	35.6	4.47	-6.72	2.89	0.22	21.2	5
	2013-09-05	8.00	-	-	36.2	4.53	-0.50	4.62	1.57	21.5	-

(Table continues)

(Table continues)

5300	IEEE1528 / IEC62209*				35.9	4.76					
	Reference result SN:1048	8.34	-		34.4	4.55	TCC Salo/SAR-2 EX3DV4 SN:3573 Head 5300MHz				
	2013-09-04	8.17	-	-	35.9	4.59	-2.04	4.36	0.88	21.5	-
	2013-09-05	8.10	-	-	36.0	4.63	-2.88	4.65	1.76	21.5	6
	2013-09-20	8.50	-	-	35.7	4.68	1.92	3.78	2.86	21.8	
5500	IEEE1528 / IEC62209*				35.6	4.96					
	Reference result SN:1048	8.31	-		34.2	4.72	TCC Salo/SAR-2 EX3DV4 SN:3573 Head 5500MHz				
	2013-09-05	7.91	-	-	35.8	4.83	-4.81	4.68	2.33	21.5	7
	2013-09-10	8.04	-	-	34.6	4.76	-3.25	1.17	0.85	21.6	-
5600	IEEE1528 / IEC62209*				35.5	5.07					
	Reference result SN:1048	8.41	-		34.0	4.81	TCC Salo/SAR-2 EX3DV4 SN:3573 Head 5600MHz				
	2013-09-06	7.94	-	-	34.9	4.88	-5.59	2.65	1.46	21.4	8
	2013-09-10	8.42	-	-	34.5	4.87	0.12	1.47	1.25	21.6	-
5800	IEEE1528 / IEC62209*				35.3	5.27					
	Reference result SN:1048	7.93	-		33.8	5.04	TCC Salo/SAR-2 EX3DV4 SN:3573 Head 5800MHz				
	2013-09-09	7.48	-	-	34.4	5.06	-5.67	1.78	0.40	21.9	9
	2013-09-10	7.66	-	-	34.2	5.08	-3.40	1.18	0.79	21.6	-

* Dielectric parameter data taken from IEC62209-2.

System checking, body tissue simulant

f [MHz]	Description	SAR 1g [W/kg]	Estimated SAR 1g [W/kg]	Estimated SAR 1g Deviation dSAR [%]	Dielectric Parameters		SAR 1g Deviation from target dSAR [%]	Dielectric Parameters Deviation from target d ϵ_r [%] d σ [%]		Temp [°C]	Plot #
					ϵ_r	σ [S/m]					
835	IEEE1528 / IEC62209				55.2	0.97					
	Reference result SN:4d005	2.42	-		55.0	1.00	TCC Beijing/SAR-1 EX3DV4 SN:3836 Body 835MHz				
	2013-08-28	2.44	-	-	52.7	0.97	0.83	-4.18	-3.00	22.1	10
	2013-08-30	2.43	-	-	55.1	0.96	0.41	0.18	-4.00	22.5	-
1900	IEEE1528 / IEC62209				53.3	1.52					
	Reference result SN:509	9.84	-		52.2	1.52	TCC Beijing/SAR-4 EX3DV4 SN:3823 Body 1900MHz				
	2013-08-28	10.2	-	-	50.8	1.52	3.66	-2.68	0.00	22.1	11
	2013-08-30	10.2	-	-	50.7	1.54	3.66	-2.87	1.32	22.2	-
2450	IEEE1528 / IEC62209				52.7	1.95					
	Reference result SN:883	13.2	-		52.3	2.02	TCC Beijing/SAR-4 EX3DV4 SN:3823 Body 2450MHz				
	2013-08-27	13.9	-	-	50.1	1.96	5.30	-4.21	-2.97	22.2	12
5200	FCC Published RF Exposure KDB Procedures				49.0	5.30					
	Reference result SN:1048	7.20	-		47.1	5.40	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5200MHz				
	2013-09-11	7.86	-	-	47.1	5.21	9.17	0.00	-3.52	21.0	13
5300	FCC Published RF Exposure KDB Procedures				48.9	5.42					
	Reference result SN:1048	7.45	-		46.9	5.51	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5300MHz				
	2013-09-11	7.73	-	-	46.8	5.30	3.76	-0.21	-3.81	20.7	-
	2013-09-20	7.97			46.7	5.42	6.98	-0.43	-1.63	21.8	14

(Table continues)

(Table continues)

5500	FCC Published RF Exposure KDB Procedures				48.6	5.65						
	Reference result SN:1048	7.62	-		46.6	5.76	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5500MHz					
	2013-09-12	7.94	-	-	46.3	5.68	4.20	-0.64	-1.39	20.9	-	
	2013-09-20	8.08	-	-	46.4	5.66	6.04	-0.43	-1.74	21.8	15	
5600	FCC Published RF Exposure KDB Procedures				48.5	5.77						
	Reference result SN:1048	7.73	-		46.40	5.88	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5600MHz					
	2013-09-12	8.23	-	-	46.1	5.81	6.47	-0.65	-1.19	20.9	-	
	2013-09-14	8.29	-	-	46.3	5.95	7.24	-0.22	1.19	21.2	16	
5800	FCC Published RF Exposure KDB Procedures				48.2	6.00						
	Reference result SN:1048	7.25	-		46.10	6.17	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5800MHz					
	2013-09-14	7.22	-	-	46.1	6.22	-0.41	0.00	0.81	21.2	-	
	2013-09-15	7.44	-	-	46.1	6.22	2.62	0.00	0.81	21.2	17	
	2013-09-20	7.30	-	-	45.9	6.07	0.69	-0.43	-1.62	21.8	-	

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

4.5 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from recommended value		Temp [°C]
		ϵ_r	σ [S/m]	$d\epsilon_r$ [%]	$d\sigma$ [%]	
	Tolerances			± 5 %	± 5 %	
835	Recommended value	41.5	0.90			
	2013-08-27	40.6	0.90	-2.17	0.00	21.8
836	Recommended value	41.5	0.90			
	2013-08-26	40.4	0.90	-2.65	0.00	22.0
1880	Recommended value	40.0	1.40			
	2013-08-26	38.1	1.34	-4.75	-4.29	20.5
	2013-08-27	39.6	1.38	-1.00	-1.43	20.9
	2013-08-29	39.1	1.35	-2.25	-3.57	22.1
2437	Recommended value	39.2	1.79			
	2013-08-26	37.6	1.84	-4.08	2.79	21.9
5210	Recommended value	36.0	4.67			
	2013-09-03	35.6	4.89	-1.11	4.71	21.2
	2013-09-05	36.2	4.54	0.56	-2.78	21.5
5290	Recommended value	35.9	4.75			
	2013-09-04	35.9	4.58	0.00	-3.58	21.5
	2013-09-05	36.0	4.62	0.28	-2.74	21.5
	2013-09-20	35.8	4.67	-0.28	-1.68	21.8
5520	Recommended value	35.6	4.99			
	2013-09-05	35.7	4.85	0.28	-2.81	21.5
	2013-09-10	34.6	4.78	-2.81	-4.21	21.6
5620	Recommended value	35.5	5.09			
	2013-09-06	34.8	4.90	-1.97	-3.73	21.4
	2013-09-10	34.4	4.89	-3.10	-3.93	21.6
5760	Recommended value	35.3	5.23			
	2013-09-09	34.5	5.02	-2.27	-4.02	21.9
	2013-09-10	34.3	5.04	-2.83	-3.63	21.6

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from Recommended value		Temp [°C]
		ϵ_r	σ [S/m]	$d\epsilon_r$ [%]	$d\sigma$ [%]	
	Tolerances			± 5 %	± 5 %	
835	Recommended value	55.2	0.97			
	2013-08-28	52.7	0.97	-4.53	0.00	22.1
	2013-08-30	55.1	0.96			22.5
836	Recommended value	55.2	0.97			
	2013-08-28	52.7	0.97	-4.53	0.00	22.1
1880	Recommended value	53.3	1.52			
	2013-08-28	50.9	1.50	-4.50	-1.32	22.1
	2013-08-30	50.8	1.53	-4.69	0.66	22.2
2437	Recommended value	52.7	1.94			
	2013-08-27	50.1	1.94	-4.93	0.00	22.2
5210	Recommended value	49.0	5.31			
	2013-09-11	47.1	5.23	-3.88	-1.51	21.0
5290	Recommended value	48.9	5.40			
	2013-09-11	46.8	5.29	-4.29	-2.04	20.7
	2013-09-20	46.7	5.40	-4.50	0.00	21.8
5520	Recommended value	48.6	5.67			
	2013-09-12	46.3	5.71	-4.73	0.71	20.9
	2013-09-20	46.4	5.68	-4.53	0.18	21.8
5620	Recommended value	48.4	5.79			
	2013-09-12	46.1	5.84	-4.75	0.86	20.9
	2013-09-13	46.3	6.00	-4.34	3.63	21.2
5760	Recommended value	48.3	5.95			
	2013-09-15	45.9	6.19	-4.97	4.03	21.2
	2013-09-20	46.0	5.99	-4.76	0.67	21.8

Dielectric parameter data for the band edges is given in Appendix C.

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.

5.2.3 Wireless Router Configuration

The device was placed in the SPEAG holder and, in sequence, the back, display and each of the 4 edges was positioned 10.0mm away from the flat phantom. The spacer was removed before the start of the measurements.

5.2.4 10g Extremity SAR

The device was placed in the SPEAG holder and, in sequence, the back, display and each of the 4 edges was positioned 0.0mm away from the flat phantom.

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	±6.55	N	1	1	±6.55	∞
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	±5.0	R	√3	1	±2.9	∞
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			±13.5	116
Coverage Factor for 95%			k=2				
Expanded Uncertainty						±27.1	

Table 6.2 – Measurement uncertainty evaluation for Fast SAR

Relative DASY5 Uncertainty Budget for Fast SAR Tests According to IEEE 1528/2011 and IEC 62209-1/2011 (0.3-6 GHz range)						
Uncertainty Component	Tol. (%)	Prob Dist.	Div.	C_i	$C_i \cdot U_i$ (%)	V_i
Measurement System						
Probe Calibration	±6.55	N	1	0		
Axial Isotropy	±4.7	R	√3	0.7	±1.9	∞
Hemispherical Isotropy	±9.6	R	√3	0.7	±3.9	∞
Boundary Effect	±2.0	R	√3	1	±1.2	∞
Linearity	±4.7	R	√3	1	±2.7	∞
System Detection Limits	±1.0	R	√3	1	±0.6	∞
Modulation Response	±2.4	R	√3	1	±1.4	∞
Readout Electronics	±0.3	N	1	0		
Response Time	±0.8	R	√3	0		
Integration Time	±2.6	R	√3	1	±1.5	∞
RF Ambient Conditions - Noise	±3.0	R	√3	1	±1.7	∞
RF Ambient Conditions - Reflections	±3.0	R	√3	0		
Probe Positioner Mechanical Tolerance	±0.8	R	√3	1	±0.5	∞
Probe Positioning with respect to Phantom Shell	±6.7	R	√3	1	±3.9	∞
Spatial x-y Resolution	±10.0	R	√3	1	±5.8	∞
Fast SAR z Approximation	±14.0	R	√3	1	±8.1	∞
Test sample Related						
Test Sample Positioning	±2.9	N	1	1	±2.9	145
Device Holder Uncertainty	±3.6	N	1	1	±3.6	5
Output Power Variation - SAR drift measurement	±5.0	R	√3	1	±2.9	∞
Power Scaling	±0	R	√3	0		
Phantom and Setup						
Phantom Uncertainty (shape and thickness tolerances)	±6.6	R	√3	1	±3.8	∞
SAR correction	±1.9	R	√3	0		
Conductivity - measurement uncertainty	±2.5	R	√3	0		
Permittivity - measurement uncertainty	±2.5	R	√3	0		
Temperature - Conductivity	±3.4	R	√3	0		
Temperature - Permittivity	±0.4	R	√3	0		
Combined Standard Uncertainty		RSS			±13.9	748
Coverage Factor for 95%		k=2				
Expanded Uncertainty					±27.8	

7. RESULTS

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

850MHz Band Head SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz	Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz		
GSM	Tuning Target + Tolerance [dBm]		32.85			Scaling factor*				
	Conducted Slot Average Power [dBm]		32.79	32.80	32.80	0.06	0.05	0.05	dB	
	Time-averaged power [dBm]		23.76	23.77	23.77	1.01	1.01	1.01	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.091	-	-	0.092	-		
2-slot GPRS	Tuning Target + Tolerance [dBm]		30.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		29.94	30.31	30.30	0.41	0.04	0.05	dB	
	Time-averaged power [dBm]		23.92	24.29	24.28	1.10	1.01	1.01	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	1
		Full SAR	0.074	0.158	0.172	0.082	0.159	0.174		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.082	-	-	0.083	-		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.151	-	-	0.152	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.074	-	-	0.075	-		
3-slot GPRS	Tuning Target + Tolerance [dBm]		28.55			Scaling factor*				
	Conducted Slot Average Power [dBm]		28.34	28.49	28.44	0.21	0.06	0.11	dB	
	Time-averaged power [dBm]		24.08	24.23	24.18	1.05	1.01	1.03	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.152	-	-	0.154	-		
4-slot GPRS	Tuning Target + Tolerance [dBm]		27.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		27.18	27.33	27.26	0.17	0.02	0.09	dB	
	Time-averaged power [dBm]		24.17	24.32	24.25	1.04	1.00	1.02	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.149	-	-	0.150	-		
2-slot 8PSK EGPRS	Tuning Target + Tolerance [dBm]		26.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		26.08	26.13	26.15	0.27	0.22	0.20	dB	
	Time-averaged power [dBm]		23.07	23.12	23.14	1.06	1.05	1.05	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	-	0.060	-	-	0.063		

(Table continues)

(Table continues)

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz	Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz		
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*				
	Conducted Slot Average Power [dBm]		23.74	23.78	23.83	0.11	0.07	0.02	dB	
	Time-averaged power [dBm]		23.74	23.78	23.83	1.03	1.02	1.00	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	2
		Full SAR	0.178	0.190	0.193	0.183	0.193	0.194		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.102	-	-	0.104	-		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.169	-	-	0.172	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.084	-	-	0.086	-		

1900MHz Band Head SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz	Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz		
GSM	Tuning Target + Tolerance [dBm]		30.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		29.90	30.04	30.01	0.45	0.31	0.34	dB	
	Time-averaged power [dBm]		20.87	21.01	20.98	1.11	1.07	1.08	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.107	-	-	0.115	-		
2-slot GPRS	Tuning Target + Tolerance [dBm]		27.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		27.02	27.16	27.16	0.33	0.19	0.19	dB	
	Time-averaged power [dBm]		21.00	21.14	21.14	1.08	1.04	1.04	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	3
		Full SAR	0.104	0.114	0.093	0.112	0.119	0.097		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.054	-	-	0.057	-		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.094	-	-	0.098	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.053	-	-	0.055	-		
3-slot GPRS	Tuning Target + Tolerance [dBm]		25.55			Scaling factor*				
	Conducted Slot Average Power [dBm]		25.12	25.29	25.28	0.43	0.26	0.27	dB	
	Time-averaged power [dBm]		20.86	21.03	21.02	1.10	1.06	1.06	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.108	-	-	0.115	-		
4-slot GPRS	Tuning Target + Tolerance [dBm]		24.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		23.99	24.09	24.18	0.36	0.26	0.17	dB	
	Time-averaged power [dBm]		20.98	21.08	21.17	1.09	1.06	1.04	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.112	-	-	0.119	-		
2-slot 8PSK EGPRS	Tuning Target + Tolerance [dBm]		25.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		24.80	24.93	25.08	0.55	0.42	0.27	dB	
	Time-averaged power [dBm]		21.79	21.92	22.07	1.14	1.10	1.06	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.061	-	-	0.067	-		

(Table continues)

(Table continues)

Table continues

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz	Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz		
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*				
	Conducted Power [dBm]		23.54	23.62	23.55	0.31	0.23	0.30	dB	
	Time-averaged power [dBm]		23.54	23.62	23.55	1.07	1.05	1.07	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	4
		Full SAR	0.196	0.203	0.206	0.211	0.214	0.221		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.093	-	-	0.098	-		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.162	-	-	0.171	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.090	-	-	0.095	-		

2450MHz Head SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz	Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz		
WLAN b-mode DSSS 1Mbps	Tuning Target + Tolerance [dBm]		17.50			Scaling factor*				
	Conducted Power [dBm]		16.75	16.58	16.56	0.75	0.92	0.94	dB	
	Time-averaged power [dBm]		16.75	16.58	16.56	1.19	1.24	1.24	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	5
		Full SAR	1.06	1.00	1.00	1.26	1.24	1.24		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	0.854	0.845	0.824	1.02	1.04	1.02		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.533	-	-	0.659	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	-	0.453	-	-	0.560	-		
	Repeated SAR Left Cheek	Estimated SAR	-	-	-	-	-	-	-	
		Full SAR	1.01	-	-	1.20	-	-		

5000MHz Head SAR results
5150–5250 MHz and 5250–5350 MHz

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz	Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50				Scaling factor*					
	Conducted Power [dBm]		13.02	12.86	12.96	12.70	0.48	0.64	0.54	0.80	dB	
	Time-averaged power [dBm]		13.02	12.86	12.96	12.70	1.12	1.16	1.13	1.20	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.901	0.854	0.878	0.849	1.01	0.990	0.994	1.02	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	1.10	-	-	1.01	1.23	-	-	1.21	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.606	-	-	0.647	0.677	-	-	0.778	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.739	-	-	0.760	0.825	-	-	0.914	-	
	Repeated SAR Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	6
		Full SAR	1.13	-	-	1.04	1.27	-	-	1.25	-	
Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
					Ch 58 5290.0 MHz				Ch 58 5290.0 MHz			
WLAN ac-mode OFDM 351/390 Mbps	Tuning Target + Tolerance [dBm]		8.50				Scaling factor*					
	Conducted Power [dBm]		-	-	6.03	-	-	-	2.47	-	dB	
	Time-averaged power [dBm]		-	-	6.03	-	-	-	1.77	-	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.684	-	-	-	1.21	-	-	

5000MHz Head SAR results
5470–5725 MHz

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 104 5520.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 136 5680.0 MHz	Ch 104 5520.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 136 5680.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50				Scaling factor*					
	Conducted Power [dBm]		12.99	12.66	12.81	12.59	0.51	0.84	0.69	0.91	dB	
	Time-averaged power [dBm]		12.99	12.66	12.81	12.59	1.12	1.21	1.17	1.23	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.680	0.679	0.593	0.606	0.765	0.824	0.695	0.747		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.820	-	-	-	0.995	-	-		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.499	-	-	-	0.605	-	-		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.576	-	-	-	0.699	-	-		
	Repeated SAR Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.822	-	-	-	0.997	-	-		

5000MHz Head SAR results
5725–5850 MHz

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 149	Ch 153	Ch 165	Ch 149	Ch 153	Ch 165		
			5745.0 MHz	5765.0 MHz	5825.0 MHz	5745.0 MHz	5765.0 MHz	5825.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50			Scaling factor*				
	Conducted Power [dBm]		12.73	12.60	12.30	0.77	1.09	1.20	dB	
	Time-averaged power [dBm]		12.73	12.60	12.30	1.19	1.23	1.32	Lin	
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	0.687	0.667	0.655	0.820	0.821	0.863		
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.757	-	-	0.998		
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.563	-	-	0.742		
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.629	-	-	0.829		

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

Test configuration	Max. Reported* 1g SAR results					
	WLAN 2450	WLAN 5000	2-slot GPRS 850	WCDMA 850	2-slot GPRS 1900	WCDMA 1900
Head: Left, Cheek	1.26	1.02	0.174	0.194	0.119	0.221
Head: Left, Tilt	1.04	1.27	0.083	0.104	0.057	0.098
Head: Right, Cheek	0.659	0.778	0.152	0.172	0.098	0.171
Head: Right, Tilt	0.560	0.914	0.075	0.086	0.055	0.095

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Head: Left, Cheek	1.43	1.45	1.38	1.48
Head: Left, Tilt	1.12	1.14	1.10	1.14
Head: Right, Cheek	0.811	0.831	0.757	0.830
Head: Right, Tilt	0.635	0.646	0.615	0.655
Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN5000	WCDMA850 + WLAN5000	2-slot GPRS1900 + WLAN5000	WCDMA1900 + WLAN5000
Head: Left, Cheek	1.19	1.21	1.14	1.24
Head: Left, Tilt	1.35	1.37	1.33	1.37
Head: Right, Cheek	0.930	0.950	0.876	0.949
Head: Right, Tilt	0.989	1.00	0.969	1.01

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.

7.1.1 Area scan based combined Head SAR data

The Combined SAR data given in the tables below has been voluntarily calculated and should be ignored for FCC certification.

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 or WLAN5000 and the cellular bands point-by-point and c) calculates the combined average SAR values.

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Head: Left, Cheek	1.30	1.30	1.30	1.32
Head: Left, Tilt	-	-	-	-
Head: Right, Cheek	-	-	-	-
Head: Right, Tilt	-	-	-	-
Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN5000	WCDMA850 + WLAN5000	2-slot GPRS1900 + WLAN5000	WCDMA1900 + WLAN5000
Head: Left, Cheek	-	-	-	-
Head: Left, Tilt	1.20	1.20	1.20	1.22
Head: Right, Cheek	-	-	-	-
Head: Right, Tilt	-	-	-	-

Note: Plots #7-14

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 or WLAN5000 and b) uncertainties associated with the different methods of calculation. In these cases, the maximum SAR values given for the combined Modes in the Summary table in Section 1.2 are those for the individual cellular band.

Plots of the Measurement scans are given in Appendix B.

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

850MHz Band Body SAR results

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #	
				Ch 128	Ch 190	Ch 251	Ch 128	Ch 190	Ch 251			
				824.2 MHz	836.6 MHz	848.8 MHz	824.2 MHz	836.6 MHz	848.8 MHz			
2-slot GPRS	Tuning Target + Tolerance [dBm]			30.35			Scaling factor*					
	Conducted Slot Average Power [dBm]			29.94	30.31	30.30	0.41	0.04	0.05	dB		
	Time-averaged power [dBm]			23.92	24.29	24.28	1.10	1.01	1.01	Lin		
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	
			Full SAR	-	0.124	-	-	0.125	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.135	-	-	0.136	-	-	-	-
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	
			Full SAR	-	0.134	-	-	0.135	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.139	0.139	0.143	0.153	0.140	0.145	-	15	
Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #	
				Ch 4132	Ch 4175	Ch 4233	Ch 4132	Ch 4175	Ch 4233			
				826.4 MHz	835.0 MHz	846.6 MHz	826.4 MHz	835.0 MHz	846.6 MHz			
WCDMA	Tuning Target + Tolerance [dBm]			23.85			Scaling factor*					
	Conducted Slot Average Power [dBm]			23.74	23.78	23.83	0.11	0.07	0.02	dB		
	Time-averaged power [dBm]			23.74	23.78	23.83	1.03	1.02	1.00	Lin		
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	
			Full SAR	-	0.154	-	-	0.157	-	-	--	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.141	-	-	0.143	-	-	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	
			Full SAR	-	0.156	-	-	0.159	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.173	0.168	0.171	0.177	0.171	0.172	-	16	

1900MHz Band Body SAR results

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 512	Ch 661	Ch 810	Ch 512	Ch 661	Ch 810		
				1850.2 MHz	1880.0 MHz	1909.8 MHz	1850.2 MHz	1880.0 MHz	1909.8 MHz		
2-slot GPRS	Tuning Target + Tolerance [dBm]			27.35			Scaling factor*				
	Conducted Slot Average Power [dBm]			27.02	27.16	27.16	0.33	0.19	0.19	dB	
	Time-averaged power [dBm]			21.00	21.14	21.14	1.08	1.04	1.04	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	17
			Full SAR	0.171	0.162	0.139	0.184	0.169	0.145		
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.160	-	-	0.167	-		
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.145	-	-	0.151	-		
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.152	-	-	0.159	-		
Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 9262	Ch 9400	Ch 9538	Ch 9262	Ch 9400	Ch 9538		
				1852.4 MHz	1880.0 MHz	1907.6 MHz	1852.4 MHz	1880.0 MHz	1907.6 MHz		
WCDMA	Tuning Target + Tolerance [dBm]			23.85			Scaling factor*				
	Conducted Slot Average Power [dBm]			23.54	23.62	23.55	0.31	0.23	0.30	dB	
	Time-averaged power [dBm]			23.54	23.62	23.55	1.07	1.05	1.07	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.326	-	-	0.344	-		
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	18
			Full SAR	0.331	0.327	0.294	0.355	0.345	0.315		
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.274	-	-	0.289	-		
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.266	-	-	0.280	-		

2450MHz Body SAR results

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz	Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz		
WLAN b-mode DSSS 1 Mbps	Tuning Target + Tolerance [dBm]			17.50			Scaling factor*				
	Conducted Power [dBm]			16.75	16.58	16.56	0.75	0.92	0.94	dB	
	Time-averaged power [dBm]			16.75	16.58	16.56	1.19	1.24	1.24	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.096	-	-	0.118	-	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	0.094	0.103	0.114	0.112	0.127	0.142	-	19
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.097	-	-	0.120	-	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	0.096	-	-	0.119	-	-	-

5000MHz Body SAR results 5150–5250 MHz and 5250–5350 MHz

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz	Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz		
WLAN a-mode OFDM 6 bps	Tuning Target + Tolerance [dBm]			13.50				Scaling factor*					
	Conducted Power [dBm]			13.02	12.86	12.96	12.70	0.48	0.64	0.54	0.80	dB	
	Time-averaged power [dBm]			13.02	12.86	12.96	12.70	1.12	1.16	1.13	1.20	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	0.102	0.107	0.109	0.114	0.114	0.124	0.123	0.137	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.106	-	0.122	-	0.123	-	0.147	-	-
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.064	-	0.084	-	0.075	-	0.101	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.069	-	0.074	-	0.080	-	0.089	-	-

5000MHz Body SAR results
5470–5725 MHz

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 104	Ch 112	Ch 120	Ch 136	Ch 104	Ch 112	Ch 120	Ch 136		
				5520.0 MHz	5560.0 MHz	5600.0 MHz	5680.0 MHz	5520.0 MHz	5560.0 MHz	5600.0 MHz	5680.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]			13.50				Scaling factor*					
	Conducted Power [dBm]			12.99	12.66	12.81	12.59	0.51	0.84	0.69	0.91	dB	
	Time-averaged power [dBm]			12.99	12.66	12.81	12.59	1.12	1.21	1.17	1.23	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	0.108	0.121	0.104	0.119	0.121	0.147	0.122	0.147	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.159	-	-	-	0.193	-	-	-	-
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.056	-	-	-	0.068	-	-	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	-	0.062	-	-	-	0.075	-	-	-	-
Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 106				Ch 106					
				5530.0 MHz				5530.0 MHz					
WLAN ac-mode OFDM 351/3 90 Mbps	Tuning Target + Tolerance [dBm]			8.50				Scaling factor*					
	Conducted Power [dBm]			5.97	-	-	-	2.53	-	-	-	dB	
	Time-averaged power [dBm]			5.97	-	-	-	1.79	-	-	-	Lin	
	Back facing phantom	Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-	-
			Full SAR	0.051	-	-	-	0.091	-	-	-	-	-

5000MHz Body SAR results
5725–5850 MHz

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
				Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 165 5825.0 MHz	Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 165 5825.0 MHz		
WLAN a-mode DSSS 6 Mbps	Tuning Target + Tolerance [dBm]			13.50			Scaling factor*				
	Conducted Power [dBm]			12.73	12.60	12.30	0.77	0.90	1.20	dB	
	Time-averaged power [dBm]			12.73	12.60	12.30	1.19	1.23	1.32	Lin	
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	0.115	0.099	0.114	0.137	0.122	0.150	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	-	0.108	-	-	0.142	-	-
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	-	0.074	-	-	0.097	-	-
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-
			Full SAR	-	-	0.056	-	-	0.074	-	-

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

Test configuration	Max. Reported* 1g SAR results					
	WLAN 2450	WLAN 5000	2-slot GPRS 850	WCDMA 850	2-slot GPRS 1900	WCDMA 1900
Body: Back facing phantom, Without Headset	0.118	0.150	0.125	0.157	0.184	0.344
Body: Back facing phantom, Headset WH-208	0.142	0.193	0.136	0.143	0.167	0.355
Body: Display facing phantom, Without Headset	0.120	0.101	0.135	0.159	0.151	0.289
Body: Display facing phantom, Headset WH-208	0.119	0.089	0.145	0.177	0.159	0.280

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Body: Back facing phantom, Without Headset	0.243	0.275	0.302	0.462
Body: Back facing phantom, Headset WH-208	0.278	0.285	0.309	0.497
Body: Display facing phantom, Without Headset	0.255	0.279	0.271	0.409
Body: Display facing phantom, Headset WH-208	0.264	0.296	0.278	0.399
Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN5000	WCDMA850 + WLAN5000	2-slot GPRS1900 + WLAN5000	WCDMA1900 + WLAN5000
Body: Back facing phantom, Without Headset	0.275	0.307	0.334	0.494
Body: Back facing phantom, Headset WH-208	0.329	0.336	0.360	0.548
Body: Display facing phantom, Without Headset	0.236	0.260	0.252	0.390
Body: Display facing phantom, Headset WH-208	0.234	0.266	0.248	0.369

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.

7.2.1 Area scan based combined Body SAR data

The Combined SAR data given in the tables below has been voluntarily calculated and should be ignored for FCC certification.

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 or WLAN5000 and the cellular bands point-by-point and c) calculates the combined average SAR values. It is these values that appear in the Summary table in Section 1.2.2.

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Body: Back facing phantom, Without Headset	-	-	-	-
Body: Back facing phantom, Headset WH-208	0.167	-	0.185	0.366
Body: Display facing phantom, Without Headset	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	0.209	-	-
Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN5000	WCDMA850 + WLAN5000	2-slot GPRS1900 + WLAN5000	WCDMA1900 + WLAN5000
Body: Back facing phantom, Without Headset	-	-	-	-
Body: Back facing phantom, Headset WH-208	0.244	0.254	0.257	0.403
Body: Display facing phantom, Without Headset	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	-	-	-

Note: Plots #21-28

Plots of the Measurement scans are given in Appendix B.

7.3 Body SAR assessment of Wireless Router mode at 10.0mm separation distance

850MHz Band Wireless Router SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 128	Ch 190	Ch 251	Ch 128	Ch 190	Ch 251		
			824.2 MHz	836.6 MHz	848.8 MHz	824.2 MHz	836.6 MHz	848.8 MHz		
2-slot GPRS	Tuning Target + Tolerance [dBm]		30.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		29.94	30.31	30.30	0.41	0.04	0.05	dB	
	Time-averaged power [dBm]		23.92	24.29	24.28	1.10	1.01	1.01	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	29
		Full SAR	0.193	0.196	0.239	0.212	0.198	0.242		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.195	-	-	0.197	-		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.006	-	-	0.006	-		
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.083	-	-	0.083	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.116	-	-	0.117	-		
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.070	-	-	0.071	-		
Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz	Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz		
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*				
	Conducted Power [dBm]		23.74	23.78	23.83	0.11	0.07	0.02	dB	
	Time-averaged power [dBm]		23.74	23.78	23.83	1.03	1.02	1.00	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.204	-	-	0.207	-		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	30
		Full SAR	0.250	0.262	0.296	0.256	0.266	0.297		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.015	-	-	0.016	-		
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.102	-	-	0.104	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.115	-	-	0.117	-		
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.117	-	-	0.119	-		

1900MHz Band Wireless Router SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 512	Ch 661	Ch 810	Ch 512	Ch 661	Ch 810		
			1850.2 MHz	1880.0 MHz	1909.8 MHz	1850.2 MHz	1880.0 MHz	1909.8 MHz		
2-slot GPRS	Tuning Target + Tolerance [dBm]		27.35			Scaling factor*				
	Conducted Slot Average Power [dBm]		27.02	27.16	27.16	0.33	0.19	0.19	dB	
	Time-averaged power [dBm]		21.00	21.14	21.14	1.08	1.04	1.04	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	31
		Full SAR	0.330	0.313	0.350	0.356	0.327	0.366		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.287	-	-	0.300	-		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.026	-	-	0.027	-		
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.191	-	-	0.200	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.188	-	-	0.196	-		
Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	
	Full SAR	-	0.068	-	-	0.071	-			
Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz	Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz		
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*				
	Conducted Power [dBm]		23.54	23.62	23.55	0.31	0.23	0.30	dB	
	Time-averaged power [dBm]		23.54	23.62	23.55	1.07	1.05	1.07	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.511	-	-	0.539	-		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	32
		Full SAR	0.549	0.520	0.497	0.590	0.548	0.533		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.041	-	-	0.043	-		
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.306	-	-	0.323	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.303	-	-	0.319	-		
Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	
	Full SAR	-	0.111	-	-	0.117	-			

2450MHz Wireless Router SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 1	Ch 6	Ch 11	Ch 1	Ch 6	Ch 11		
			2412.0 MHz	2437.0 MHz	2462.0 MHz	2412.0 MHz	2437.0 MHz	2462.0 MHz		
WLAN b-mode DSSS 1 Mbps	Tuning Target + Tolerance [dBm]		17.50			Scaling factor*				
	Conducted Power [dBm]		16.75	16.58	16.56	0.75	0.92	0.94	dB	
	Time-averaged power [dBm]		16.75	16.58	16.56	1.19	1.24	1.24	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	33
		Full SAR	0.153	0.191	0.172	0.182	0.236	0.214		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.191	-	-	0.236	-		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.101	-	-	0.125	-		
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.019	-	-	0.023	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.029	-	-	0.036	-		
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	0.088	-	-	0.109	-		

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

Test configuration	Max. Reported* 1g SAR results				
	WLAN 2450	2-slot GPRS 850	WCDMA 850	2-slot GPRS 1900	WCDMA 1900
Back facing phantom	0.236	0.242	0.207	0.366	0.539
Display facing phantom	0.236	0.197	0.297	0.300	0.590
Top edge facing phantom	0.125	0.006	0.016	0.027	0.043
Bottom edge facing phantom	0.023	0.083	0.104	0.200	0.323
Left edge facing phantom	0.036	0.117	0.117	0.196	0.319
Right edge facing phantom	0.109	0.071	0.119	0.071	0.117

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Back facing phantom	0.478	0.443	0.602	0.775
Display facing phantom	0.433	0.533	0.536	0.826
Top edge facing phantom	0.131	0.141	0.152	0.168
Bottom edge facing phantom	0.106	0.127	0.223	0.346
Left edge facing phantom	0.153	0.153	0.232	0.355
Right edge facing phantom	0.180	0.228	0.180	0.226

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.

7.3.1 Area scan based combined Body SAR data of Wireless Router mode

The Combined SAR data given in the tables below has been voluntarily calculated and should be ignored for FCC certification.

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 or WLAN5000 and the cellular bands point-by-point and c) calculates the combined average SAR values. It is these values that appear in the Summary table in Section 1.2.3.

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

Test configuration	Max. Reported* 1g SAR results			
	2-slot GPRS850 + WLAN2450	WCDMA850 + WLAN2450	2-slot GPRS1900 + WLAN2450	WCDMA1900 + WLAN2450
Back facing phantom	0.283	-	0.408	-
Display facing phantom	-	0.363	-	0.601
Top edge facing phantom	-	-	-	-
Bottom edge facing phantom	-	-	-	-
Left edge facing phantom	-	-	-	-
Right edge facing phantom	-	-	-	-

Note: Plots #34-37

Plots of the Measurement scans are given in Appendix B.

7.4 The measured 10-g Extremity SAR values for the test device are tabulated below

All other bands/communication systems have Wireless Router SAR less than 1.2W/kg for all surfaces and edges, therefore only WLAN5000 need to be tested for Phablet 10-g extremity SAR according to KDB 648474 D04 Handset SAR v01r01. WLAN5000 was not tested for Wireless Router SAR because it does not support WR mode.

5000MHz Extremity SAR results
5150–5250 MHz and 5250–5350 MHz

Mode	Test configuration	SAR Measurement	Measured 10g SAR [W/kg]				Reported* 10g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz	Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50				Scaling factor*					
	Conducted Power [dBm]		13.02	12.86	12.96	12.70	0.48	0.64	0.54	0.80	dB	
	Time-averaged power [dBm]		13.02	12.86	12.96	12.70	1.12	1.16	1.13	1.20	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.321	0.324	0.340	0.327	0.359	0.375	0.385	0.393		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.289	-	0.277	-	0.335	-	0.333		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	38
		Full SAR	-	0.736	-	0.732	-	0.853	-	0.880		
	Bottom edge* facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	-	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.034	-	0.032	-	0.040	-	0.038		
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.026	-	0.038	-	0.031	-	0.045		
Mode	Test configuration	SAR Measurement	Measured 10g SAR [W/kg]				Reported* 10g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
					Ch 58 5290.0 MHz					Ch 58 5290.0 MHz		
WLAN ac-mode OFDM 351/3 90 Mbps	Tuning Target + Tolerance [dBm]		8.50				Scaling factor*					
	Conducted Power [dBm]		-	-	6.03	-	-	-	2.47	-	dB	
	Time-averaged power [dBm]		-	-	6.03	-	-	-	1.77	-	Lin	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.465	-	-	-	0.821	-		

5000MHz Extremity SAR results
5470–5725 MHz

Mode	Device orientation	SAR measurement	Measured 10g SAR [W/kg]				Reported* 10g SAR [W/kg]				Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 104 5520.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 136 5680.0 MHz	Ch 104 5520.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 136 5680.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50				Scaling factor*					
	Conducted Power [dBm]		12.99	12.66	12.81	12.59	0.51	0.84	0.69	0.91	dB	
	Time-averaged power [dBm]		12.99	12.66	12.81	12.59	1.12	1.21	1.17	1.23	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	0.248	0.264	0.257	0.247	0.279	0.320	0.301	0.305		
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR		0.238				0.289	-	-		
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.615	-	-	-	0.746	-	-		
	Bottom edge* facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	-	-		
	Left edge facing phantom	Estimated SAR	-	-	-	-		-	-	-	-	-
		Full SAR	-	0.026	-	-	-	0.032	-	-		
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.039	-	-	-	0.047	-	-		

**5000MHz Extremity SAR results
5725–5850 MHz**

Mode	Device orientation	SAR measurement	Measured 10g SAR [W/kg]			Reported* 10g SAR [W/kg]			Max Deviation (Estimated SAR - Full SAR) [W/kg]	Plot #
			Ch 149	Ch 153	Ch 165	Ch 149	Ch 153	Ch 165		
			5745.0 MHz	5765.0 MHz	5825.0 MHz	5745.0 MHz	5765.0 MHz	5825.0 MHz		
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		13.50			Scaling factor*				
	Conducted Power [dBm]		12.73	12.60	12.30	0.77	1.09	1.20	dB	
	Time-averaged power [dBm]		12.73	12.60	12.30	1.19	1.29	1.32	Lin	
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	0.254	0.250	0.254	0.303	0.308	0.335	-	-
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.211	-	-	0.278	-	-
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.530	-	-	0.699	-	-
	Bottom* edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	-	-
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.023	-	-	0.031	-	-
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-	-
		Full SAR	-	-	0.036	-	-	0.047	-	-

*Bottom edge is not measured because of distance between WLAN 5GHz antenna and bottom edge is more than 2.5cm (KDB 648474 D04 Handset SAR v01r01).

Plot of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

Plot 1:

Date/Time: 2013-08-26 10:32:47

Test Laboratory: TCC Nokia

Type: D835V2; Serial: 4d005

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 835 SAR1; Medium Notes: Medium Temperature: t=22.0

Medium parameters used: $f = 835$ MHz; $\sigma = 0.9$ S/m; $\epsilon_r = 40.356$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.31 W/kg

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

Reference Value = 50.864 V/m

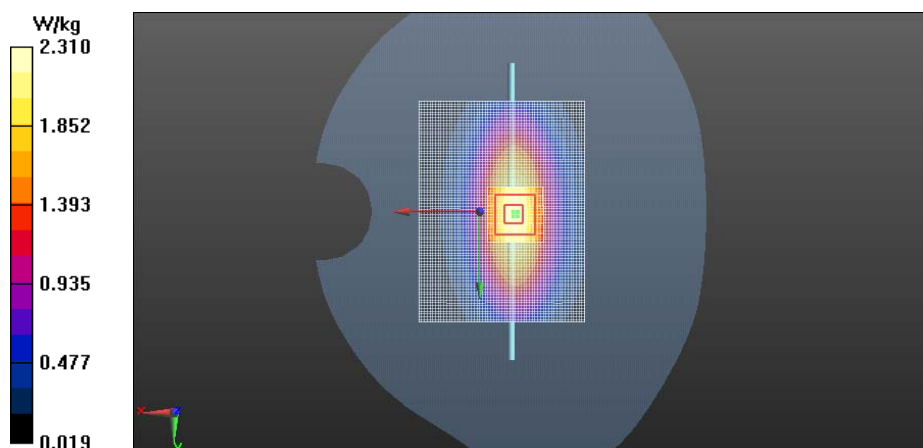
Peak SAR (extrapolated) = 3.22 W/kg

SAR(1 g) = 2.13 W/kg

SAR(10 g) = 1.39 W/kg

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 2.29 W/kg



Plot 2:

Date/Time: 2013-08-26 10:17:52

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: 509

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900 SAR3; Medium Notes: Medium Temperature: t=20.5

Medium parameters used: f = 1900 MHz; $\sigma = 1.356$ S/m; $\epsilon_r = 38.035$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3195
- ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn887; Calibrated: 2013-03-07
- Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 12.0 W/kg

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

Reference Value = 92.484 V/m

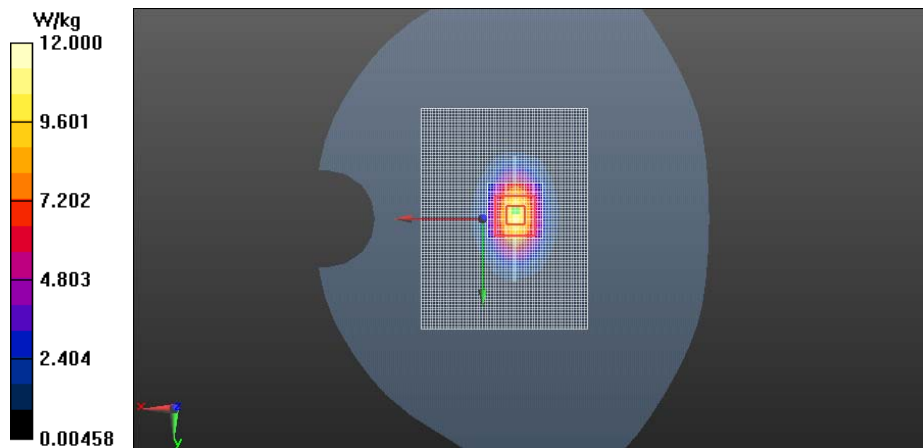
Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.83 W/kg

SAR(10 g) = 5.13 W/kg

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 11.0 W/kg



Plot 3:

Date/Time: 2013-08-29 17:29:36

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: 509

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900 SAR4; Medium Notes: Medium Temperature: t=22.1C

Medium parameters used: f = 1900 MHz; $\sigma = 1.366$ S/m; $\epsilon_r = 38.957$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.62, 7.62, 7.62); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - SAM1; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.1 W/kg

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

Reference Value = 87.271 V/m

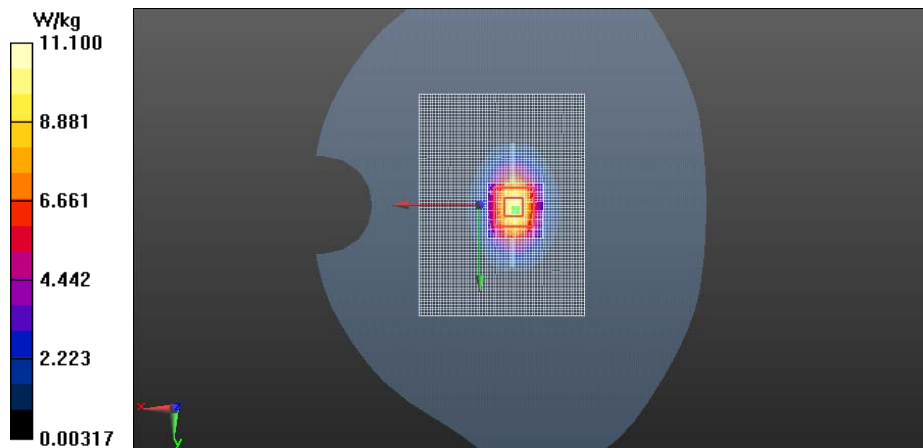
Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 9.42 W/kg

SAR(10 g) = 4.95 W/kg

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 10.5 W/kg



Plot 4:

Date/Time: 2013-08-26 11:25:06

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:883

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Head 2450 SAR4; Medium Notes: Medium Temperature: t=21.9C

Medium parameters used: f = 2450 MHz; $\sigma = 1.857$ S/m; $\epsilon_r = 37.552$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.2 W/kg

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

Reference Value = 93.807 V/m

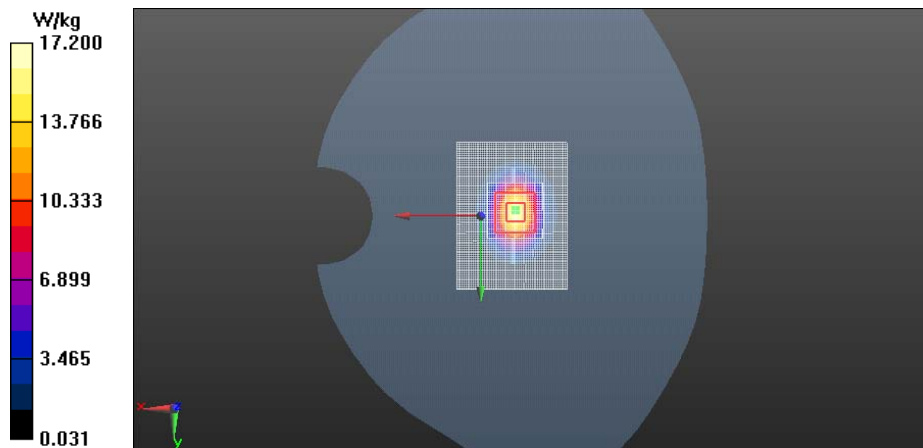
Peak SAR (extrapolated) = 31.9 W/kg

SAR(1 g) = 14.9 W/kg

SAR(10 g) = 6.81 W/kg

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 17.0 W/kg



Plot 5:

Date/Time: 2013-09-03 20:02:09

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: HSL 5000; Medium Notes: t= 21,2 C

Medium parameters used: f = 5200 MHz; $\sigma = 4.474$ S/m; $\epsilon_r = 35.622$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5200/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.8 W/kg

d=10mm, Pin=100mW 5200/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.688 V/m

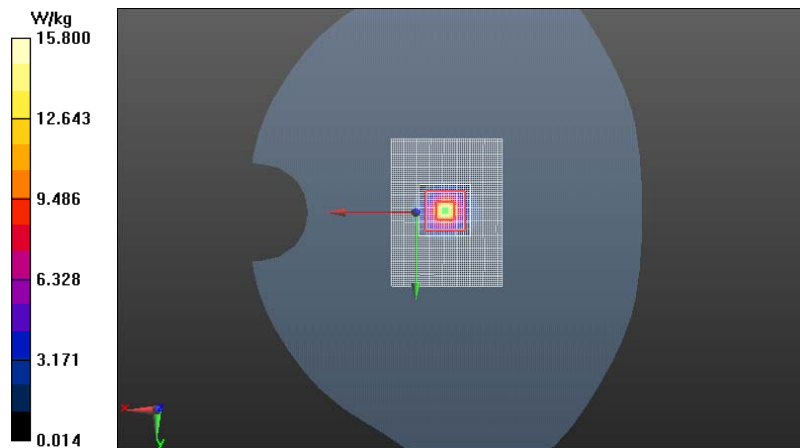
Peak SAR (extrapolated) = 29.1 W/kg

SAR(1 g) = 7.5 W/kg

SAR(10 g) = 2.15 W/kg

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 14.2 W/kg



Plot 6:

Date/Time: 2013-09-05 14:58:36

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5300

Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: t= 21,5 C

Medium parameters used: f = 5300 MHz; $\sigma = 4.632$ S/m; $\epsilon_r = 36.031$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.29, 4.29, 4.29); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

Configuration 5300/d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.4 W/kg

Configuration 5300/d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 61.105 V/m

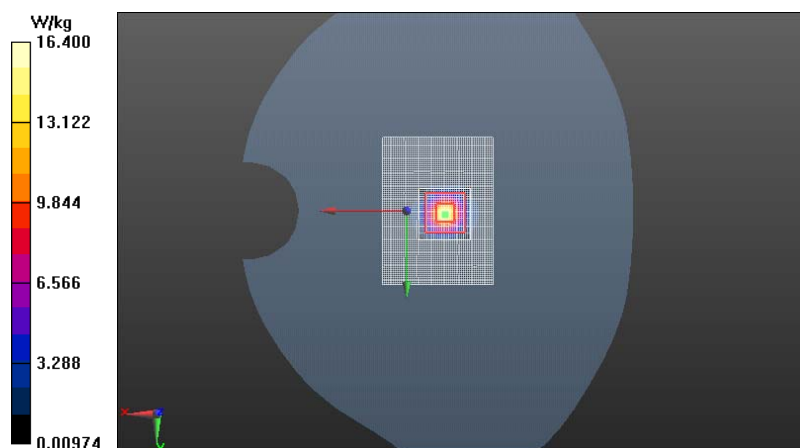
Peak SAR (extrapolated) = 33.1 W/kg

SAR(1 g) = 8.1 W/kg

SAR(10 g) = 2.27 W/kg

Power Drift = -0.10 dB

Maximum value of SAR (measured) = 15.7 W/kg



Plot 7:

Date/Time: 2013-09-05 15:35:19

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5500

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: t= 21,5 C

Medium parameters used: f = 5500 MHz; $\sigma = 4.825$ S/m; $\epsilon_r = 35.767$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.17, 4.17, 4.17); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

Configuration 5500/d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.3 W/kg

Configuration 5500/d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 61.105 V/m

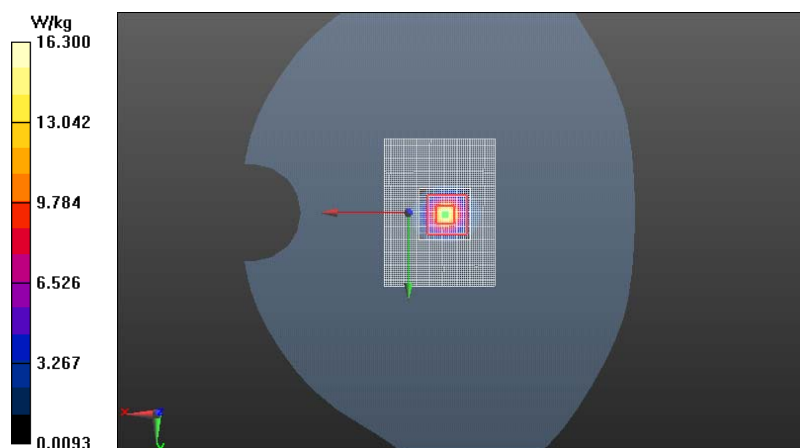
Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 7.91 W/kg

SAR(10 g) = 2.23 W/kg

Power Drift = -0.10 dB

Maximum value of SAR (measured) = 15.1 W/kg



Plot 8:

Date/Time: 2013-09-06 11:56:43

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5600

Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: t= 21,4 C

Medium parameters used: f = 5600 MHz; $\sigma = 4.882$ S/m; $\epsilon_r = 34.857$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.1, 4.1, 4.1); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.9 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 58.249 V/m

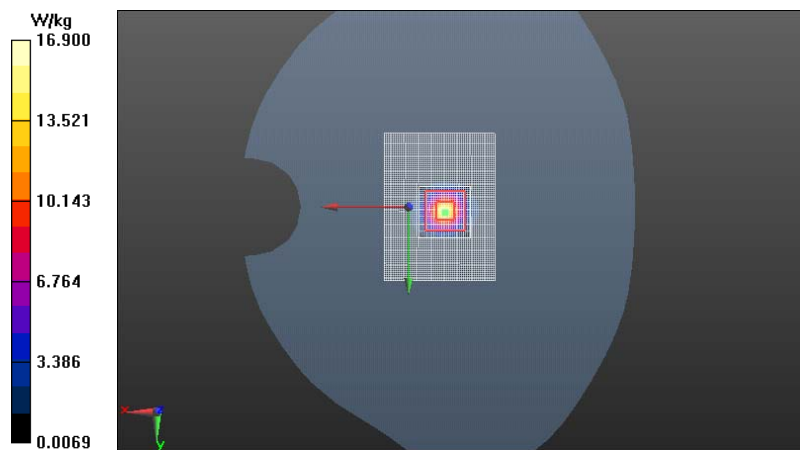
Peak SAR (extrapolated) = 34.2 W/kg

SAR(1 g) = 7.94 W/kg

SAR(10 g) = 2.23 W/kg

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 16.0 W/kg



Plot 9:

Date/Time: 2013-09-09 07:04:14

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: t= 21,9 C

Medium parameters used: f = 5800 MHz; σ = 5.056 S/m; ϵ_r = 34.393; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.0 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 55.801 V/m

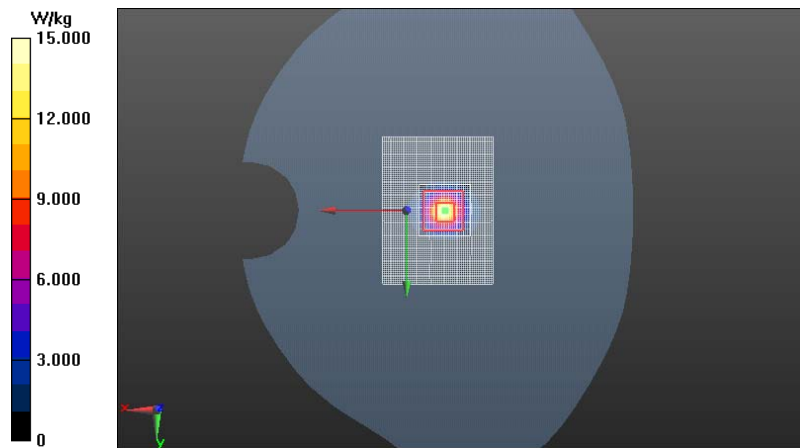
Peak SAR (extrapolated) = 32.7 W/kg

SAR(1 g) = 7.48 W/kg

SAR(10 g) = 2.11 W/kg

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 15.0 W/kg



Plot 10:

Date/Time: 2013-08-28 10:39:06

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

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 835 SAR1; Medium Notes: Medium Temperature: $t=22.1$

Medium parameters used: $f = 835$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 52.733$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=15mm, Pin=250mW/Area Scan (81x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.62 W/kg

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

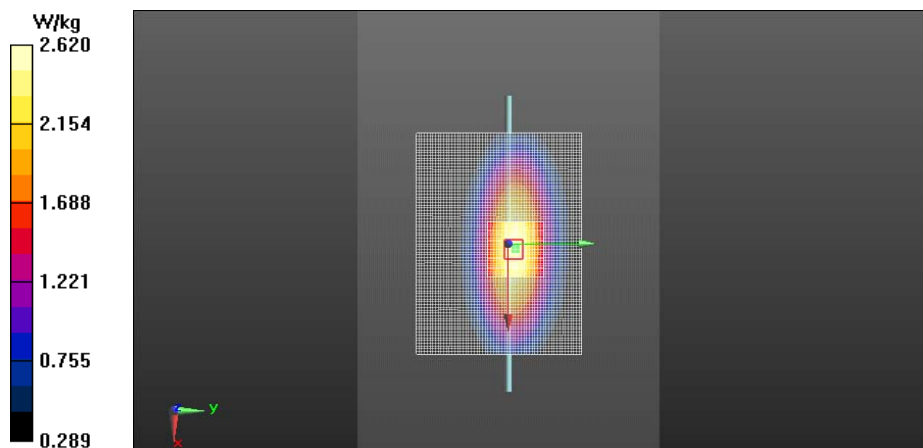
Reference Value = 51.251 V/m

Peak SAR (extrapolated) = 3.57 W/kg

SAR(1 g) = 2.44 W/kg

Maximum value of SAR (measured) = 2.62 W/kg

Power Drift = 0.01 dB



Plot 11:

Date/Time: 2013-08-28 09:59:21

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: 509

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Body 1900 SAR4; Medium Notes: Medium Temperature: t=22.1

Medium parameters used: f = 1900 MHz; $\sigma = 1.518$ S/m; $\epsilon_r = 50.779$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=250mW/Area Scan (81x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.8 W/kg

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

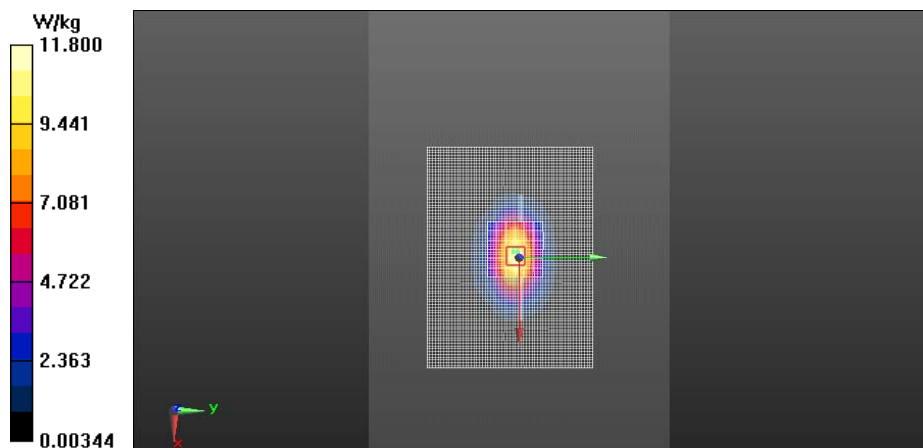
Reference Value = 86.095 V/m

Peak SAR (extrapolated) = 18.6 W/kg

SAR(1 g) = 10.2 W/kg

Maximum value of SAR (measured) = 11.5 W/kg

Power Drift = -0.03 dB



Plot 12:

Date/Time: 2013-08-27 10:10:02

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:883

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Body 2450 SAR4; Medium Notes: Medium Temperature: t=22.2C

Medium parameters used: f = 2450 MHz; σ = 1.959 S/m; ϵ_r = 50.076; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=250mW/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.2 W/kg

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

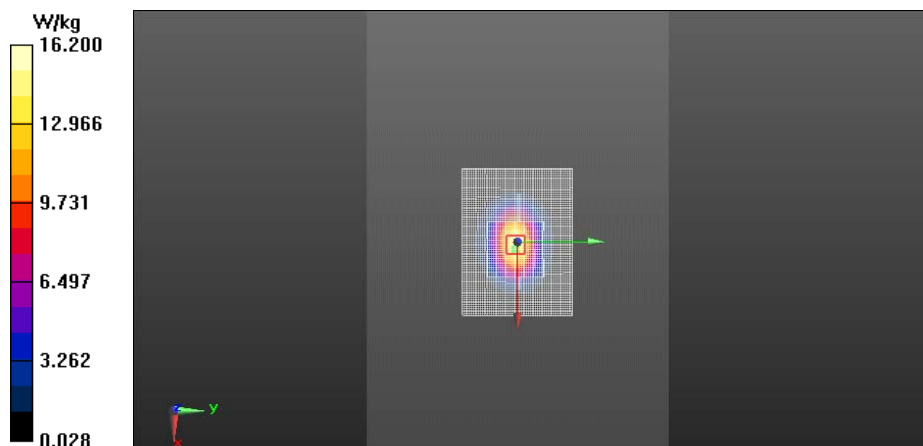
Reference Value = 89.689 V/m

Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 13.9 W/kg

Maximum value of SAR (measured) = 15.9 W/kg

Power Drift = -0.01 dB



Plot 13:

Date/Time: 2013-09-11 08:06:11

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 21.0 C

Medium parameters used: f = 5200 MHz; σ = 5.212 S/m; ϵ_r = 47.055; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.04, 4.04, 4.04); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5200/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.6 W/kg

d=10mm, Pin=100mW 5200/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.289 V/m

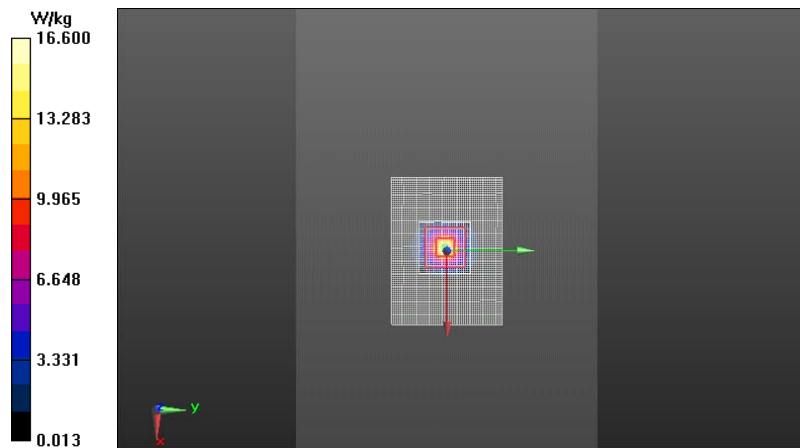
Peak SAR (extrapolated) = 32.1 W/kg

SAR(1 g) = 7.86 W/kg

SAR(10 g) = 2.21 W/kg

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 15.2 W/kg



Plot 14:

Date/Time: 2013-09-20 10:52:38

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5300

Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 21.8 C

Medium parameters used: f = 5300 MHz; σ = 5.418 S/m; ϵ_r = 46.681; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.85, 3.85, 3.85); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5300/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.7 W/kg

d=10mm, Pin=100mW 5300/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 37.878 V/m

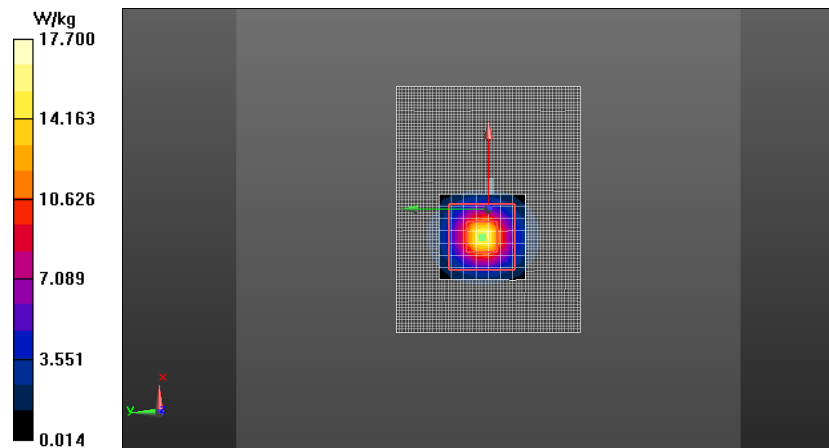
Peak SAR (extrapolated) = 32.9 W/kg

SAR(1 g) = 7.97 W/kg

SAR(10 g) = 2.23 W/kg

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 15.5 W/kg



Plot 15:

Date/Time: 2013-09-20 11:25:26

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5500

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 21.8 C

Medium parameters used: f = 5500 MHz; σ = 5.661 S/m; ϵ_r = 46.404; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.56, 3.56, 3.56); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5500/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.1 W/kg

d=10mm, Pin=100mW 5500/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 36.264 V/m

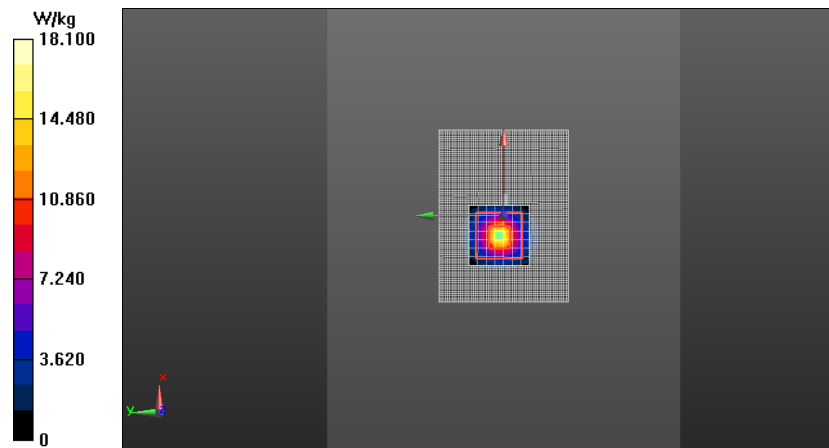
Peak SAR (extrapolated) = 33.9 W/kg

SAR(1 g) = 8.08 W/kg

SAR(10 g) = 2.24 W/kg

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 16.1 W/kg



Plot 16:

Date/Time: 2013-09-14 12:16:47

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5600

Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 21.2 C

Medium parameters used: f = 5600 MHz; σ = 5.957 S/m; ϵ_r = 46.298; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5600/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.6 W/kg

d=10mm, Pin=100mW 5600/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 36.848 V/m

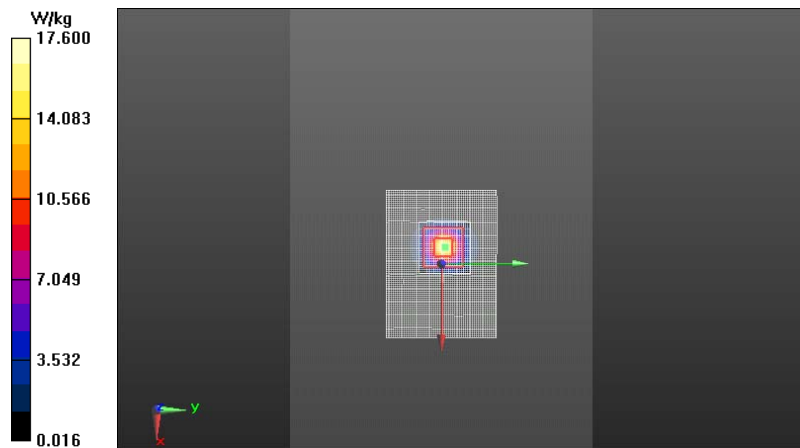
Peak SAR (extrapolated) = 34.1 W/kg

SAR(1 g) = 8.29 W/kg

SAR(10 g) = 2.31 W/kg

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 16.5 W/kg



Plot 17:

Date/Time: 2013-09-15 16:02:14

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 21.2 C

Medium parameters used: f = 5800 MHz; σ = 6.236 S/m; ϵ_r = 45.886; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.6, 3.6, 3.6); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

d=10mm, Pin=100mW 5800/Area Scan (81x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.3 W/kg

d=10mm, Pin=100mW 5800/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 27.061 V/m

Peak SAR (extrapolated) = 31.8 W/kg

SAR(1 g) = 7.44 W/kg

SAR(10 g) = 2.07 W/kg

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 15.3 W/kg



APPENDIX B: MEASUREMENT SCANS

Plot 1:

Date/Time: 2013-08-26 16:30:20

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: Head 835 SAR1; Medium Notes: Medium Temperature: t=22.0

Medium parameters used: f = 849 MHz; σ = 0.913 S/m; ϵ_r = 40.19; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

2-slot GPRS850 - Left/Cheek - High/Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.190 W/kg

2-slot GPRS850 - Left/Cheek - High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.220 V/m

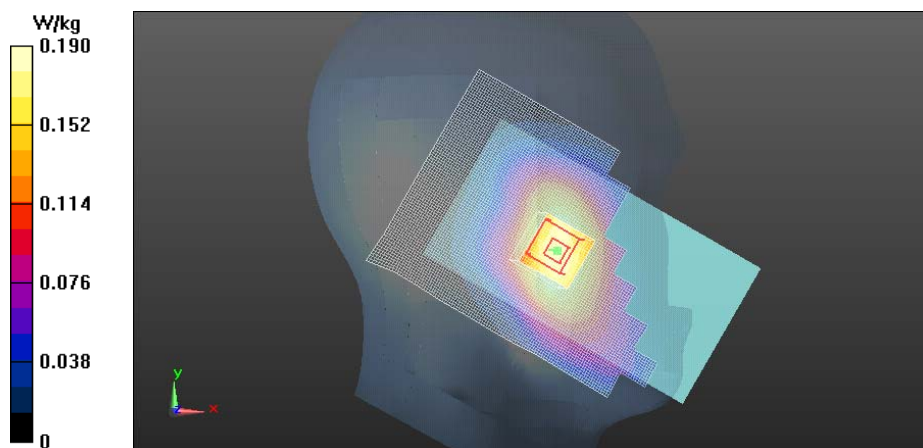
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.172 W/kg

SAR(10 g) = 0.133 W/kg

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.180 W/kg



Plot 2:

Date/Time: 2013-08-27 12:21:27

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: Head 835 SAR1; Medium Notes: Medium Temperature: $t=21.8$

Medium parameters used: $f = 847$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 40.428$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WCDMA850 (Band 5) - Left/Cheek - High/Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.213 W/kg

WCDMA850 (Band 5) - Left/Cheek - High/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 3.833 V/m

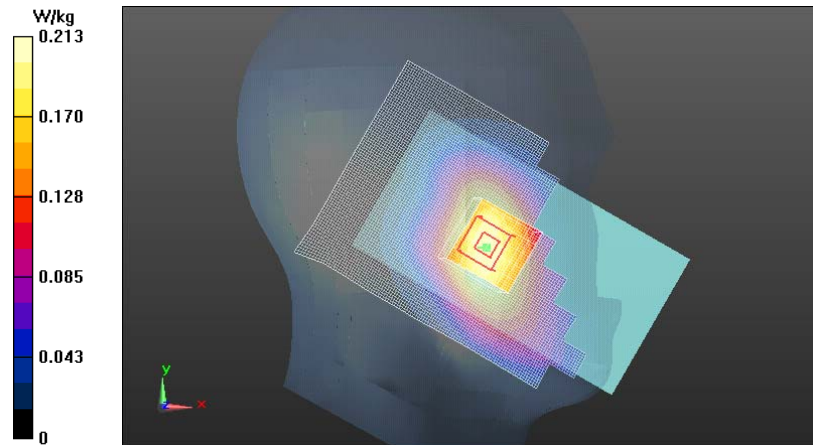
Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.193 W/kg

SAR(10 g) = 0.149 W/kg

Power Drift = 0.16 dB

Maximum value of SAR (measured) = 0.202 W/kg



Plot 3:

Date/Time: 2013-08-27 10:56:54

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.19952

Medium: Head 1900 SAR3; Medium Notes: Medium Temperature: t=20.9

Medium parameters used: f = 1880 MHz; σ = 1.38 S/m; ϵ_r = 39.623; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3195
- ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn887; Calibrated: 2013-03-07
- Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.8 (7028)

2-slot GPRS1900 - Left/Cheek - Middle/Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.127 W/kg

2-slot GPRS1900 - Left/Cheek - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.742 V/m

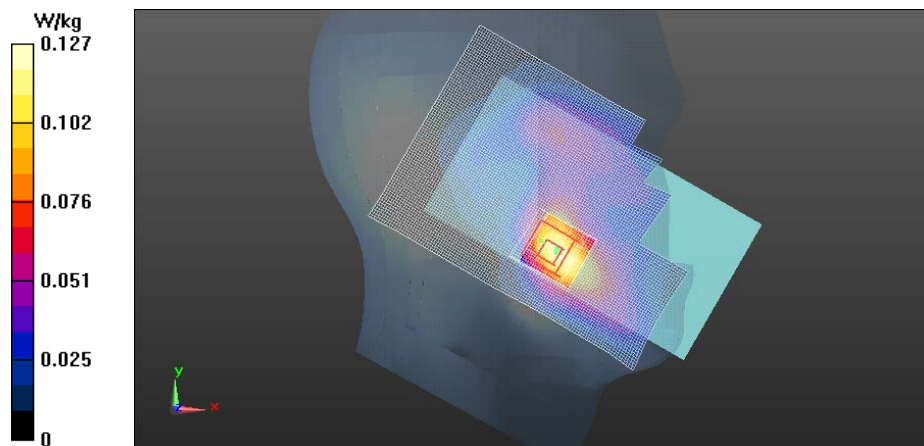
Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.114 W/kg

SAR(10 g) = 0.074 W/kg

Power Drift = -0.15 dB

Maximum value of SAR (measured) = 0.119 W/kg



Plot 4:

Date/Time: 2013-08-26 14:31:39

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900

Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: Head 1900 SAR3; Medium Notes: Medium Temperature: t=20.5

Medium parameters used: f = 1908 MHz; $\sigma = 1.364$ S/m; $\epsilon_r = 38.011$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3195
- ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn887; Calibrated: 2013-03-07
- Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.8 (7028)

WCDMA1900 (Band 2) - Left/Cheek - High/Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.234 W/kg

WCDMA1900 (Band 2) - Left/Cheek - High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.823 V/m

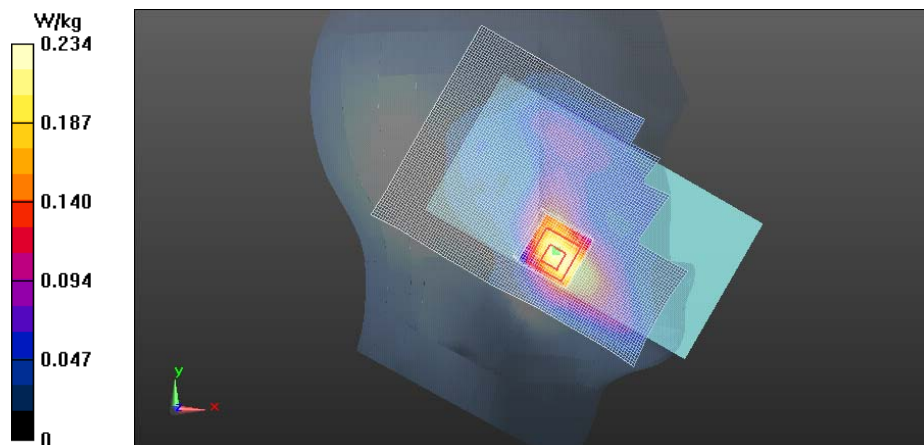
Peak SAR (extrapolated) = 0.303 W/kg

SAR(1 g) = 0.206 W/kg

SAR(10 g) = 0.130 W/kg

Power Drift = 0.19 dB

Maximum value of SAR (measured) = 0.216 W/kg



Plot 5:

Date/Time: 2013-08-26 12:38:49

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: Head 2450 SAR4; Medium Notes: Medium Temperature: t=21.9C

Medium parameters used: f = 2412 MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 37.664$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan (121x211x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.22 W/kg

WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Zoom Scan (8x8x7)/Cube 0: Measurement grid:

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

Reference Value = 18.679 V/m

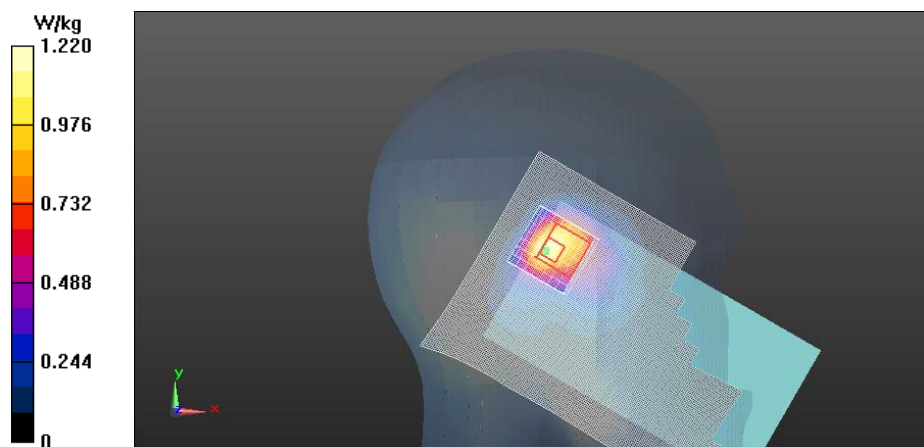
Peak SAR (extrapolated) = 2.25 W/kg

SAR(1 g) = 1.06 W/kg

SAR(10 g) = 0.552 W/kg

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 1.15 W/kg



Plot 6:

Date/Time: 2013-09-05 17:33:17

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode

Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: t= 21,5 C

Medium parameters used: f = 5180 MHz; $\sigma = 4.507$ S/m; $\epsilon_r = 36.191$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Area Scan (121x211x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.67 W/kg

WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Zoom Scan (8x10x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 15.179 V/m

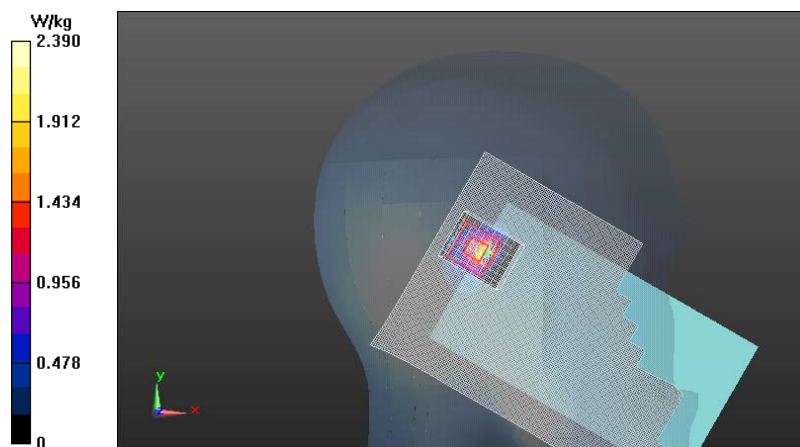
Peak SAR (extrapolated) = 4.62 W/kg

SAR(1 g) = 1.13 W/kg

SAR(10 g) = 0.301 W/kg

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 2.39 W/kg



Plot 7:

Date/Time: 2013-08-26 16:30:20

DASY Configuration for 2-slot GPRS850 - Left/Cheek - High/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Head 835 SAR1 Medium parameters used: $f = 849$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 40.19$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3836; ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-26 12:38:49

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1

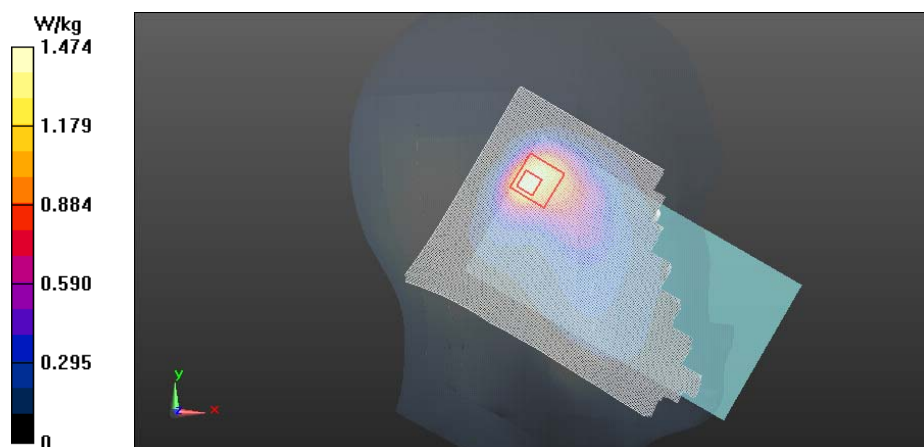
Medium: Head 2450 SAR4 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 37.664$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3823; ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.677 W/kg

Maximum value of SAR (interpolated) = 1.47 W/kg



Note: 2-slot GPRS850 result was scaled by a factor of 1.01 and WLAN2450 result was scaled by a factor of 1.19 before combining.

Plot 8:

Date/Time: 2013-08-27 12:21:27

DASY Configuration for WCDMA850 (Band 5) - Left/Cheek - High/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850; Frequency: 846.6 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Head 835 SAR1 Medium parameters used: $f = 847$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 40.428$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3836; ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-26 12:38:49

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1

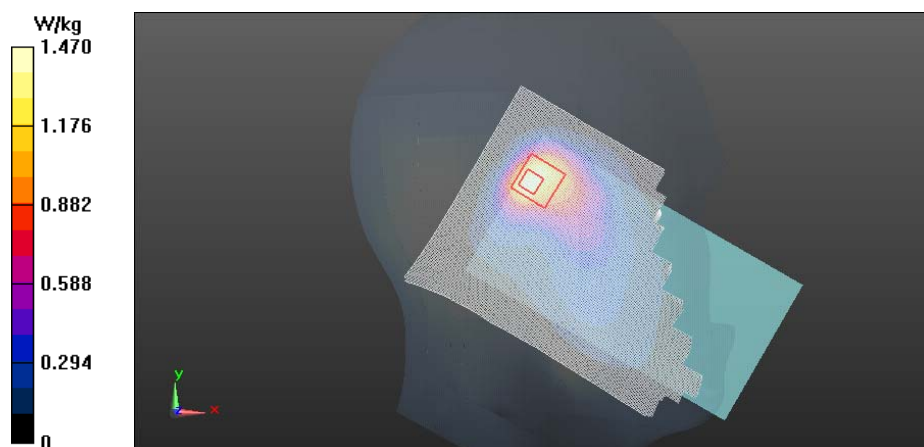
Medium: Head 2450 SAR4 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 37.664$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3823; ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.674 W/kg

Maximum value of SAR (interpolated) = 1.47 W/kg



Note: WCDMA850 result was scaled by a factor of 1.00 and WLAN2450 result was scaled by a factor of 1.19 before combining.

Plot 9:

Date/Time: 2013-08-27 10:56:54

DASY Configuration for 2-slot GPRS1900 - Left/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Head 1900 SAR3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ S/m; $\epsilon_r = 39.623$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3195; ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn887; Calibrated: 2013-03-07

Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified

Measurement SW: DASY52, Version 52.8 (7)

Date/Time: 2013-08-26 12:38:49

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Head 2450 SAR4 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 37.664$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3823; ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;

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

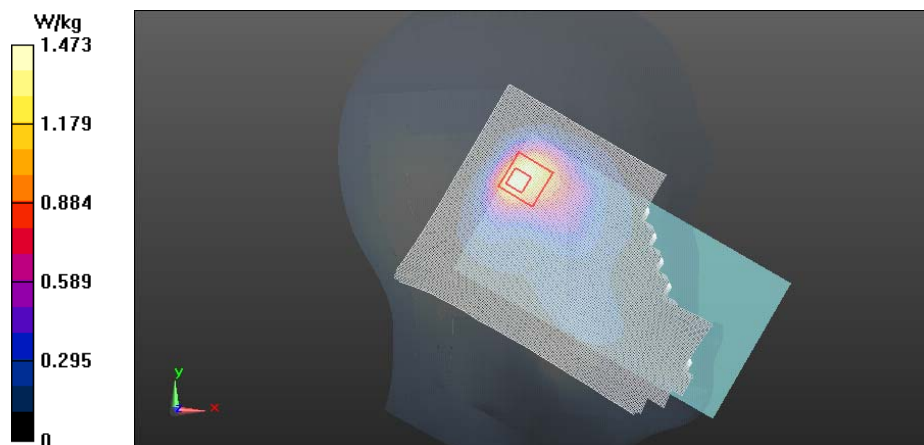
Electronics: DAE4 Sn705; Calibrated: 2012-12-04

Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified

Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.669 W/kg

Maximum value of SAR (interpolated) = 1.47 W/kg



Note: 2-slot GPRS1900 result was scaled by a factor of 1.07 and WLAN2450 result was scaled by a factor of 1.19 before combining.

Plot 10:

Date/Time: 2013-08-26 14:31:39

DASY Configuration for WCDMA1900 (Band 2) - Left/Cheek - High/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900 (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Head 1900 SAR3 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.364$ S/m; $\epsilon_r = 38.011$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3195; ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn887; Calibrated: 2013-03-07
Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (7)

Date/Time: 2013-08-26 12:38:49

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1

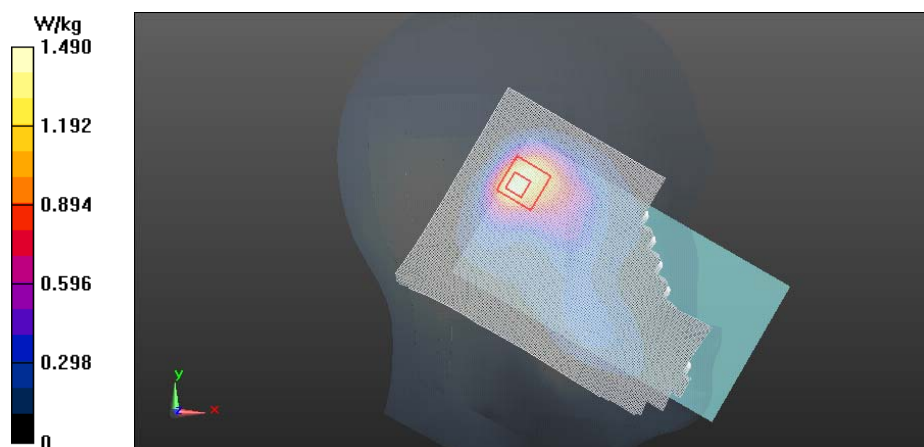
Medium: Head 2450 SAR4 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 37.664$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3823; ConvF(6.91, 6.91, 6.91); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - SAM3; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.677 W/kg

Maximum value of SAR (interpolated) = 1.49 W/kg



Note: WCDMA1900 result was scaled by a factor of 1.07 and WLAN2450 result was scaled by a factor of 1.19 before combining.

Plot 11:

Date/Time: 2013-08-26 13:18:34

DASY Configuration for 2-slot GPRS850 - Left/Tilt- Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Head 835 SAR1 Medium parameters used: $f = 837$ MHz; $\sigma = 0.902$ S/m; $\epsilon_r = 40.332$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3836; ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-05 17:33:17

DASY Configuration for WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5180 MHz; Duty Cycle: 1:1; PMF: 1

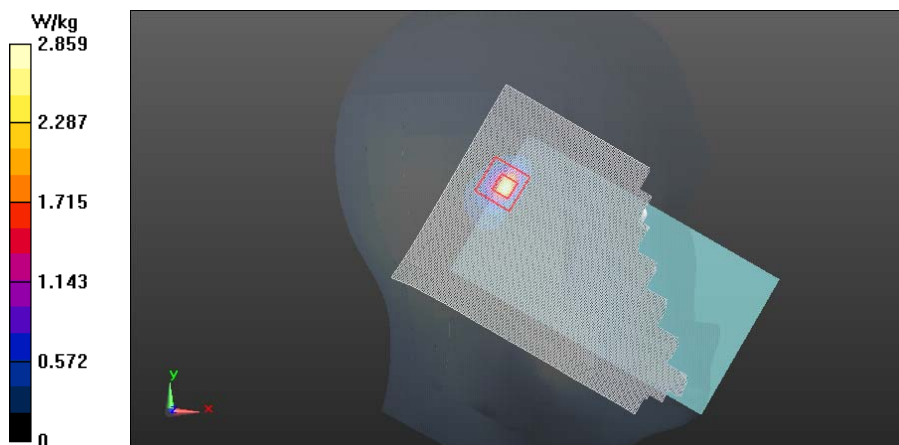
Medium: HSL5000 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.507$ S/m; $\epsilon_r = 36.191$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.325 W/kg

Maximum value of SAR (interpolated) = 2.86 W/kg



Note: 2-slot GPRS850 result was scaled by a factor of 1.01 and WLAN5000 result was scaled by a factor of 1.12 before combining.

Plot 12:

Date/Time: 2013-08-27 10:33:52

DASY Configuration for WCDMA850 (Band 5) - Left/Tilt- Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850; Frequency: 835 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Head 835 SAR1 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.901 \text{ S/m}$; $\epsilon_r = 40.569$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Probe: EX3DV4 - SN3836; ConvF(9.03, 9.03, 9.03); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - SAM1; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-05 17:33:17

DASY Configuration for WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5180 MHz; Duty Cycle: 1:1; PMF: 1

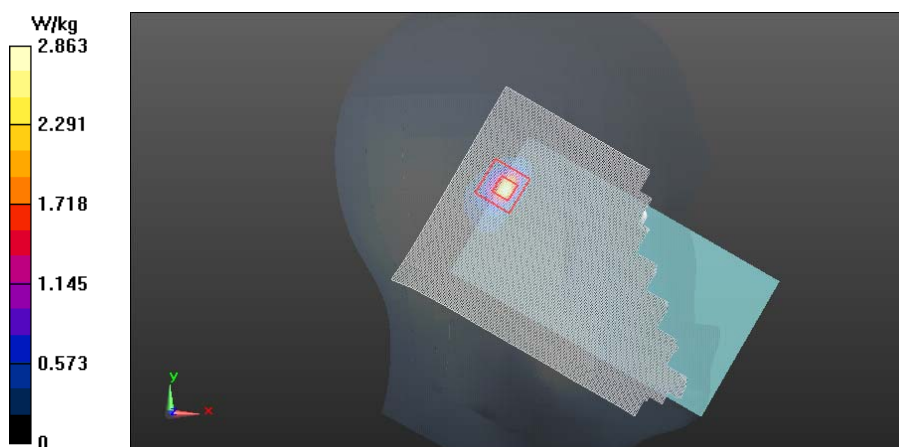
Medium: HSL5000 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.507 \text{ S/m}$; $\epsilon_r = 36.191$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.328 W/kg

Maximum value of SAR (interpolated) = 2.86 W/kg



Note: WCDMA850 result was scaled by a factor of 1.02 and WLAN5000 result was scaled by a factor of 1.12 before combining.

Plot 13:

Date/Time: 2013-08-27 11:57:42

DASY Configuration for 2-slot GPRS1900 - Left/Tilt- Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Head 1900 SAR3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.38$ S/m; $\epsilon_r = 39.623$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3195; ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn887; Calibrated: 2013-03-07
Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (7)

Date/Time: 2013-09-05 17:33:17

DASY Configuration for WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5180 MHz; Duty Cycle: 1:1; PMF: 1

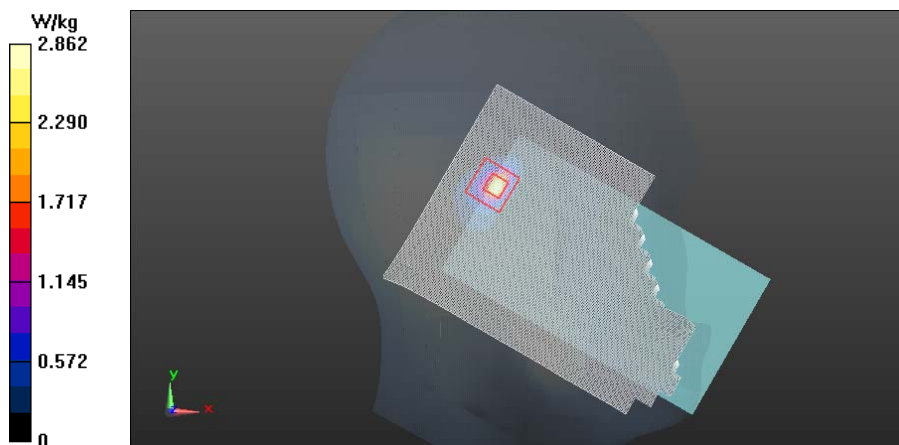
Medium: HSL5000 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.507$ S/m; $\epsilon_r = 36.191$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.325 W/kg

Maximum value of SAR (interpolated) = 2.86 W/kg



Note: 2-slot GPRS1900 result was scaled by a factor of 1.07 and WLAN5000 result was scaled by a factor of 1.12 before combining.

Plot 14:

Date/Time: 2013-08-26 11:10:19

DASY Configuration for WCDMA1900 (Band 2) - Left/Tilt- Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900; Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Head 1900 SAR3 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.338$ S/m; $\epsilon_r = 38.118$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3195; ConvF(5.14, 5.14, 5.14); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn887; Calibrated: 2013-03-07
Phantom: SAR3 - SAM2 ; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (7)

Date/Time: 2013-09-05 17:33:17

DASY Configuration for WLAN5000 a-mode - Left/Tilt - Middle - Channel 36 - OFDM 6 Mbps/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5180 MHz; Duty Cycle: 1:1; PMF: 1

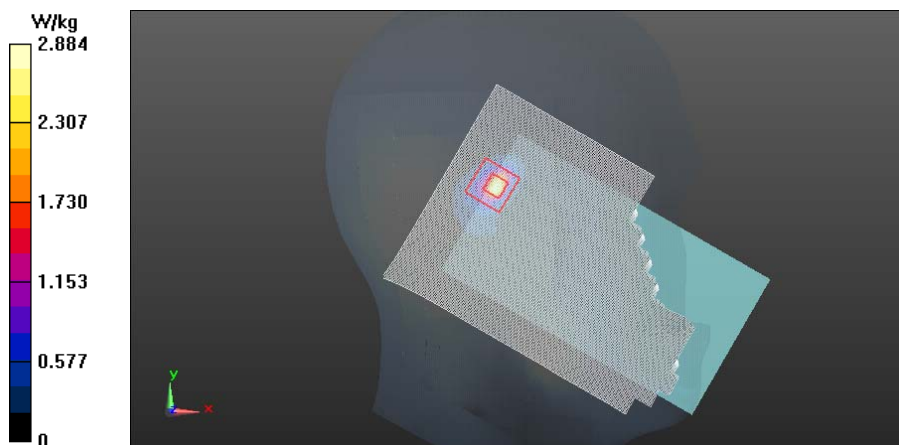
Medium: HSL5000 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.507$ S/m; $\epsilon_r = 36.191$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.337 W/kg

Maximum value of SAR (interpolated) = 2.88 W/kg



Note: WCDMA1900 result was scaled by a factor of 1.05 and WLAN5000 result was scaled by a factor of 1.12 before combining.

Plot 15:

Date/Time: 2013-08-28 14:01:21

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: Body 835 SAR1; Medium Notes: Medium Temperature: t=22.1

Medium parameters used: f = 849 MHz; $\sigma = 0.98$ S/m; $\epsilon_r = 52.619$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

2-slot GPRS850/Body - High - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x141x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.149 W/kg

2-slot GPRS850/Body - High - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

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

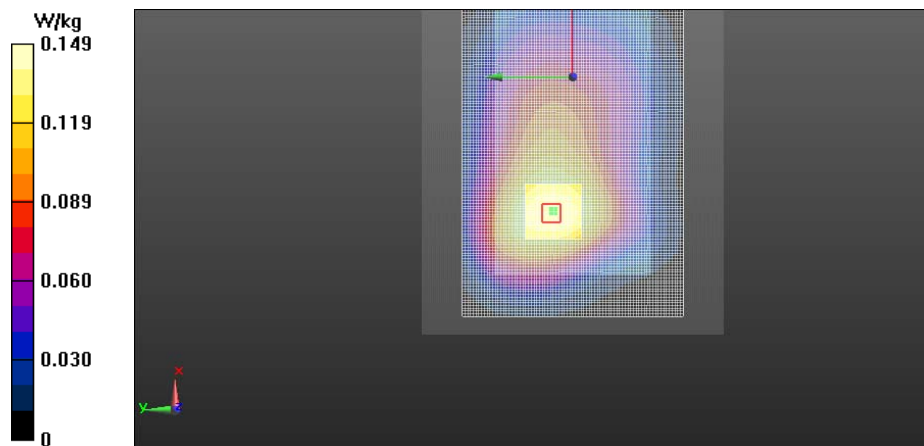
Reference Value = 8.905 V/m

Peak SAR (extrapolated) = 0.192 W/kg

SAR(1 g) = 0.143 W/kg

Maximum value of SAR (measured) = 0.150 W/kg

Power Drift = -0.05 dB



Plot 16:

Date/Time: 2013-08-28 20:12:15

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: Body 835 SAR1; Medium Notes: Medium Temperature: $t=22.1$

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.959$ S/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WCDMA850 (Band 5)/Body - Low - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x141x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.179 W/kg

WCDMA850 (Band 5)/Body - Low - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube

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

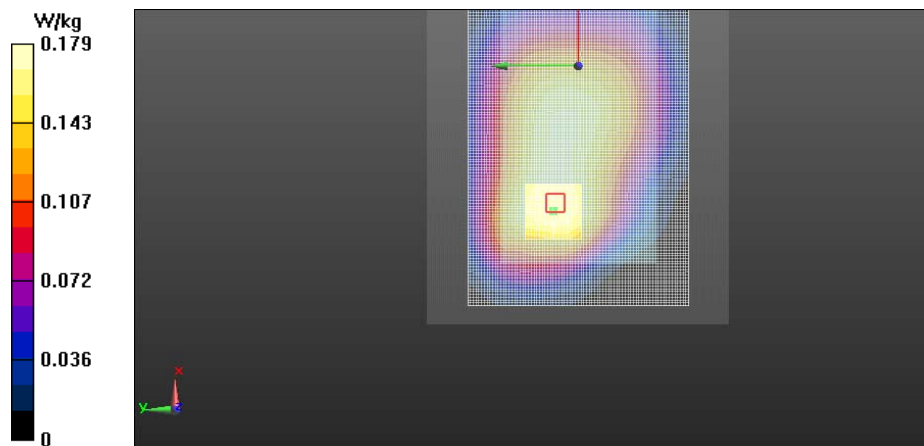
Reference Value = 12.050 V/m

Peak SAR (extrapolated) = 0.230 W/kg

SAR(1 g) = 0.173 W/kg

Maximum value of SAR (measured) = 0.180 W/kg

Power Drift = -0.02 dB



Plot 17:

Date/Time: 2013-08-28 20:44:55

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.19952

Medium: Body 1900 SAR4; Medium Notes: Medium Temperature: t=22.1

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.47 S/m; ϵ_r = 50.983; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

2-slot GPRS1900/Body - Low - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (81x141x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.191 W/kg

2-slot GPRS1900/Body - Low - Spacer 15mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

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

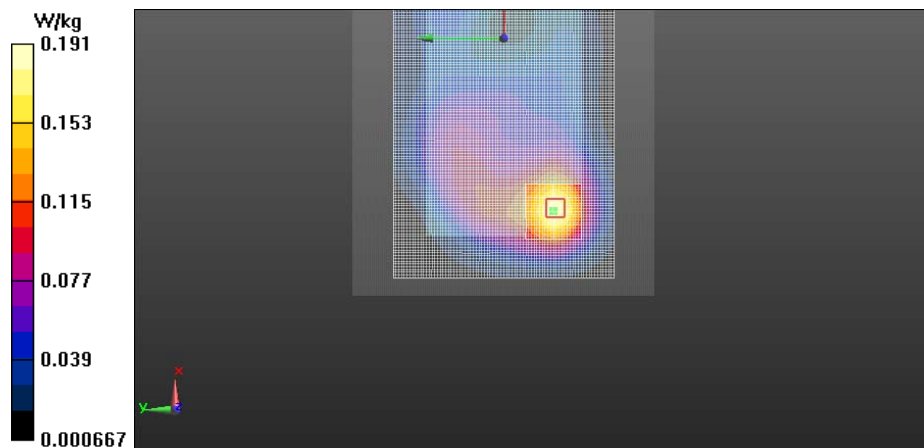
Reference Value = 5.238 V/m

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.171 W/kg

Maximum value of SAR (measured) = 0.183 W/kg

Power Drift = -0.09 dB



Plot 18:

Date/Time: 2013-08-28 11:42:49

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: Body 1900 SAR4; Medium Notes: Medium Temperature: t=22.1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.472$ S/m; $\epsilon_r = 50.971$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WCDMA1900 (Band 2)/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom 2/Area Scan (81x141x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.358 W/kg

WCDMA1900 (Band 2)/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom 2/Zoom Scan (5x5x7)/Cube

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

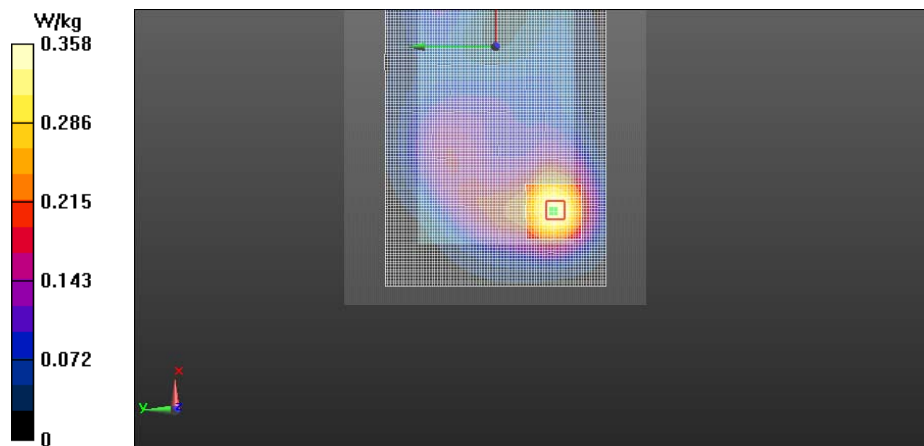
Reference Value = 15.012 V/m

Peak SAR (extrapolated) = 0.537 W/kg

SAR(1 g) = 0.331 W/kg

Maximum value of SAR (measured) = 0.361 W/kg

Power Drift = 0.07 dB



Plot 19:

Date/Time: 2013-08-27 13:36:35

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: Body 2450 SAR4; Medium Notes: Medium Temperature: t=22.2C

Medium parameters used: f = 2462 MHz; $\sigma = 1.974$ S/m; $\epsilon_r = 50.059$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN2450 b-mode/Body - Channel 11 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area

Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.121 W/kg

WLAN2450 b-mode/Body - Channel 11 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom

Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

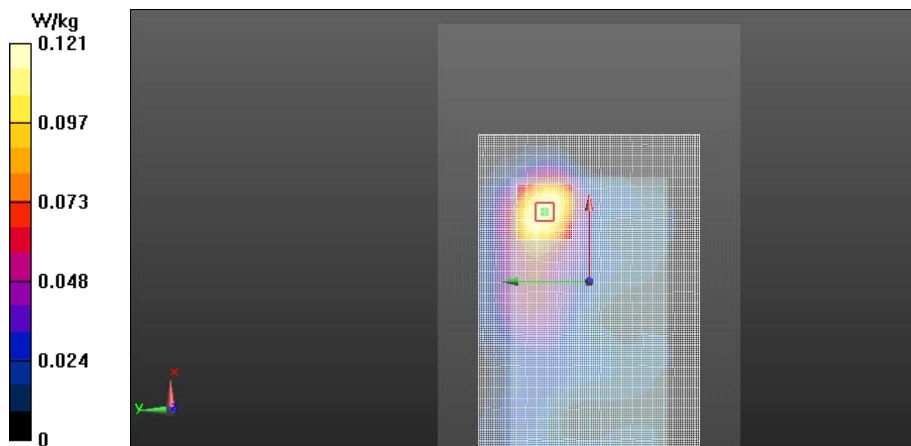
Reference Value = 3.536 V/m

Peak SAR (extrapolated) = 0.200 W/kg

SAR(1 g) = 0.114 W/kg

Maximum value of SAR (measured) = 0.125 W/kg

Power Drift = -0.02 dB



Plot 20:

Date/Time: 2013-09-13 07:04:55

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode

Frequency: 5560 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 20.9 C

Medium parameters used: f = 5560 MHz; σ = 5.756 S/m; ϵ_r = 46.208; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.353 W/kg

WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (9x10x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.342 V/m

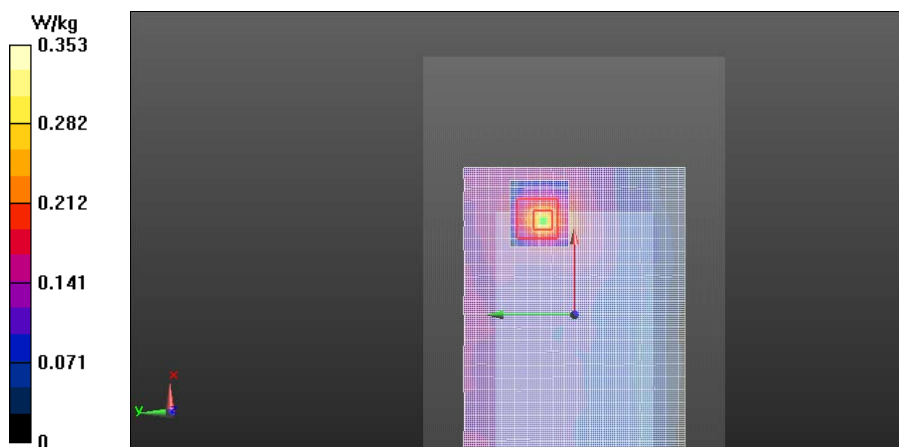
Peak SAR (extrapolated) = 0.521 W/kg

SAR(1 g) = 0.159 W/kg

SAR(10 g) = 0.070 W/kg

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.283 W/kg



Plot 21:

Date/Time: 2013-08-28 11:36:24

DASY Configuration for 2-slot GPRS850/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 835 SAR1 Medium parameters used: $f = 837$ MHz; $\sigma = 0.969$ S/m; $\epsilon_r = 52.722$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 13:36:35

DASY Configuration for WLAN2450 b-mode/Body - Channel 11 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2462 MHz; Duty Cycle: 1:1; PMF: 1

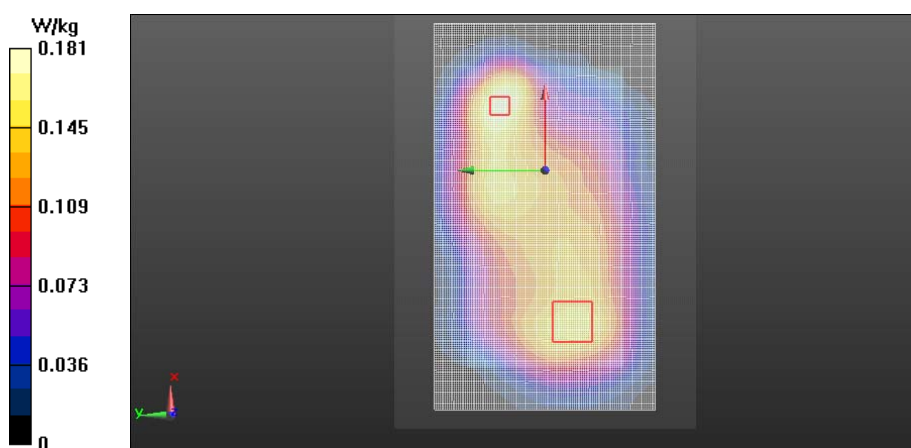
Medium: Body 2450 SAR4 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.974$ S/m; $\epsilon_r = 50.059$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (interpolated) = 0.181 W/kg



Note: 2-slot GPRS850 result was scaled by a factor of 1.01 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 22:

Date/Time: 2013-08-28 20:12:15

DASY Configuration for WCDMA850 (Band 5)/Body - Low - Spacer 15mm - WH-208 - Display Facing

Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850; Frequency: 826.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 835 SAR1 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.959$ S/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 12:34:09

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

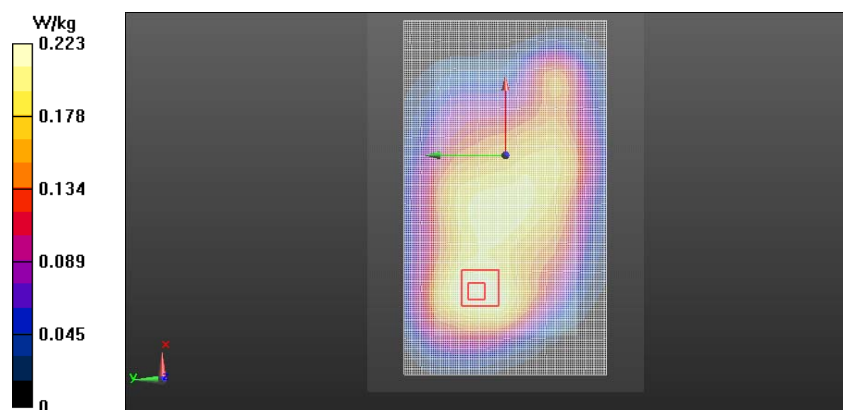
Medium: Body 2450 SAR4 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.145 W/kg

Maximum value of SAR (interpolated) = 0.223 W/kg



Note: WCDMA850 result was scaled by a factor of 1.03 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 23:

Date/Time: 2013-08-28 20:19:17

DASY Configuration for 2-slot GPRS1900/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 1900 SAR4 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ S/m; $\epsilon_r = 50.868$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 13:36:35

DASY Configuration for WLAN2450 b-mode/Body - Channel 11 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2462 MHz; Duty Cycle: 1:1; PMF: 1

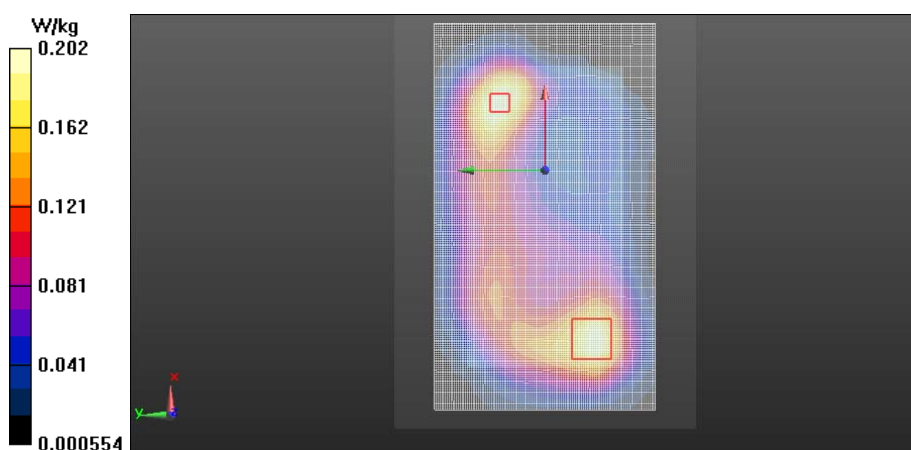
Medium: Body 2450 SAR4 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.974$ S/m; $\epsilon_r = 50.059$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.107 W/kg

Maximum value of SAR (interpolated) = 0.202 W/kg



Note: 2-slot GPRS1900 result was scaled by a factor of 1.04 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 24:

Date/Time: 2013-08-28 11:42:49

DASY Configuration for WCDMA1900 (Band 2)/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom 2/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 1900 SAR4 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.472$ S/m; $\epsilon_r = 50.971$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 13:36:35

DASY Configuration for WLAN2450 b-mode/Body - Channel 11 - DSSS 1 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2462 MHz; Duty Cycle: 1:1; PMF: 1

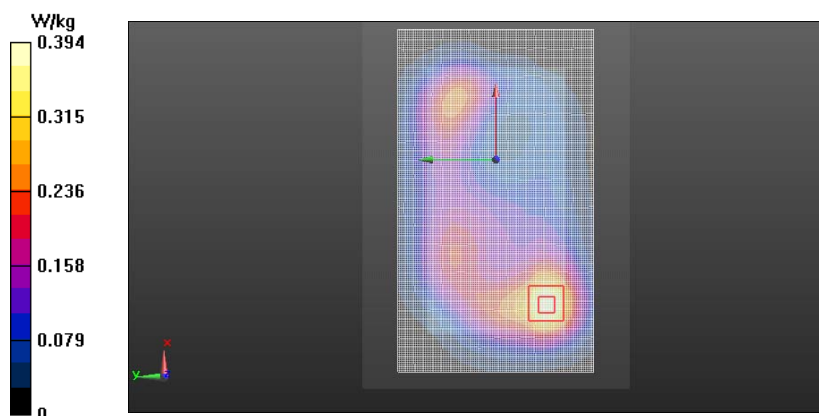
Medium: Body 2450 SAR4 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.974$ S/m; $\epsilon_r = 50.059$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.216 W/kg

Maximum value of SAR (interpolated) = 0.394 W/kg



Note: WCDMA1900 result was scaled by a factor of 1.07 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 25:

Date/Time: 2013-08-28 11:36:24

DASY Configuration for 2-slot GPRS850/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 835 SAR1 Medium parameters used: $f = 837$ MHz; $\sigma = 0.969$ S/m; $\epsilon_r = 52.722$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-13 07:04:55

DASY Configuration for WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5560 MHz; Duty Cycle: 1:1; PMF: 1

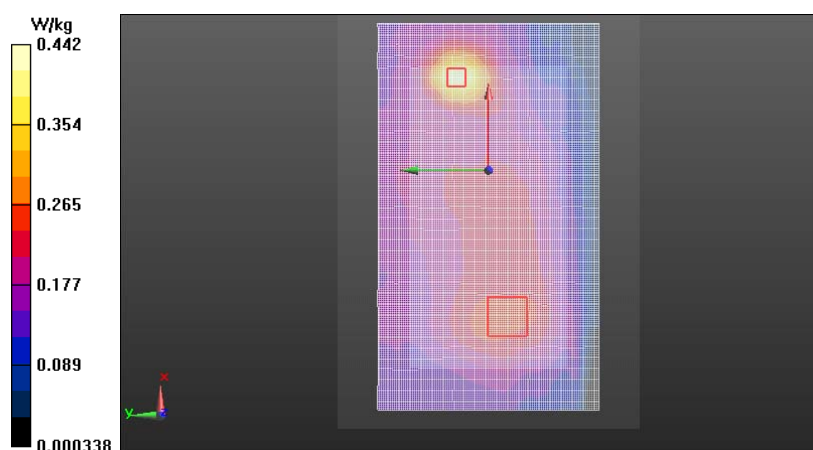
Medium: BSL5000 Medium parameters used: $f = 5560$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 46.208$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: xxxx
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.244 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (interpolated) = 0.442 W/kg



Note: 2-slot GPRS850 result was scaled by a factor of 1.01 and WLAN5000 result was scaled by a factor of 1.21 before combining.

Plot 26:

Date/Time: 2013-08-28 19:28:42

DASY Configuration for WCDMA850 (Band 5)/Body - Middle - Spacer 15mm - WH-208 - Back Facing

Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850; Frequency: 835 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 835 SAR1 Medium parameters used: $f = 835$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 52.733$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-13 07:04:55

DASY Configuration for WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5560 MHz; Duty Cycle: 1:1; PMF: 1

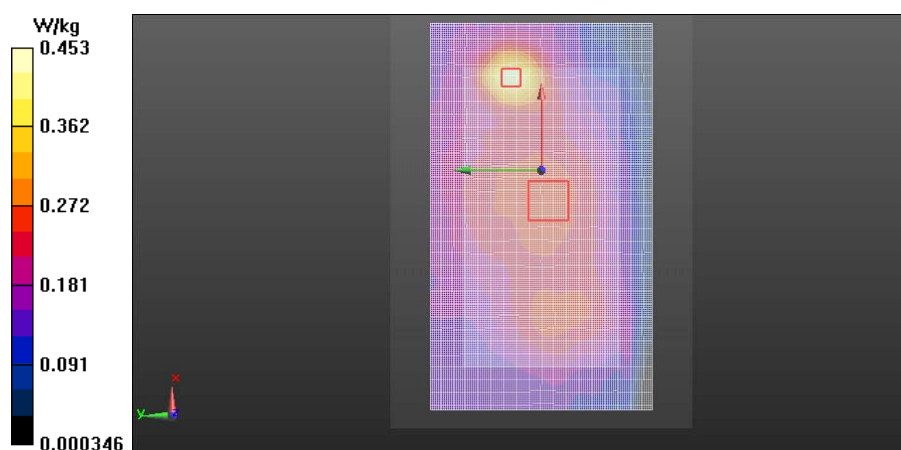
Medium: BSL5000 Medium parameters used: $f = 5560$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 46.208$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.132 W/kg

Maximum value of SAR (interpolated) = 0.453 W/kg



Note: WCDMA850 result was scaled by a factor of 1.02 and WLAN5000 result was scaled by a factor of 1.21 before combining.

Plot 27:

Date/Time: 2013-08-28 20:19:17

DASY Configuration for 2-slot GPRS1900/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 1900 SAR4 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.499$ S/m; $\epsilon_r = 50.868$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-13 07:04:55

DASY Configuration for WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5560 MHz; Duty Cycle: 1:1; PMF: 1

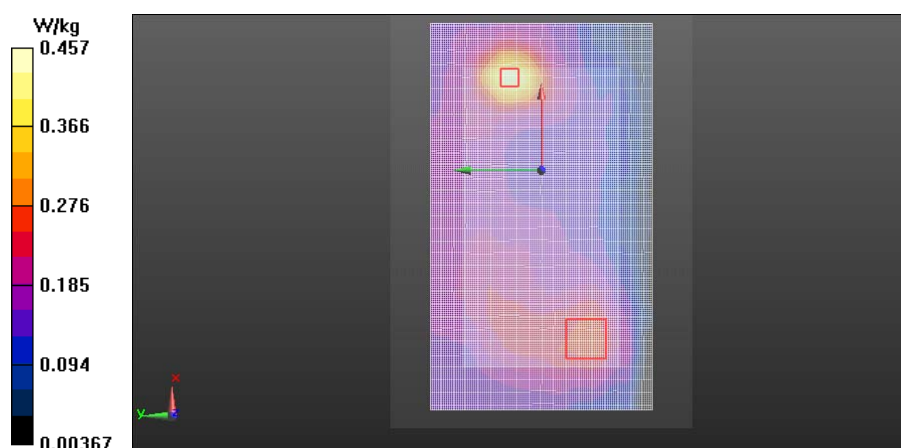
Medium: BSL5000 Medium parameters used: $f = 5560$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 46.208$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.257 W/kg; SAR(10 g) = 0.124 W/kg

Maximum value of SAR (interpolated) = 0.457 W/kg



Note: 2-slot GPRS1900 result was scaled by a factor of 1.04 and WLAN5000 result was scaled by a factor of 1.21 before combining.

Plot 28:

Date/Time: 2013-08-28 11:42:49

DASY Configuration for WCDMA1900 (Band 2)/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom 2/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 1900 SAR4 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.472$ S/m; $\epsilon_r = 50.971$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-09-13 07:04:55

DASY Configuration for WLAN5000 a-mode/Body - Channel 112 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode; Frequency: 5560 MHz; Duty Cycle: 1:1; PMF: 1

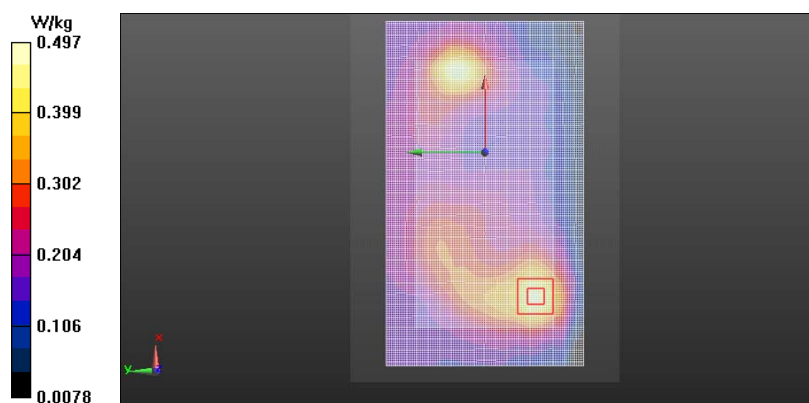
Medium: BSL5000 Medium parameters used: $f = 5560$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 46.208$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(3.38, 3.38, 3.38); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.403 W/kg; SAR(10 g) = 0.233 W/kg

Maximum value of SAR (interpolated) = 0.497 W/kg



Note: WCDMA1900 result was scaled by a factor of 1.05 and WLAN5000 result was scaled by a factor of 1.21 before combining.

Plot 29:

Date/Time: 2013-08-28 16:10:24

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: Body 835 SAR1; Medium Notes: Medium Temperature: t=22.1

Medium parameters used: f = 849 MHz; $\sigma = 0.98$ S/m; $\epsilon_r = 52.619$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

GSM850/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x141x1): Interpolated
grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.261 W/kg

GSM850/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

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

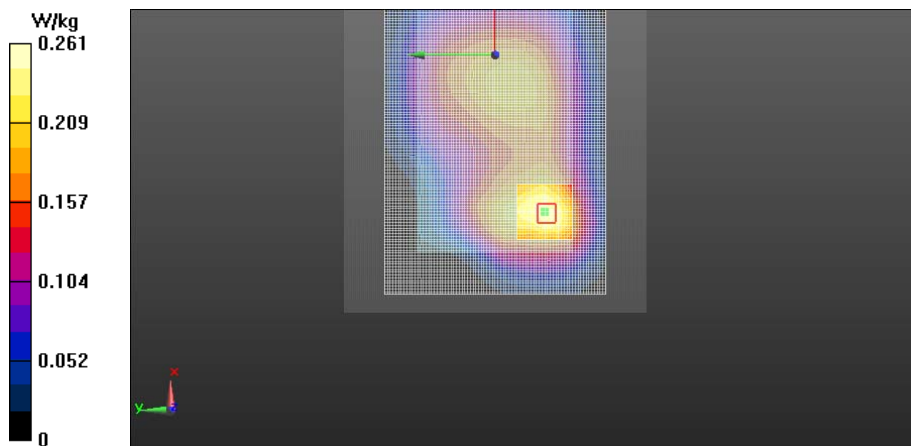
Reference Value = 13.833 V/m

Peak SAR (extrapolated) = 0.373 W/kg

SAR(1 g) = 0.239 W/kg

Maximum value of SAR (measured) = 0.258 W/kg

Power Drift = 0.02 dB



Plot 30:

Date/Time: 2013-08-30 14:32:10

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850

Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: Body 835 SAR1; Medium Notes: Medium Temperature: t=22.5

Medium parameters used: f = 847 MHz; $\sigma = 0.974$ S/m; $\epsilon_r = 54.957$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3836
- ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2013-03-08
- Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WCDMA850 (Band 5)/Body - High - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan

(81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.323 W/kg

WCDMA850 (Band 5)/Body - High - Spacer 10mm - No Headset - Display Facing Phantom/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

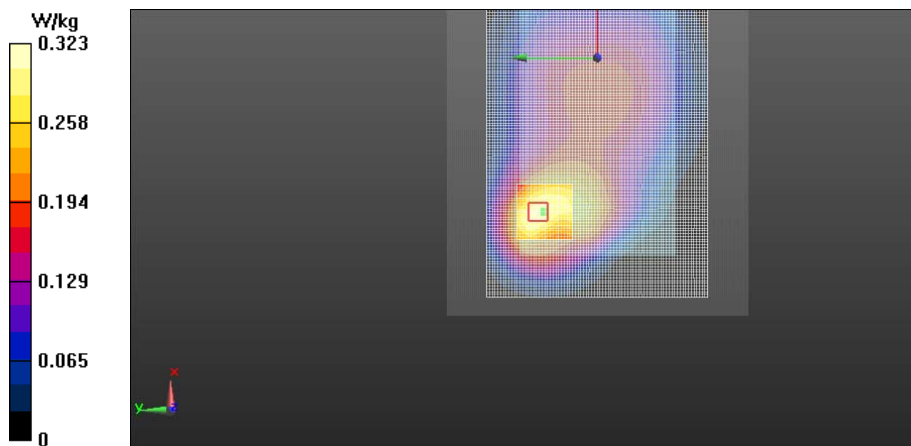
Reference Value = 13.433 V/m

Peak SAR (extrapolated) = 0.484 W/kg

SAR(1 g) = 0.296 W/kg

Maximum value of SAR (measured) = 0.315 W/kg

Power Drift = -0.05 dB



Plot 31:

Date/Time: 2013-08-30 14:28:49

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:4.19952

Medium: Body 1900 SAR4; Medium Notes: Medium Temperature: t=22.2

Medium parameters used: f = 1910 MHz; σ = 1.551 S/m; ϵ_r = 50.702; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

2-slot GPRS1900/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x141x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.394 W/kg

2-slot GPRS1900/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

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

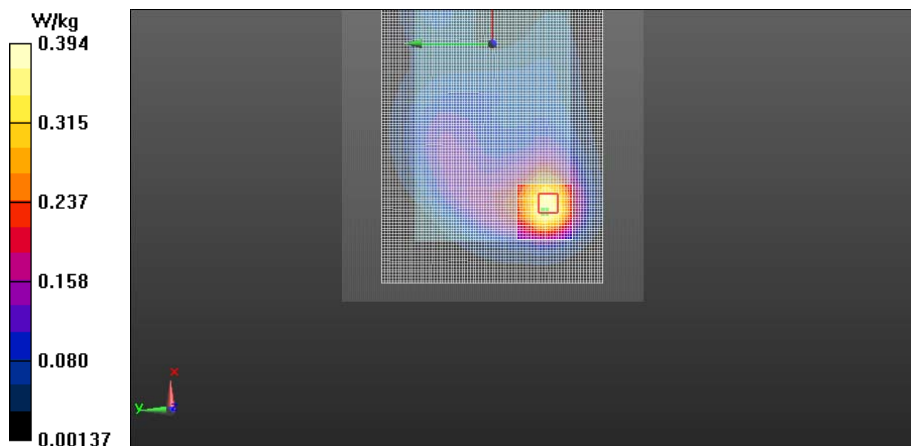
Reference Value = 3.868 V/m

Peak SAR (extrapolated) = 0.591 W/kg

SAR(1 g) = 0.350 W/kg

Maximum value of SAR (measured) = 0.376 W/kg

Power Drift = -0.02 dB



Plot 32:

Date/Time: 2013-08-28 17:04:38

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: Body 1900 SAR4; Medium Notes: Medium Temperature: t=22.1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.472$ S/m; $\epsilon_r = 50.971$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WCDMA1900 (Band 2)/Body - Low - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan

(81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.591 W/kg

WCDMA1900 (Band 2)/Body - Low - Spacer 10mm - No Headset - Display Facing Phantom/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

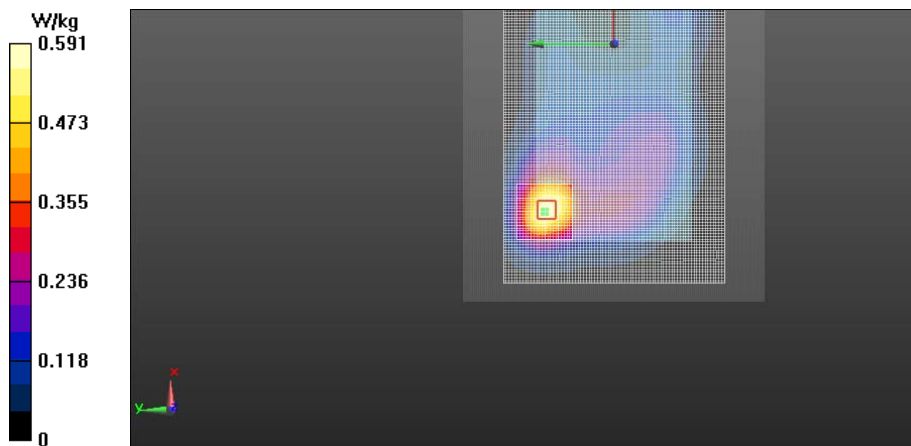
Reference Value = 5.004 V/m

Peak SAR (extrapolated) = 0.929 W/kg

SAR(1 g) = 0.549 W/kg

Maximum value of SAR (measured) = 0.608 W/kg

Power Drift = 0.19 dB



Plot 33:

Date/Time: 2013-08-27 14:09:02

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: Body 2450 SAR4; Medium Notes: Medium Temperature: t=22.2C

Medium parameters used: f = 2437 MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3823
- ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn705; Calibrated: 2012-12-04
- Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.217 W/kg

WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

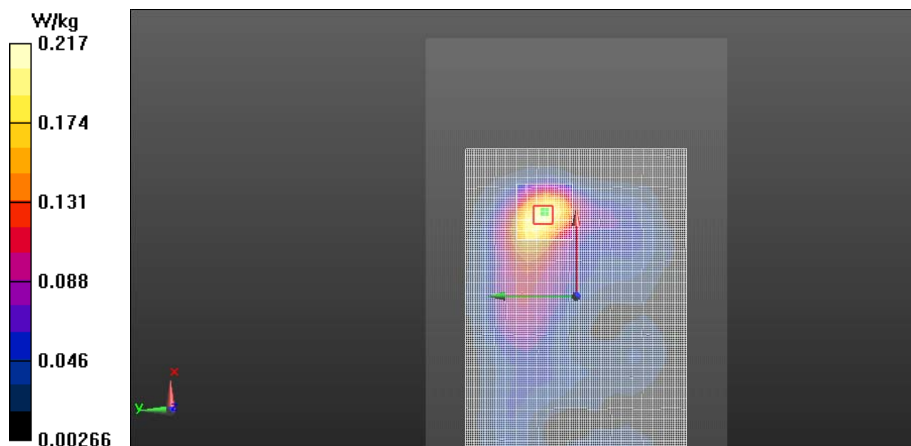
Reference Value = 4.690 V/m

Peak SAR (extrapolated) = 0.358 W/kg

SAR(1 g) = 0.191 W/kg

Maximum value of SAR (measured) = 0.208 W/kg

Power Drift = -0.03 dB



Plot 34:

Date/Time: 2013-08-28 16:10:24

DASY Configuration for GSM850/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 835 SAR1 Medium parameters used: $f = 849$ MHz; $\sigma = 0.98$ S/m; $\epsilon_r = 52.619$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 14:09:02

DASY Configuration for WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

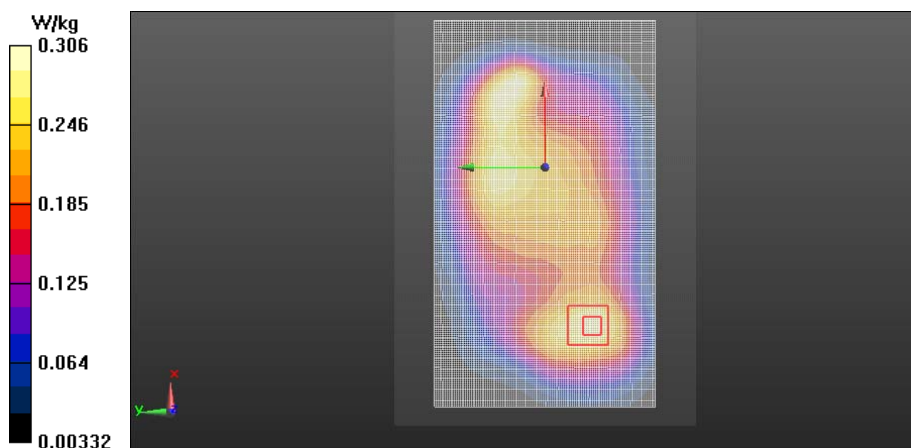
Medium: Body 2450 SAR4 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.188 W/kg

Maximum value of SAR (interpolated) = 0.306 W/kg



Note: 2-slot GPRS850 result was scaled by a factor of 1.01 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 35:

Date/Time: 2013-08-30 14:32:10

DASY Configuration for WCDMA850 (Band 5)/Body - High - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA850; Frequency: 846.6 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 835 SAR1 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ S/m; $\epsilon_r = 54.957$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3836; ConvF(8.97, 8.97, 8.97); Calibrated: 2013-03-08;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn710; Calibrated: 2013-03-08
Phantom: SAR1 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 14:47:55

DASY Configuration for WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

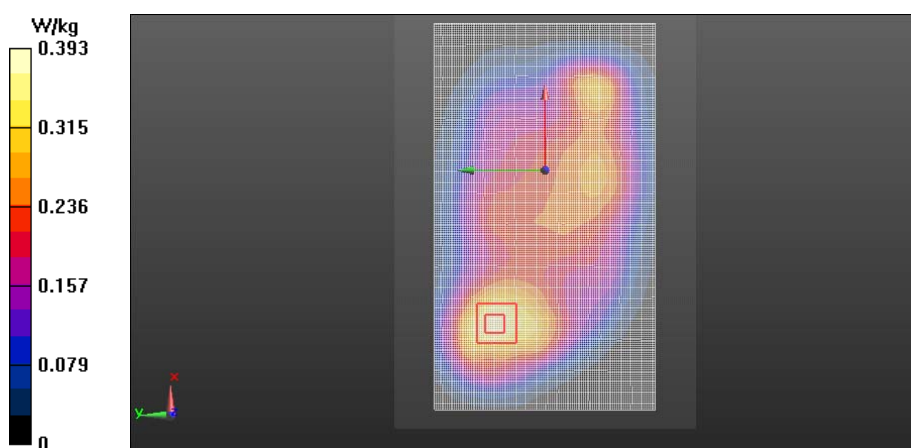
Medium: Body 2450 SAR4 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (interpolated) = 0.393 W/kg



Note: WCDMA850 result was scaled by a factor of 1.00 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 36:

Date/Time: 2013-08-30 14:28:49

DASY Configuration for 2-slot GPRS1900/Body - High - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288850/6

Communication System: 2-slot GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: Body 1900 SAR4 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.551$ S/m; $\epsilon_r = 50.702$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 14:09:02

DASY Configuration for WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

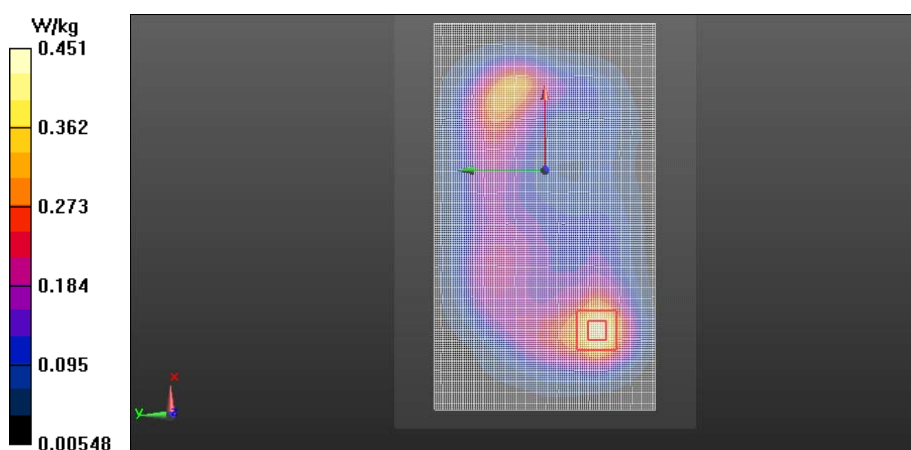
Medium: Body 2450 SAR4 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.408 W/kg; SAR(10 g) = 0.229 W/kg

Maximum value of SAR (interpolated) = 0.451 W/kg



Note: 2-slot GPRS1900 result was scaled by a factor of 1.04 and WLAN2450 result was scaled by a factor of 1.24 before combining.

Plot 37:

Date/Time: 2013-08-28 17:04:38

DASY Configuration for WCDMA1900 (Band 2)/Body - Low - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: Body 1900 SAR4 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.472$ S/m; $\epsilon_r = 50.971$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(7.28, 7.28, 7.28); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Date/Time: 2013-08-27 14:47:55

DASY Configuration for WLAN 2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288853/0

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

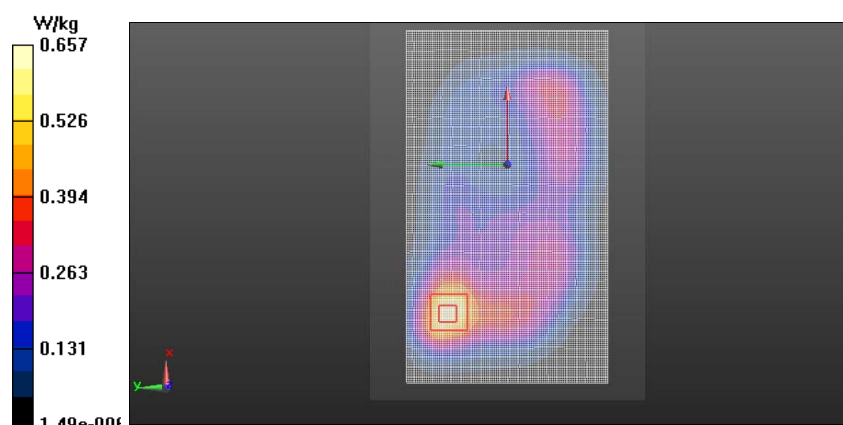
Medium: Body 2450 SAR4 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.938$ S/m; $\epsilon_r = 50.109$; $\rho = 1000$ kg/m³

Phantom section: Center Section

Probe: EX3DV4 - SN3823; ConvF(6.9, 6.9, 6.9); Calibrated: 2012-12-12;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn705; Calibrated: 2012-12-04
Phantom: SAR4 - TFP; Type: Not Specified; Serial: Not Specified
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.601 W/kg; SAR(10 g) = 0.349 W/kg

Maximum value of SAR (interpolated) = 0.657 W/kg



Note: WCDMA1900 result was scaled by a factor of 1.07 and WLAN2450 result was scaled by a factor of 1.24 before combining.

SAR Report

Type: RM-937

FCC_RM-937_01

Applicant: Nokia Corporation

Copyright © 2013 TCC Nokia

Plot 38:

Date/Time: 2013-09-12 12:59:10

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288855/5

Communication System: WLAN5000 a-mode

Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: t= 20.7 C

Medium parameters used: f = 5320 MHz; σ = 5.322 S/m; ϵ_r = 46.781; ρ = 1000 kg/m³

Phantom section: Center Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(3.85, 3.85, 3.85); Calibrated: 2013-01-23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA; Serial: Not Specified
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.8 (7028)

WLAN5000 a-mode/Body - Channel 64 - OFDM 6 Mbps - Spacer 0mm - No Headset - Top Edge Facing

Phantom/Area Scan (61x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 10.0 W/kg

WLAN5000 a-mode/Body - Channel 64 - OFDM 6 Mbps - Spacer 0mm - No Headset - Top Edge Facing

Phantom/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 43.057 V/m

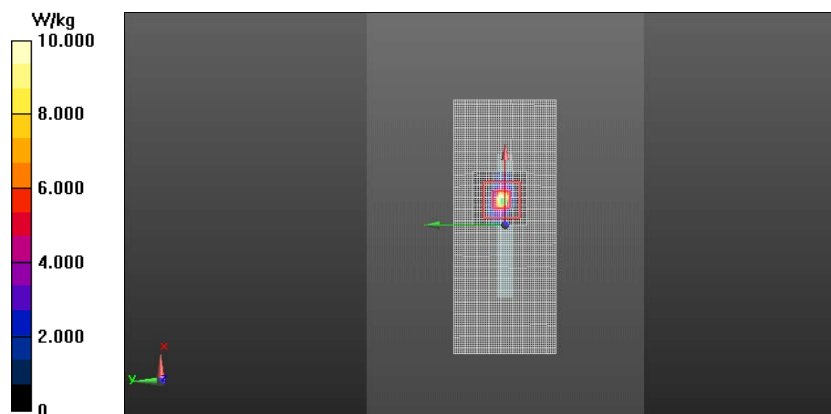
Peak SAR (extrapolated) = 28.5 W/kg

SAR(1 g) = 3.93 W/kg

SAR(10 g) = 0.732 W/kg

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 10.8 W/kg



APPENDIX C: DIELECTRIC PARAMETERS OF THE TISSUE SIMULANTS

Head tissue simulant dielectric parameters used in the measurements:

f (MHz)	Date	Dielectric Parameters					
		824.2MHz		836.6MHz		848.8MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
GSM/GPRS/ EGPRS850	2013-08-26	40.5	0.89	40.3	0.90	40.2	0.91
f (MHz)	Date	Dielectric Parameters					
		826.4MHz		835.0MHz		846.6MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WCDMA850	2013-08-27	40.7	0.89	40.6	0.90	40.4	0.91
f (MHz)	Date	Dielectric Parameters					
		1850.2MHz		1880.0MHz		1909.8MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
GSM/GPRS/ EGPRS1900	2013-08-27	39.7	1.35	39.6	1.38	39.5	1.41
	2013-08-29	39.2	1.32	39.1	1.35	38.9	1.37
f (MHz)	Date	Dielectric Parameters					
		1852.4MHz		1880.0MHz		1907.6MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WCDMA1900	2013-08-26	38.2	1.31	38.1	1.34	38.0	1.36
f (MHz)	Date	Dielectric Parameters					
		2412.0MHz		2437.0MHz		2462.0MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WLAN2450	2013-08-26	37.7	1.81	37.6	1.83	37.5	1.87

Head tissue simulant dielectric parameters used in the measurements 5180 – 5805 MHz:

f (MHz)	Date	Dielectric Parameters									
		Ch 36 5180.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5210	2013-09-03	35.7	4.45	35.6	4.49	35.6	4.52				
	2013-09-05	36.2	4.51	36.2	4.54	36.1	4.57				
f (MHz)	Date	Dielectric Parameters									
		Ch 52 5260.0 MHz		5290.0 MHz		5320.0 MHz		Ch 64 5360.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5290	2013-09-04	35.9	4.55	35.9	4.58	35.8	4.61	35.8	4.65		
	2013-09-05	36.1	4.59	36.0	4.62	36.0	4.66	36.0	4.69		
	2013-09-20	35.8	4.65	35.8	4.67	35.7	4.71	35.6	4.75		
f (MHz)	Date	Dielectric Parameters									
		Ch 104 5520.0 MHz		Ch 112 5560.0 MHz		Ch 120 5600.0 MHz		Ch 128 5640.0 MHz		Ch 136 5680.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5520 5620	2013-09-05	35.7	4.85	35.7	4.89	35.6	4.93	35.6	4.97	35.5	5.02
	2013-09-06	35.0	4.80	34.9	4.84	34.9	4.88	34.8	4.92	34.7	4.97
	2013-09-10	34.6	4.78	34.5	4.82	34.5	4.87	34.4	4.91	34.4	4.95
f (MHz)	Date	Dielectric Parameters									
		Ch 149 5745.0 MHz		Ch 153 5765.0 MHz		5785.0 MHz		Ch 165 5825.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5760	2013-09-09	34.5	5.00	34.5	5.02	34.4	5.04	34.4	5.09		
	2013-09-10	34.3	5.02	34.2	5.04	34.3	5.06	34.2	5.10		

Body tissue simulant dielectric parameters used in the measurements:

f (MHz)	Date	Dielectric Parameters					
		824.2MHz		836.6MHz		848.8MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
GSM/GPRS/ EGPRS850	2013-08-28	52.8	0.96	52.7	0.97	52.6	0.98
f (MHz)	Date	Dielectric Parameters					
		826.4MHz		835.0MHz		846.6MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WCDMA850	2013-08-28	52.8	0.96	52.7	0.97	52.6	0.98
	2013-08-30	55.1	0.95	55.1	0.96	55.0	0.97
f (MHz)	Date	Dielectric Parameters					
		1850.2MHz		1880.0MHz		1909.8MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
GSM/GPRS/ EGPRS1900	2013-08-28	51.0	1.47	50.9	1.50	50.7	1.52
	2013-08-30	50.9	1.49	50.8	1.52	50.7	1.55
f (MHz)	Date	Dielectric Parameters					
		1852.4MHz		1880.0MHz		1907.6MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WCDMA1900	2013-08-28	51.0	1.47	50.9	1.50	50.7	1.52
f (MHz)	Date	Dielectric Parameters					
		2412.0MHz		2437.0MHz		2462.0MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
WLAN2450	2013-08-27	50.2	1.89	50.1	1.94	50.1	1.97

Body tissue simulant dielectric parameters used in the measurements 5180 – 5805 MHz:

f (MHz)	Date	Dielectric Parameters									
		Ch 36 5180.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5210	2013-09-11	47.1	5.18	47.1	5.23	47.0	5.26				
f (MHz)	Date	Dielectric Parameters									
		Ch 52 5260.0 MHz		5290.0 MHz		5320.0 MHz		Ch 64 5360.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5290	2013-09-11	46.9	5.26	46.8	5.29	46.8	5.32	46.7	5.38		
	2013-09-20	46.8	5.37	46.7	5.41	46.6	5.45	46.6	5.50		
f (MHz)	Date	Dielectric Parameters									
		Ch 104 5520.0 MHz		Ch 112 5560.0 MHz		Ch 120 5600.0 MHz		5640.0 MHz		Ch 136 5680.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5520	2013-09-12	46.3	5.71	46.2	5.76	46.2	5.82	46.1	5.87	46.1	5.92
5620	2013-09-13	46.5	5.87	46.5	5.90	46.3	5.96	46.3	6.04	46.3	6.06
f (MHz)	Date	Dielectric Parameters									
		Ch 106 5530.0 MHz									
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5520	2013-09-20	46.3	5.70								
f (MHz)	Date	Dielectric Parameters									
		Ch 149 5745.0 MHz		Ch 153 5765.0 MHz		5785.0 MHz		Ch 165 5825.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5760	2013-09-15	46.0	6.16	45.9	6.19	45.9	6.22	45.9	6.27		

APPENDIX D: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4, HW: 2010, SW: 1028.3500.1332.2000

D.1. WCDMA850 Test results

Average power

Ch / f(MHz)	P [dBm]
4132 / 826.4	23.74
4175 / 835.0	23.78
4233 / 846.6	23.83

D.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
4132 / 826.4	22.60	21.51	21.49	22.22	22.67
4175 / 835.0	22.72	21.48	21.61	21.99	22.70
4233 / 846.6	22.72	21.49	21.51	22.12	22.69

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs a single HSUPA power control routine. 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
0.0dB	2.0dB	1.0dB	2.0dB	0.0dB

Test Laboratory: TCC Nokia

Type: RM-937; Serial: 004402/47/288851/4, HW: 2010, SW: 1028.3500.1332.2000

D.5. WCDMA1900 Test results

Average power

Ch / f(MHz)	P [dBm]
9262 / 1852.4	23.54
9400 / 1880.0	23.62
9538 / 1907.6	23.55

D.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
9262 / 1852.4	22.00	21.37	21.42	21.30	22.64
9400 / 1880.0	22.53	21.35	21.46	22.28	22.63
9538 / 1907.6	22.31	20.98	21.30	22.05	22.77

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs a single HSUPA power control routine. 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
0.0dB	2.0dB	1.0dB	2.0dB	0.0dB