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SAR Compliance Test Report

Test report no.:	FCC_RM-893_10	**Date of report:**	2013-08-12
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Tested device:	RM-893		
FCC ID:	PYAA1	**IC:**	661V-A1
Supplement reports:	FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892, SAR_Photo_RM-893_11		

Testing has been carried out in accordance with:

47CFR §2.1093
Radiofrequency Radiation Exposure Evaluation: Portable Devices

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

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

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

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

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

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2013-04-18 – 2013-05-15
SN, HW and SW numbers of tested device	SN: 355519/05/000415/9, HW: 0421, SW: 3034.0000.1314.1000, DUT: 31322 SN: 355519/05/000365/6, HW: 0421, SW: 3034.0000.1314.1000, DUT: 31323 SN: 355519/05/000377/1, HW: 0421, SW: 3034.0000.1314.1000, DUT: 31321 SN: 355519/05/000394/6, HW: 0421, SW: 3034.0000.1314.1000, DUT: 31317 SN: 355519/05/000407/6, HW: 0421, SW: 3034.0000.1314.1000, DUT: 31316 SN: 355519/05/000397/9, HW: 0421, SW: 3034.000.1314.1000, DUT: 31314 SN: 355519/05/000290/6, HW: 0421, SW: 3034.0000.1314.00, DUT: 17361 SN: 355519/05/000395/3, HW: 0421, SW: 3034.0000.1314.00, DUT: 17359 SN: 355519/05/000282/3, HW: 0421, SW: 3034.0000.1314.00, DUT: 17358 SN: 004402/47/223426/3, HW: 0401, SW: 3035.0000.1315.1000, DUT: 17322 SN: 004402/47/223449/5, HW: 0401, SW: 3035.0000.1315.1000, DUT: 17321
Batteries used in testing	-
Headsets used in testing	WH-208; DUT: 17320,17319,17318,17317,31319,31320
Other accessories used in testing	Cover CC-3065 Optional Wireless Charging back cover, DUT: 17348, 17349, 17352, 31318, 31312
State of sample	Prototype unit
Notes	-

1.1.1 Supplement reports referenced on the front cover of this report

FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892

Head, Body-worn and Wireless Router SAR data for WLAN2450 and Head and Body-worn SAR data for WLAN5000 have been taken from this report; 2 sample was used in the RM-892 SAR testing to test each WLAN band. The FCC Grant for RM-892 / FCC ID: PYARM-892 was issued on 26th June 2013.

1.2 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration and Wireless Router ("Hotspot") configuration are given in section 1.2.1, 1.2.2 and 1.2.3 respectively. The device conforms to the requirements of the standards when the maximum measured SAR value is less than or equal to the limit.

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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 #
LTE700	23790 / 710.0	24.22 dBm	Left, Cheek	0.450 W/kg	**0.51 W/kg**	1.6 W/kg	PASSED	1
2-slot GPRS850	190 / 836.6	32.02 dBm	Right, Cheek	0.638 W/kg	**0.72 W/kg**	1.6 W/kg	PASSED	2
WCDMA850	4175 / 835.0	24.49 dBm	Right, Cheek	0.729 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	3
LTE850	20525 / 836.5	24.05 dBm	Right, Cheek	0.612 W/kg	**0.69 W/kg**	1.6 W/kg	PASSED	4
WCDMA1700/2100	1513 / 1752.6	24.44 dBm	Left, Cheek	1.09 W/kg	**1.22 W/kg**	1.6 W/kg	PASSED	5
LTE1700/2100	23175 /1732.5	24.07 dBm	Left, Cheek	0.878 W/kg	**0.99 W/kg**	1.6 W/kg	PASSED	6
2-slot GPRS1900	661 / 1880.0	28.49 dBm	Left, Cheek	0.673 W/kg	**0.76 W/kg**	1.6 W/kg	PASSED	7
WCDMA1900	9538 / 1907.6	24.49 dBm	Left, Cheek	1.20 W/kg	**1.35 W/kg**	1.6 W/kg	PASSED	8
LTE1900	19100 / 1900.0	23.52 dBm	Left, Cheek	1.06 W/kg	**1.19 W/kg**	1.6 W/kg	PASSED	9
WLAN2450**	1 / 2412.0	16.17 dBm	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
WLAN5000**	161 / 5805.0	16.76 dBm	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
LTE700 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
2-slot GPRS850 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
WCDMA850 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
LTE850 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
WCDMA1700/2100 + WLAN2450	-	-	Left, Cheek	0.959 W/kg	**1.38 W/kg**	1.6 W/kg	PASSED	34
LTE1700/2100 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
2-slot GPRS1900 + WLAN2450	-	-	Left, Cheek	0.872 W/kg	**1.33 W/kg**	1.6 W/kg	PASSED	33
WCDMA1900 + WLAN2450	-	-	Left, Cheek	1.20 W/kg	**1.42 W/kg**	1.6 W/kg	PASSED	35
LTE1900 + WLAN2450	-	-	Left, Cheek	1.01 W/kg	**1.41 W/kg**	1.6 W/kg	PASSED	36
LTE700 + WLAN5000	-	-	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
2-slot GPRS850 + WLAN5000	-	-	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
WCDMA850 + WLAN5000	-	-	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
LTE850 + WLAN5000	-	-	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
WCDMA1700/2100 + WLAN5000	-	-	Left, Cheek	1.09 W/kg	**1.22 W/kg**	1.6 W/kg	PASSED	5

(Table continues)

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(Table continues)

LTE1700/2100 + WLAN5000	-	-	Left, Cheek	0.883 W/kg	**0.99 W/kg**	1.6 W/kg	PASSED	26
2-slot GPRS1900 + WLAN5000	-	-	Left, Cheek	0.691 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	11
WCDMA1900 + WLAN5000	-	-	Left, Cheek	1.21 W/kg	**1.36 W/kg**	1.6 W/kg	PASSED	28
LTE1900 + WLAN5000	-	-	Left, Cheek	1.06 W/kg	**1.19 W/kg**	1.6 W/kg	PASSED	9

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#
LTE700	23790 / 710.0	24.22 dBm	15 mm	0.557 W/kg	**0.63 W/kg**	1.6 W/kg	PASSED	37
2-slot GPRS850	190 / 836.6	32.02 dBm	15 mm	0.613 W/kg	**0.69 W/kg**	1.6 W/kg	PASSED	38
WCDMA850	4233 / 846.6	24.38 dBm	15 mm	0.609 W/kg	**0.68 W/kg**	1.6 W/kg	PASSED	39
LTE850	20525 / 836.5	24.05 dBm	15 mm	0.559 W/kg	**0.63 W/kg**	1.6 W/kg	PASSED	40
WCDMA1700/2100	1513 / 1752.6	24.44 dBm	15 mm	0.887 W/kg	**1.00 W/kg**	1.6 W/kg	PASSED	41
LTE1700/2100	23175 / 1732.5	24.07 dBm	15 mm	0.732 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	42
2-slot GPRS1900	512 / 1850.2	28.54 dBm	15 mm	0.435 W/kg	**0.49 W/kg**	1.6 W/kg	PASSED	43
WCDMA1900	9538 / 1907.6	24.49 dBm	15 mm	0.671 W/kg	**0.75 W/kg**	1.6 W/kg	PASSED	44
LTE1900	18900 / 1880.0	23.95 dBm	15 mm	0.551 W/kg	**0.62 W/kg**	1.6 W/kg	PASSED	45
WLAN2450**	6 / 2437.0	16.35 dBm	15 mm	0.083 W/kg	**0.12 W/kg**	1.6 W/kg	PASSED	46
WLAN5000**	40 / 5200.0	16.25 dBm	15 mm	0.106 W/kg	**0.14 W/kg**	1.6 W/kg	PASSED	47
LTE700 + WLAN2450	-	-	15 mm	0.563 W/kg	**0.64 W/kg**	1.6 W/kg	PASSED	48
2-slot GPRS850 + WLAN2450	-	-	15 mm	0.613 W/kg	**0.69 W/kg**	1.6 W/kg	PASSED	49
WCDMA850 + WLAN2450	-	-	15 mm	0.609 W/kg	**0.68 W/kg**	1.6 W/kg	PASSED	39
LTE850 + WLAN2450	-	-	15 mm	0.575 W/kg	**0.65 W/kg**	1.6 W/kg	PASSED	51
WCDMA1700/2100 + WLAN2450	-	-	15 mm	0.887 W/kg	**1.00 W/kg**	1.6 W/kg	PASSED	41
LTE1700/2100 + WLAN2450	-	-	15 mm	0.732 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	42
2-slot GPRS1900 + WLAN2450	-	-	15 mm	0.435 W/kg	**0.49 W/kg**	1.6 W/kg	PASSED	43
WCDMA1900 + WLAN2450	-	-	15 mm	0.678 W/kg	**0.76 W/kg**	1.6 W/kg	PASSED	55
LTE1900 + WLAN2450	-	-	15 mm	0.551 W/kg	**0.62 W/kg**	1.6 W/kg	PASSED	45

(Table continues)

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(Table continues)

LTE700 + WLAN5000	-	-	15 mm	0.560 W/kg	**0.63 W/kg**	1.6 W/kg	PASSED	57
2-slot GPRS850 + WLAN5000	-	-	15 mm	0.636 W/kg	**0.72 W/kg**	1.6 W/kg	PASSED	58
WCDMA850 + WLAN5000	-	-	15 mm	0.609 W/kg	**0.68 W/kg**	1.6 W/kg	PASSED	39
LTE850 + WLAN5000	-	-	15 mm	0.562 W/kg	**0.63 W/kg**	1.6 W/kg	PASSED	60
WCDMA1700/2100 + WLAN5000	-	-	15 mm	0.887 W/kg	**1.00 W/kg**	1.6 W/kg	PASSED	41
LTE1700/2100 + WLAN5000	-	-	15 mm	0.732 W/kg	**0.82 W/kg**	1.6 W/kg	PASSED	42
2-slot GPRS1900 + WLAN5000	-	-	15 mm	0.435 W/kg	**0.49 W/kg**	1.6 W/kg	PASSED	43
WCDMA1900 + WLAN5000	-	-	15 mm	0.671 W/kg	**0.75 W/kg**	1.6 W/kg	PASSED	44
LTE1900 + WLAN5000	-	-	15 mm	0.551 W/kg	**0.62 W/kg**	1.6 W/kg	PASSED	45

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#
LTE700	23790 / 710.0	24.22 dBm	10 mm	0.711 W/kg	**0.80 W/kg**	1.6 W/kg	PASSED	66
2-slot GPRS850	128 / 824.2	31.78 dBm	10 mm	0.784 W/kg	**0.88 W/kg**	1.6 W/kg	PASSED	67
WCDMA850	4132 / 826.4	24.36 dBm	10 mm	0.866 W/kg	**0.97 W/kg**	1.6 W/kg	PASSED	68
LTE850	20525 / 836.5	24.05 dBm	10 mm	0.757 W/kg	**0.85 W/kg**	1.6 W/kg	PASSED	69
WCDMA1700/2100	1513 / 1752.6	20.01 dBm	10 mm	1.12 W/kg	**1.26 W/kg**	1.6 W/kg	PASSED	70
LTE1700/2100	23175 / 1732.5	20.77 dBm	10 mm	1.31 W/kg	**1.47 W/kg**	1.6 W/kg	PASSED	71
2-slot GPRS1900	512/ 1850.2	27.28 dBm	10 mm	1.34 W/kg	**1.50 W/kg**	1.6 W/kg	PASSED	72
WCDMA1900	9538 / 1907.6	21.05 dBm	10 mm	1.16 W/kg	**1.30 W/kg**	1.6 W/kg	PASSED	73
LTE1900	18900 / 1880.0	20.78 dBm	10 mm	0.983 W/kg	**1.10 W/kg**	1.6 W/kg	PASSED	74
WLAN2450**	1 / 2412.0	16.17 dBm	10 mm	0.227 W/kg	**0.35 W/kg**	1.6 W/kg	PASSED	75
LTE700 + WLAN2450	-	-	10 mm	0.743 W/kg	**0.84 W/kg**	1.6 W/kg	PASSED	76
2-slot GPRS850 + WLAN2450	-	-	10 mm	0.784 W/kg	**0.88 W/kg**	1.6 W/kg	PASSED	67
WCDMA850 + WLAN2450	-	-	10 mm	0.873 W/kg	**0.99 W/kg**	1.6 W/kg	PASSED	78
LTE850 + WLAN2450	-	-	10 mm	0.786 W/kg	**0.89 W/kg**	1.6 W/kg	PASSED	79
WCDMA1700/2100 + WLAN2450	-	-	10 mm	1.15 W/kg	**1.28 W/kg**	1.6 W/kg	PASSED	80

(Table continues)

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(Table continues)

LTE1700/2100 + WLAN2450	-	-	10 mm	1.31 W/kg	**1.47 W/kg**	1.6 W/kg	PASSED	**71**
2-slot GPRS1900 + WLAN2450	-	-	10 mm	1.34 W/kg	**1.50 W/kg**	1.6 W/kg	PASSED	**72**
WCDMA1900 + WLAN2450	-	-	10 mm	1.16 W/kg	**1.30 W/kg**	1.6 W/kg	PASSED	**73**
LTE1900 + WLAN2450	-	-	10 mm	0.990 W/kg	**1.11 W/kg**	1.6 W/kg	PASSED	**84**

* Reported SAR values are scaled to, or measured at, upper limit of power tuning tolerance. In addition, SAR values are scaled up by 12% to cover measurement drift. As a consequence of this upward drift correction, the contribution of measurement drift to the overall measurement uncertainty (Section 6) is reduced to zero.
**SAR data taken from FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892.

Note: The conducted powers used in SAR testing in Sections 1.2.1 - 1.2.3 are above upper limit of tuning tolerance. Appendix L demonstrates that device is still working linear part of the PA and that obtained SAR results are acceptable.

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1.2.4 Summary SAR data

	FCC-defined SAR values for the Grants of Equipment Authorization		
	PCE	DTS	NII
Maximum Head SAR values	1.35 W/kg	1.33 W/kg	0.51 W/Kg
{Max + Max} Simultaneous Head SAR value	1.57 W/kg †		
Maximum Body SAR values	1.00 W/kg	0.12 W/kg	0.14 W/Kg
{Max + Max} Simultaneous Body SAR value	1.11 W/kg ††		
Maximum Product Specific (Wireless Router) SAR values	1.50 W/kg	0.35 W/kg	N/A
{Max + Max} Simultaneous Product Specific SAR value	1.51 W/kg †††		
Maximum Simultaneous SAR value **Head SAR: 2-slot GPRS1900+WLAN5000**	1.57 W/kg †		

PCE contains the highest results between all cellular modes (cellular 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

† From Section 7.1:

The highest {Max + Max} Simultaneous Head SAR value is 2.55W/kg i.e. > 1.6W/kg for WCDMA1900+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio > 0.04, expanded zoom scans as described in KDB865664 were performed. The resulting combined SAR value was 1.42W/kg (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The second highest {Max + Max} Simultaneous Head SAR value is 2.42W/kg i.e. > 1.6W/kg for WCDMA1700/2100+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio > 0.04, expanded zoom scans as described in KDB865664 were performed. The resulting combined SAR value was 1.38W/kg (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

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The third highest {Max + Max} Simultaneous Head SAR value is 2.39W/kg i.e. > 1.6W/kg for LTE1900+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio > 0.04, expanded zoom scans as described in KDB865664 were performed. The resulting combined SAR value was 1.41W/kg (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The fourth highest {Max + Max} Simultaneous Head SAR value is 2.19W/kg i.e. > 1.6W/kg for LTE1700/2100+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.04, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The fifth highest {Max + Max} Simultaneous Head SAR value is 2.17W/kg i.e. > 1.6W/kg for WCDMA1900+WLAN5000 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.04, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The sixth highest {Max + Max} Simultaneous Head SAR value is 2.04W/kg i.e. > 1.6W/kg for WCDMA1700/2100+WLAN5000 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.04, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The seventh highest {Max + Max} Simultaneous Head SAR value is 2.01W/kg i.e. > 1.6W/kg for LTE1900+WLAN5000 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.03, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The eighth highest {Max + Max} Simultaneous Head SAR value is 1.96W/kg i.e. > 1.6W/kg for 2-slot GPRS1900+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.04, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The ninth highest {Max + Max} Simultaneous Head SAR value is 1.83W/kg i.e. > 1.6W/kg for 2-slot GPRS850+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.03, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The tenth highest {Max + Max} Simultaneous Head SAR value is 1.80W/kg i.e. > 1.6W/kg for WCDMA850+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.03, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

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The eleventh highest {Max + Max} Simultaneous Head SAR value is 1.80W/kg i.e. > 1.6W/kg for LTE1700/2100+WLAN5000 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.03, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The twelfth highest {Max + Max} Simultaneous Head SAR value is 1.78W/kg i.e. > 1.6W/kg for LTE850+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.04, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

The thirteenth highest {Max + Max} Simultaneous Head SAR value is 1.71W/kg i.e. > 1.6W/kg for LTE700+WLAN2450 Left Cheek test configuration. As descripted in KDB447498 D01 v05 the Antenna Pair SAR to Peak Separation Ratio = 0.03, hence Simultaneous Transmission Procedures are not required (see Section 7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements).

Consequently {Max + Max} Simultaneous Head SAR quoted here is 1.57W/kg for 2-slot GPRS1900+WLAN5000.

†† From Section 7.2:

The highest {Max + Max} Simultaneous Body-worn SAR value is 1.11W/kg for WCDMA1700/2100+WLAN2450.

††† From Section 7.3:

The highest {Max + Max} Simultaneous Wireless Router SAR value is 1.51W/kg for 2-slot GPRS1900+WLAN2450.

1.2.5 Maximum Drift

Maximum drift covered by 12% scaling up of the SAR values	Maximum drift during measurements
0.5dB	0.50dB

1.2.6 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	± 26.4%

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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	30.50	28.50	27.50	32.85	30.85	28.85	27.85
	1900			1850 – 1910	30.00	27.50	25.50	24.50	30.35	27.85	25.85	24.85
EGPRS	850	8PSK	1/8 to 4/8	824 – 849	26.50	26.00	25.00	24.00	26.85	26.35	25.35	24.35
	1900			1850 – 1910	25.50	25.00	24.00	23.00	25.85	25.35	24.35	23.35
WCDMA	850 (Band V)		1	826 – 847	23.50				23.85			
WCDMA	1700/2100 (Band IV)		1	1712 – 1753	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	1700/2100 (Band IV)		1	1712 – 1753	See Appendix D for details							
HSUPA	1900 (Band II)		1	1852 – 1908	See Appendix D for details							
LTE	700	QPSK / 16QAM		704 – 716	23.00				23.35			
LTE	850	QPSK / 16QAM		824 – 849	23.00				23.35			
LTE	1700/2100	QPSK / 16QAM		1710 – 1755	23.00				23.35			
LTE	1900	QPSK / 16QAM		1850 – 1910	23.00				23.35			
BT	2450	GFSK	1	2402 – 2480	7.00				8.50			
					Ch 1-11				Ch 1-11			
WLAN b-mode* 20MHz	2450	DSSS	1	2412 – 2472	16.00				17.50			
WLAN g-mode* 20MHz	2450	OFDM	1	2412 – 2472	16.00				17.50			
WLAN n-mode* 20MHz	2450	OFDM	1	2412 – 2472	15.00				16.50			
					Ch 36-165				Ch 36-165			
WLAN a-mode* 20MHz	5000	OFDM	1	5150 – 5825	15.50				17.00			
WLAN n-mode* 20MHz	5000	OFDM	1	5150 – 5825	15.00				16.50			

(Table continues)

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(Table continues)

					Ch 38-163	Ch 38-163
WLAN n-mode* 40MHz	5000	OFDM	1	5150 – 5825	14.00	15.50

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

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

This device has Voice-over-IP/Dual Transfer Mode capability for use at the ear. Therefore, SAR for multi slot GPRS mode was evaluated against the head profile of the phantom. Dual Transfer Mode is a feature that utilises the multi-slot GPRS capability in this device; it allows simultaneous transmission of voice and data during the same call, using the same transmitter and antenna. This device is Class B DTM device. Multislot DTM capability is multislot class 11 as defined in 3GPP TS 45.002, Annex B. The maximum number of timeslots for voice and data transmission are 1 and 2, respectively. See Chapter 3.2 for test reduction of GSM/GPRS multislot vs. DTM mode.

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 D 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 an LTE Category 3 device; it contains four LTE bands, namely LTE bands 700, 850, 1700/2100 and 1900. In LTE700(Band 17), the device possesses Channel Bandwidths of 10MHz and 5MHz; in LTE850(Band 5), the device possesses Channel Bandwidths of 10MHz, 5MHz, 3MHz and 1.4MHz; in LTE1700/2100 (Band 4) and in LTE1900(Band 2) Channel Bandwidths of 20MHz, 15MHz, 10MHz, 5MHz, 3MHz and 1.4MHz are available.

This is a BT Class 1 device; as its upper limit of power tuning tolerance is 8.5dBm (7.08mW), SAR testing was deemed unnecessary since (7.08mW/5mm)*√2.48GHz < 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 9dB 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.

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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
LTE700	✓	✓
GSM/GPRS/EGPRS850	✓	✓
WCDMA850	✓	✓
LTE850	✓	✓
WCDMA1700/2100	✓	✓
LTE1700/2100	✓	✓
GSM/GPRS/EGPRS1900	✓	✓
WCDMA1900	✓	✓
LTE1900	✓	✓

Simultaneous transmission capabilities in Wireless Router use		
	WLAN2450	WLAN5000
LTE700	✓	–
GSM/GPRS/EGPRS850	✓	–
WCDMA850	✓	–
LTE850	✓	–
WCDMA1700/2100	✓	–
LTE1700/2100	✓	–
GSM/GPRS/EGPRS1900	✓	–
WCDMA1900	✓	–
LTE1900	✓	–

The hotspot mode (Wireless Router mode) may operate concurrently in DTM mode with voice calls. The reported SAR test results are conservative regarding that use case, since output power in hotspot mode is equal to or lower than in normal voice and data modes. See following chapter for hotspot mode power reductions. Also simultaneous transmissions with WLANs are already conservatively assessed for head and body-worn exposure conditions due to VoIP capability.

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2.1 Power reductions in Wireless Router configurations

The following table details the power reductions active in Wireless Router mode:

Band	Power reduction in WR mode	Target tuning power in WR mode
LTE700	0 dB	23.0 dBm
GPRS/EGPRS850	0 dB 0 dB 0 dB 0 dB 0 dB 0 dB 0 dB 0 dB	1-slot GPRS: 32.5 dBm 2-slot GPRS: 30.5 dBm 3-slot GPRS: 28.5 dBm 4-slot GPRS: 27.5 dBm 1-slot EGPRS: 26.5 dBm 2-slot EGPRS: 26.0 dBm 3-slot EGPRS: 25.0 dBm 4-slot EGPRS: 24.0 dBm
WCDMA850	0 dB	23.5 dBm
LTE850	0 dB	23.0 dBm
WCDMA1700/2100	4.3 dB	19.2 dBm
LTE1700/2100	3.3 dB	19.7 dBm
GPRS/EGPRS1900	0.8 dB 0.8 dB 0.8 dB 0.8 dB 0 dB 0 dB 0 dB 0 dB	1-slot GPRS: 29.2 dBm 2-slot GPRS: 26.7 dBm 3-slot GPRS: 24.7 dBm 4-slot GPRS: 23.7 dBm 1-slot EGPRS: 25.5 dBm 2-slot EGPRS: 25.0 dBm 3-slot EGPRS: 24.0 dBm 4-slot EGPRS: 23.0 dBm
WCDMA1900	3.3 dB	20.2 dBm
LTE1900	3.3 dB	19.7 dBm
WLAN2450 b-mode (DSSS 1 Mbps)	0 dB	Ch 1-11: 16.0 dBm
WLAN2450 g-mode (OFDM 6 Mbps)	0 dB	Ch 1-11: 16.0 dBm
WLAN2450 n-mode (MCS 0 – OFDM 6.5 Mbps)	0 dB	Ch 1-11: 15.0 dBm

2.2 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.

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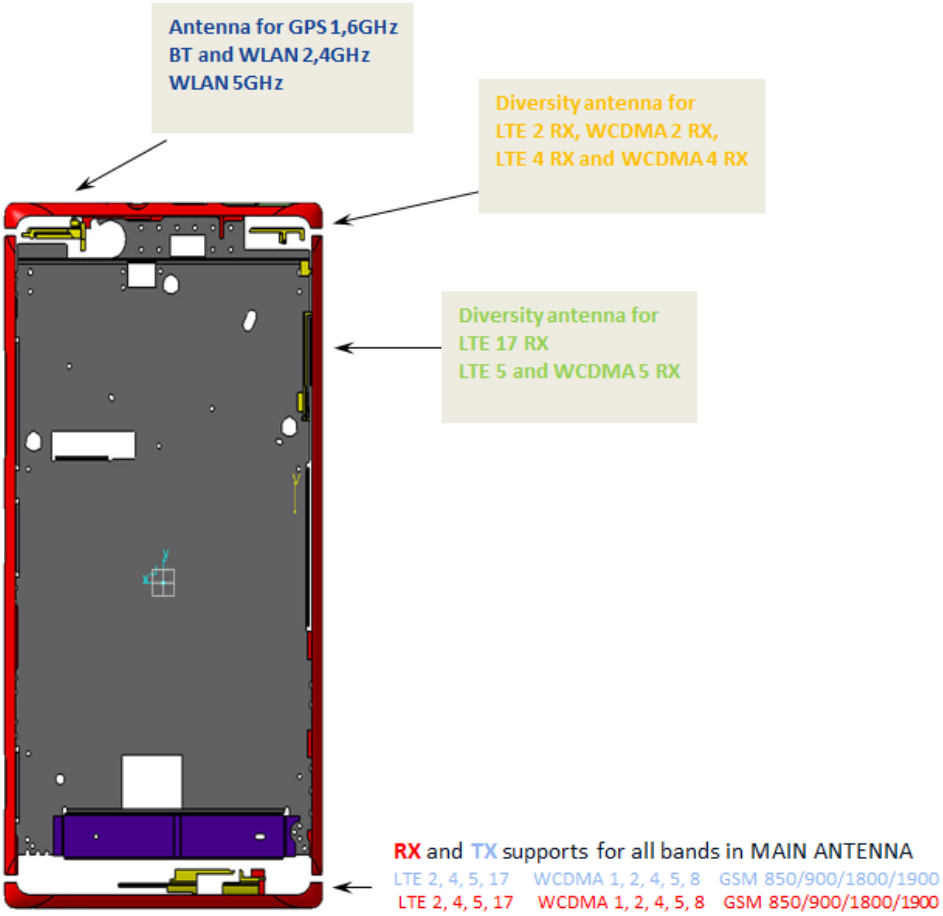

The Main Antenna of the device has a closed-loop antenna tuner. The antenna tuner optimizes the power throughput from power amplifier to the antenna. In each SAR test configuration the tuner selects the optimal tuner state for highest, or equal highest, power output and SAR. This selected state for each SAR test position, frequency band and communications system is used in SAR testing reported in this document. The details of the antenna tuner, the selected tuner states, power throughput and SAR comparison between the different states as well as other supporting material is submitted to FCC via Operational Descriptions exhibit. Most important results are attached in Appendix K. SAR test requirements have been agreed via KDB Inquiry process.

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3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	19.7 – 24.0
Ambient humidity (RH %):	25 - 39

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 (this is a multi-slot class 12 device); 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. 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 and n 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.

All the WLAN SAR results given in this report are taken from the test report FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892. Whilst RM-892 possesses different cellular bands to RM-893, the WLAN2450 and WLAN5000 engines, power amplifiers, feed networks, antennas and radiated performances are identical in the two products. Identical WLAN SAR performance of these

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devices is confirmed by repeated measurements for highest SAR test configurations. These results are presented in Appendix M. Repeated and original measurements are within standard measurement uncertainty as expected.

LTE band has been tested according to the guidance given in KDB941225 D05 SAR for LTE Devices v02r02 DR07-41372. MPR values as stipulated in Table 6.2.3 of 3GPP TS 36.101 (presented below) have been incorporated into the device; these MPR values are dependent on the modulation, Channel Bandwidth and Resource Block allocations as shown:

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

Although A-MPR will be supported by the final production device, for all the reported testing A-MPR was deactivated in the test samples.

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

KDB941225 D05 SAR for LTE Devices v02r02 DR07-41372*
KDB 941225 D01 SAR Measurement Procedures for 3G Devices
KDB 248227: SAR Measurement Procedures for 802.11 a/b/g Transmitters
KDB 648474 D04 SAR Handsets Multi Xmiter and Ant v01
KDB 941225 D06 v01 Hot Spot SAR
KDB 447498 D01 General RF Exposure Guidance v05
KDB 690783 D01 SAR Listings on Grants
KDB 865664 D01 SAR Measurements 100MHz to 6GHz v01
KDB 865664 D02 SAR Reporting v01

* In some of the LTE result tables in Section 7.1-7.3 there are extra test done which were not required by this KDB. Those tests have been conducted voluntarily.

3.3 Test Cases and Test Minimisation

This chapter is informative only and explaining some of the basic test reduction principles and should be ignored for FCC certification. Procedures laid out in KDBs mentioned in previous Chapter are fully followed.

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

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

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

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

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

In the results tables in Section 7, the maximum SAR value for the 'basic' tests (i.e. left cheek, left tilt, right cheek and right tilt in Head SAR testing; with and without headset with the back &/or display side facing the flat phantom in Body SAR testing) is bolded for each band. In some cases, after full testing of the basic SAR test configurations has been completed, additional

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checking SAR tests are made. These checking tests are always based on the bolded result from the 'basic' testing. When the SAR value of a checking test exceeds the maximum value from the basic tests, it is also bolded and used as the basis for any further checking tests that might be needed.

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

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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
DAE4	793	2012-08	2013-08
DAE4	538	2012-08	2013-08
DAE4	1355	2013-01	2014-01
DAE4	756	2013-02	2014-02
DAE4	1332	2012-07	2013-07
DAE4	1309	2013-01	2014-01
DAE4	728	2012-08	2013-08
E-field Probe ES3DV3	3165	2013-01	2014-01
E-field Probe ES3DV3	3194	2012-08	2013-08
E-field Probe ES3DV3	3275	2013-01	2014-01
E-field Probe ES3DV3	3276	2013-03	2014-03
E-field Probe ES3DV3	3131	2012-08	2013-08
E-field Probe EX3DV4	3892	2012-11	2013-11
E-field Probe EX3DV4	3573	2013-01	2014-01
Dipole Validation Kit, D750V3	1057	2012-05	2014-05
Dipole Validation Kit, D835V2	4d040	2012-08	2014-08
Dipole Validation Kit, D835V2	480	2012-12	2014-12
Dipole Validation Kit, D835V2	462	2011-09	2013-09
Dipole Validation Kit, D1750V2	1081	2012-12	2014-12
Dipole Validation Kit, D1750V2	1082	2012-12	2014-12
Dipole Validation Kit, D1750V2	1082	2012-12	2014-12

(Table continues)

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(Table continues)

Dipole Validation Kit, D1900V2	5d099	2013-01	2015-01
Dipole Validation Kit, D1900V2	5d030	2012-02	2014-02
Dipole Validation Kit, D1900V2	5d013	2012-12	2014-12
Dipole Validation Kit, D2450V2	729	2011-09	2013-09
Dipole Validation Kit, D5GHzV2	1048	2012-12	2014-12
DASY4 software	Version 4.7	-	-
DASY5 software	Version 52.8	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration date	Calibration expiry
Signal Generator	E4438C	MY42080610	2012-08	2013-08
Signal Generator	SML03	101264	2012-08	2013-08
Signal Generator	E8247C	MY43321016	2012-07	2013-07
Signal Generator	E8257C	MY43350540	2012-05	2013-05
Signal Generator	SMB100A	105735	2012-08	2013-08
Signal Generator	E4436B	US39260114	2012-08	2013-08
Amplifier	5S1G4M3	302338	-	-
Amplifier	ZHL-42-SMA	N072095-5	-	-
Amplifier	KM0822-8R	991253	-	-
Amplifier	KM0822-8R	981441	-	-
Amplifier	5S4G11	312661	-	-
Amplifier	5S1G4	25583	-	-

(Table continues)

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(Table continues)

Power Meter	NRVS	838624/032	2012-08	2013-08
Power Meter	NRVD	840023/028	2012-08	2013-08
Power Meter	E4419B	GB3920697	2012-08	2013-08
Power Meter	E4417A	GB41291021	2013-04	2014-04
Power Meter	NRP	100714	2012-08	2013-08
Power Meter	NRVZ	849305/029	2012-08	2013-08
Power Sensor	NRV-Z32	100067	2012-08	2013-08
Power Sensor	NRV-Z32	849745/018	2012-08	2013-08
Power Sensor	8482H	3318A06406	2012-08	2013-08
Power Sensor	E9325A	US40420196	2013-04	2014-04
Power Sensor	NRP-Z92	100085	2012-08	2013-08
Power Sensor	NRV-Z32	825600/002	2012-08	2013-08
Call Tester	CMU 200	103293	-	-
Call Tester	CMU 200	104983	-	-
Call Tester	MT8820C	6200883095	-	-
Call Tester	CMW500	107942-hQ	-	-
Call Tester	CMW500	136294-CF	-	-
Network Analyzer	ENA E5071C	MY46213166	2012-08	2013-08
Network Analyzer	ENA E5071C	MY46315958	2012-10	2013-10
Dielectric Probe Kit	DAK-3.5	1042	-	-
Dielectric Probe Kit	DAK-3.5	1064	-	-

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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 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 20 mm Body diameter: 12 mm Tip diameter: 3.9 mm Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

4.1.2 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 µW/g to > 100 mW/g, Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm Tip length: 10 mm Body diameter: 12 mm Tip diameter: 2.5 mm Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 6 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms

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4.2 Phantoms

The phantom used for all Head SAR tests i.e. for both system checks and device testing, was the twin-headed "SAM Phantom", manufactured by SPEAG; the SAM 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 also manufactured by SPEAG; this phantom conform to the requirements of OET Bulletin 65, Supplement C.

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

4.3 Tissue Simulants

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

The depth of the tissue simulant was at least 15.0 cm for all system check and device tests, measured from the ear reference point in the case of the SAM phantom and from the inner surface of the flat phantom.

4.3.1 Tissue Simulant Recipes

The following recipes were used for Head and Body tissue simulants:

700MHz band

Ingredient	Head (% by weight)	Body (% by weight)
Deionised Water	52.13	69.23
Tween 20	46.59	29.56
Salt	1.28	1.21

800MHz band

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

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1800MHz band

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

1900MHz band

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

2450MHz band

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

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.

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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
750	TCC San Diego / SAR-2	V52.8	D750V2 / 1057	ES3DV4 / 3275	DAE4 / 756	2013-03	2013-03
835	TCC San Diego / SAR-2	V52.8	D835V2 / 4d040	ES3DV4 / 3275	DAE4 / 756	2013-04	2013-02
835	TCC Salo / SAR-3	V4.7	D835V2 / 462	EX3DV4 / 3892	DAE4 / 793	2013-01	2013-01
835	TCC Salo / SAR-3	V52.8	D835V2 / 480	ES3DV4 / 3165	DAE4 / 1355	2013-05	2013-05
1750	TCC San Diego / SAR-4	V52.8	D1750V2 / 1081	ES3DV4 / 3276	DAE4 / 1332	2013-04	2013-04
1750	TCC Salo / SAR-1	V4.7	D1750V2 / 1082	ES3DV3 / 3194	DAE4 / 538	2012-12	2012-12
1750	TCC Salo / SAR-1	V52.8	D1750V2 / 1082	ES3DV3 / 3194	DAE4 / 538	2013-05	2013-05
1900	TCC San Diego / SAR-4	V52.8	D1900V2 / 5d099	ES3DV4 / 3276	DAE4 / 1332	2013-04	2013-04
1900	TCC Salo / SAR-1	V4.7	D1900V2 / 5d030	ES3DV3 / 3194	DAE4 / 538	2012-11	2012-11
1900	TCC Salo / SAR-1	V52.8	D1900V2 / 5d013	ES3DV3 / 3194	DAE4 / 538	2013-05	2013-05
2450	TCC Salo / SAR-4	V52.8	D2450V2 / 729	ES3DV4 / 3131	DAE4 / 728	2013-01	2013-01
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

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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

		SAR [W/kg],	Dielectric Parameters		SAR 1g Deviation from target	Dielectric Parameters Deviation from target		Temp	Plot #
f[MHz]	Description	1g	ε_r	σ [S/m]	dSAR [%]	$d\varepsilon_r$ [%]	dσ [%]	[°C]	
	Tolerances				±10 %	±5 %	±5 %		
750	IEEE1528 / IEC62209		41.9	0.89					
	Reference result SN:1057	2.16	42.3	0.92	TCC San Diego/SAR-2 ES3DV3 SN:3275 Head 750MHz				
	2013-04-26	2.01	41.2	0.91	-6.94	-2.60	-1.09	21.5	1
	2013-04-29	2.03	41.3	0.91	-6.02	-2.36	-1.09	21.5	-
	2013-04-30	2.04	41.1	0.91	-5.56	-2.84	-1.09	21.5	-
835	IEEE1528 / IEC62209		41.5	0.90					
	Reference result SN:4d040	2.38	41.0	0.90	TCC San Diego/SAR-2 EX3DV4 SN:3275 Head 835MHz				
	2013-04-26	2.34	41.8	0.90	-1.68	1.95	0.00	21.5	-
	2013-04-29	2.33	42.0	0.90	-2.10	2.44	0.00	21.5	2
	Reference result SN:462	2.33	41.1	0.89	TCC Salo/SAR-3 EX3DV4 SN:3892 Head 835MHz				
	2013-04-23	2.28	40.0	0.90	-2.15	-2.68	1.12	21.0	-
	2013-04-24	2.27	40.8	0.91	-2.58	-0.73	2.25	21.0	3
	2013-04-25	2.32	40.8	0.92	-0.43	-0.73	3.37	21.0	-

(System checking, head table continues)

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(System checking, head table continues)

f[MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		SAR 1g Deviation from target	Dielectric Parameters Deviation from target		Temp [°C]	Plot #
			ε_r	σ [S/m]	dSAR [%]	$d\varepsilon_r$ [%]	dσ [%]		
1750	IEEE1528 / IEC62209		40.1	1.36					
	Reference result SN:1081	9.04	39.3	1.34	TCC San Diego / SAR-4 ES3DV3 SN:3276 Head 1750MHz				
	2013-05-10	8.29	39.6	1.36	-8.30	0.76	1.49	21.5	4
	Reference result SN:1082	8.99	39.3	1.34	TCC Salo/SAR-1 ES3DV3 SN:3194 Head 1750MHz				
	2013-04-25	9.12	38.2	1.34	1.45	-2.80	0.00	21.0	-
	2013-05-10	9.20	39.1	1.34	2.34	-0.51	0.00	21.0	-
	2013-05-13	9.43	38.8	1.34	4.89	-1.27	0.00	21.9	5
1900	IEEE1528 / IEC62209		40.0	1.40					
	Reference result SN:5d099	10.1	39.4	1.38	TCC San Diego / SAR-4 ES3DV3 SN:3276 Head 1900MHz				
	2013-04-24	9.65	39.7	1.41	-4.46	0.76	2.17	21.5	-
	2013-04-29	9.62	39.2	1.41	-4.75	-0.51	2.17	21.5	-
	2013-05-13	9.37	39.3	1.39	-7.23	-0.25	0.72	21.5	6
	Reference result SN:5d030	9.79	40.4	1.40	TCC Salo/SAR-1 ES3DV3 SN:3194 Head 1900MHz				
	2013-04-22	10.1	38.6	1.38	3.17	-4.46	-1.43	21.0	7
	2013-04-23	10.0	39.2	1.39	2.15	-2.97	-0.71	21.0	-
	Reference result SN:5d013	10.1	39.5	1.38	TCC Salo/SAR-1 ES3DV3 SN:3194 Head 1900MHz				
	2013-05-14	10.6	38.6	1.38	4.95	-2.28	0.00	22.3	8
2450	IEEE1528 / IEC62209		39.2	1.80					
	Reference result SN:729	13.9	38.3	1.85	TCC Salo/SAR-4 ES3DV3 SN:3131 Head 2450MHz				
	2013-04-18	13.8	37.7	1.80	-0.72	-1.57	-2.70	21.0	-
	2013-04-19	13.5	37.9	1.80	-2.88	-1.04	-2.70	21.0	9
	2013-04-29	13.7	38.2	1.79	-1.44	-0.26	-3.24	21.0	-

(System checking, head table continues)

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(System checking, head table continues)

f[MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters εr	Dielectric Parameters σ [S/m]	SAR 1g Deviation from target dSAR [%]	Dielectric Parameters Deviation from target dεr [%]	Dielectric Parameters Deviation from target dσ [%]	Temp [°C]	Plot #
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				
	2013-04-20	7.38	35.6	4.47	-8.21	2.89	0.22	21.0	10
	2013-04-22	7.63	35.4	4.46	-5.10	2.31	0.00	21.0	-
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				
	2013-04-20	8.01	35.5	4.57	-3.96	3.20	0.44	21.0	-
	2013-04-21	8.43	35.4	4.57	1.08	2.91	0.44	21.0	-
	2013-04-22	8.45	35.3	4.56	1.32	2.62	0.22	21.0	-
	2013-04-23	8.85	36.1	4.67	6.12	4.94	2.64	21.0	11
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				
	2013-04-23	8.08	35.7	4.88	-2.77	4.39	3.39	21.0	12
	2013-04-24	8.36	35.5	4.82	0.60	3.80	2.12	21.0	-
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				
	2013-04-23	8.50	35.5	4.97	1.07	4.41	3.33	21.0	13
	2013-04-24	8.36	35.3	4.92	-0.59	3.82	2.29	21.0	-
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				
	2013-04-24	7.67	35.1	5.14	-3.28	3.85	1.98	21.0	14
	2013-04-25	7.89	35.1	5.15	-0.50	3.85	2.18	21.0	-

* Dielectric parameter data taken from IEC62209-2.

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System checking, body tissue simulant

f[MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters εr	Dielectric Parameters σ [S/m]	SAR 1g Deviation from target dSAR [%]	Dielectric Parameters Deviation from target dεr [%]	Dielectric Parameters Deviation from target dσ [%]	Temp [°C]	Plot #
	Deviation of tolerances				±10 %	±5 %	±5 %		
750	IEEE1528 / IEC62209		55.5	0.96					
	Reference result SN:1057	2.21	55.6	0.96	TCC San Diego/SAR-2 ES3DV3 SN:3275 Body 750MHz				
	2013-05-01	2.21	55.3	0.96	0.00	-0.54	0.00	21.5	-
	2013-05-02	2.14	55.2	0.96	-3.17	-0.72	0.00	21.5	15
835	IEEE1528 / IEC62209		55.2	0.97					
	Reference result SN:4d040	2.45	53.3	1.00	TCC San Diego/SAR-2 EX3DV4 SN:3275 Body 835MHz				
	2013-05-01	2.44	55.5	1.00	-0.41	4.13	0.00	21.5	16
	2013-05-02	2.46	55.3	1.00	0.41	3.75	0.00	21.5	-
	Reference result SN:462	2.45	53.5	1.00	TCC Salo/SAR-3 EX3DV4 SN:3892 Body 835MHz				
	2013-04-30	2.32	53.0	0.97	-5.31	-0.93	-3.00	21.0	17
	Reference result SN:480	2.42	54.5	0.99	TCC Salo/SAR-3 EX3DV4 SN:3165 Body 835MHz				
	2013-05-07	2.30	53.8	0.98	-4.96	-1.28	-1.01	21.0	18
	2013-05-08	2.31	53.3	0.99	-4.55	-2.20	0.00	22.3	-
	2013-05-10	2.30	53.5	0.98	-4.96	-1.83	-1.01	22.3	-

(System checking, body table continues)

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(System checking, body table continues)

f[MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters εr	Dielectric Parameters σ [S/m]	SAR 1g Deviation from target dSAR [%]	Dielectric Parameters Deviation from target dεr [%]	Dielectric Parameters Deviation from target dσ [%]	Temp [°C]	Plot #
1750	IEEE1528 / IEC62209		53.4	1.49					
	Reference result SN:1081	9.31	51.8	1.47	TCC San Diego / SAR-4 ES3DV3 SN:3276 Body 1750MHz				
	2013-05-08	9.37	51.8	1.43	0.64	0.00	-2.72	21.5	-
	2013-05-09	9.27	51.9	1.43	-0.43	0.19	-2.72	21.5	-
	2013-05-10	9.13	52.2	1.43	-1.93	0.77	-2.72	21.5	19
	2013-05-15	9.19	52.1	1.43	-1.29	0.58	-2.72	21.5	-
	Reference result SN:1082	9.21	51.8	1.47	TCC Salo/SAR-1 ES3DV3 SN:3194 Body 1750MHz				
	2013-04-26	9.74	52.1	1.46	5.75	0.58	-0.68	21.0	20
	2013-05-10	9.55	51.5	1.46	3.69	-0.58	-0.68	21.0	-
1900	IEEE1528 / IEC62209		53.3	1.52					
	Reference result SN:5d099	10.3	52.2	1.52	TCC San Diego / SAR-4 ES3DV3 SN:3276 Body 1900MHz				
	2013-05-01	9.90	52.9	1.52	-3.88	1.34	0.00	21.5	21
	2013-05-07	10.1	52.6	1.52	-1.94	0.77	0.00	21.5	-
	2013-05-08	10.0	52.5	1.52	-2.91	0.57	0.00	21.5	-
	Reference result SN:5d030	9.87	53.0	1.56	TCC Salo/SAR-1 ES3DV3 SN:3194 Body 1900MHz				
	2013-04-28	9.97	51.1	1.53	1.01	-3.58	-1.92	21.0	22
	Reference result SN:5d013	10.3	52.2	1.52	TCC Salo/SAR-1 ES3DV3 SN:3194 Body 1900MHz				
	2013-05-13	9.78	51.0	1.47	-5.05	-2.30	-3.29	21.0	23
	2013-05-14	10.5	51.5	1.54	1.94	-1.34	1.32	21.1	-
2450	IEEE1528 / IEC62209		52.7	1.95					
	Reference result SN:729	13.3	51.7	2.04	TCC Salo/SAR-4 ES3DV3 SN:3131 Head 2450MHz				
	2013-04-21	13.3	51.3	1.95	0.00	-0.77	-4.41	21.0	-
	2013-04-22	13.4	51.2	1.94	0.75	-0.97	-4.90	21.0	24

(System checking, body table continues)

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(System checking, body table continues)

f[MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters εr	Dielectric Parameters σ [S/m]	SAR 1g Deviation from target dSAR [%]	Dielectric Parameters Deviation from target dεr [%]	Dielectric Parameters Deviation from target dσ [%]	Temp [°C]	Plot #
	FCC OET65 Supplement C		49.0	5.30					
	Reference result SN:1048	7.2	47.1	5.40	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5200MHz				
5200	2013-04-26	7.60	48.1	5.46	5.56	2.12	1.11	21.0	25
	FCC OET65 Supplement C		48.9	5.42					
	Reference result SN:1048	7.45	46.9	5.51	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5300MHz				
5300	2013-04-26	8.08	48.0	5.60	8.46	2.35	1.63	21.0	26
	FCC OET65 Supplement C		48.6	5.65					
	Reference result SN:1048	7.62	46.6	5.76	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5500MHz				
5500	2013-04-27	7.81	47.0	5.80	2.49	0.86	0.69	21.0	27
	FCC OET65 Supplement C		48.5	5.77					
	Reference result SN:1048	7.73	46.4	5.88	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5600MHz				
5600	2013-04-27	8.30	46.9	5.94	7.37	1.08	1.02	21.0	28
	FCC OET65 Supplement C		48.2	6.00					
	Reference result SN:1048	7.25	46.1	6.17	TCC Salo/SAR-2 EX3DV4 SN:3573 Body 5800MHz				
5800	2013-04-28	7.03	47.5	6.22	-3.03	3.04	0.81	21.0	29

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

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4.5 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from Standard target		Temp [°C]
		ε_r	σ [S/m]	$d\varepsilon_r$ [%]	dσ [%]	
	Tolerances			±5 %	±5 %	
710	Recommended value	42.1	0.89			
	2013-04-26	41.5	0.88	-1.43	-1.12	21.5
	2013-04-29	41.6	0.88	-1.19	-1.12	21.5
	2013-04-30	41.4	0.88	-1.66	-1.12	21.5
835	Recommended value	41.5	0.90			
	2013-04-24	40.8	0.91	-1.69	1.11	21.0
	2013-04-25	40.8	0.92	-1.69	2.22	21.0
836	Recommended value	41.5	0.90			
	2013-04-23	40.0	0.90	-3.61	0.00	21.0
	2013-04-26	41.8	0.90	0.72	0.00	21.5
	2013-04-29	42.0	0.90	1.20	0.00	21.5
1732	Recommended value	40.1	1.36			
	2013-04-25	38.3	1.32	-4.49	-2.94	21.0
	2013-05-10	39.1	1.32	-2.49	-2.94	21.0
	2013-05-10	39.7	1.35	-1.00	-0.74	21.5
	2013-05-13	38.9	1.32	-2.99	-2.94	21.9
1880	Recommended value	40.0	1.40			
	2013-04-22	38.6	1.36	-3.50	-2.86	21.0
	2013-04-23	39.3	1.37	-1.75	-2.14	21.0
	2013-04-24	39.8	1.40	-0.50	0.00	21.5
	2013-04-29	39.3	1.39	-1.75	-0.71	21.5
	2013-05-13	39.3	1.37	-1.75	-2.14	21.5
	2013-05-14	38.7	1.37	-3.25	-2.14	22.3

(Tissue simulants, head table continues)

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(Tissue simulants, head table continues)

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from Standard target		Temp [°C]
		ε_r	σ [S/m]	$d\varepsilon_r$ [%]	dσ [%]	
2437	Recommended value	39.2	1.79			
	2013-04-18	37.8	1.78	-3.57	-0.56	21.0
	2013-04-19	38.0	1.78	-3.06	-0.56	21.0
	2013-04-29	38.3	1.78	-2.30	-0.56	21.0
5210	Recommended value	36.0	4.67			
	2013-04-20	35.6	4.48	-1.11	-4.07	21.0
	2013-04-22	35.4	4.47	-1.67	-4.28	21.0
5290	Recommended value	35.9	4.75			
	2013-04-20	35.5	4.56	-1.11	-4.00	21.0
	2013-04-21	35.4	4.56	-1.39	-4.00	21.0
	2013-04-22	35.3	4.55	-1.67	-4.21	21.0
	2013-04-23	36.1	4.66	0.56	-1.89	21.0
5520	Recommended value	35.6	4.99			
	2013-04-23	35.7	4.91	0.28	-1.60	21.0
	2013-04-24	35.5	4.84	-0.28	-3.01	21.0
5620	Recommended value	35.5	5.09			
	2013-04-23	35.5	5.01	0.00	-1.57	21.0
	2013-04-24	35.3	4.95	-0.56	-2.75	21.0
5760	Recommended value	35.3	5.23			
	2013-04-24	35.1	5.10	-0.57	-2.49	21.0
	2013-04-25	35.2	5.12	-0.28	-2.10	21.0

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Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from Standard target		Temp [°C]
		ε_r	σ [S/m]	$d\varepsilon_r$ [%]	dσ [%]	
	Tolerances			±5 %	±5 %	
710	Recommended value	55.7	0.96			
	2013-05-01	55.5	0.94	-0.36	-2.08	21.5
	2013-05-02	55.4	0.94	-0.54	-2.08	21.5
835	Recommended value	55.2	0.97			
	2013-05-07	53.8	0.98	-2.54	1.03	21.0
	2013-05-08	53.3	0.99	-3.44	2.06	22.3
	2013-05-10	53.5	0.98	-3.08	1.03	22.3
836	Recommended value	55.2	0.97			
	2013-04-30	53.0	0.97	-3.99	0.00	21.0
	2013-05-01	55.5	1.00	0.54	3.09	21.5
	2013-05-02	55.3	1.00	0.18	3.09	21.5
	2013-05-08	53.3	0.99	-3.44	2.06	22.3
1732	Recommended value	53.5	1.48			
	2013-04-26	52.1	1.45	-2.62	-2.03	21.0
	2013-05-08	51.9	1.41	-2.99	-4.73	21.5
	2013-05-09	52.0	1.42	-2.80	-4.05	21.5
	2013-05-10	52.3	1.42	-2.24	-4.05	21.5
	2013-05-10	51.5	1.44	-3.74	-2.70	21.0
	2013-05-15	52.1	1.42	-2.62	-4.05	21.5
1880	Recommended value	53.3	1.52			
	2013-04-28	51.2	1.51	-3.94	-0.66	21.0
	2013-05-01	52.9	1.50	-0.75	-1.32	21.5
	2013-05-07	52.7	1.50	-1.13	-1.32	21.5
	2013-05-08	52.5	1.50	-1.50	-1.32	21.5
	2013-05-13	51.0	1.46	-4.32	-3.95	21.0
	2013-05-14	51.6	1.53	-3.19	0.66	21.1

(Tissue simulants, body table continues)

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(Tissue simulants, body table continues)

f [MHz]	Description	Dielectric Parameters		Dielectric Parameters Deviation from Standard target		Temp [°C]
		ε_r	σ [S/m]	$d\varepsilon_r$ [%]	dσ [%]	
2437	Recommended value	52.7	1.94			
	2013-04-21	51.3	1.93	-2.66	-0.52	21.0
	2013-04-22	51.2	1.92	-2.85	-1.03	21.0
5210	Recommended value	49.0	5.31			
	2013-04-26	48.1	5.48	-1.84	3.20	21.0
5290	Recommended value	48.9	5.40			
	2013-04-26	48.0	5.59	-1.84	3.52	21.0
5520	Recommended value	48.6	5.67			
	2013-04-27	47.0	5.83	-3.29	2.82	21.0
5620	Recommended value	4.84	5.79			
	2013-04-27	46.8	5.97	-3.31	3.11	21.0
5760	Recommended value	48.3	5.95			
	2013-04-28	47.5	6.17	-1.66	3.70	21.0

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

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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".

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5.2.2 Body Worn Configuration

The device was placed in the SPEAG holder using the Nokia spacer and placed below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance indicated in Section 1.2.2 using a separate flat spacer that was removed before the start of the measurements.

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

5.2.3 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.

5.3 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.

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6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

Uncertainty Component	Section in IEEE 1528	Tol. (%)	Prob Dist	Div	c_i	$c_i . u_i$ (%)	v_i
Measurement System							
Probe Calibration	E2.1	±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	±0.0	R	√3	1	±0.0	∞
Phantom and Tissue Parameters							
Phantom Uncertainty (shape and thickness tolerances)	E3.1	±4.0	R	√3	1	±2.3	∞
Conductivity Target - tolerance	E3.2	±5.0	R	√3	0.64	±1.8	∞
Conductivity - measurement uncertainty	E3.3	±5.5	N	1	0.64	±3.5	5
Permittivity Target - tolerance	E3.2	±5.0	R	√3	0.6	±1.7	∞
Permittivity - measurement uncertainty	E3.3	±2.9	N	1	0.6	±1.7	5
Combined Standard Uncertainty			RSS			**±13.2**	116
Coverage Factor for 95%			**k=2**				
Expanded Uncertainty						**±26.4**	

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7. RESULTS

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

LTE700 (Band 17) Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.58	23.53	23.47	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.58	23.53	23.47	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.88	24.22	23.62	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.88	24.22	23.62	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	1
		Full SAR	0.422	0.450	0.406	0.473	**0.505**	0.456	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.282	-	-	0.316	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.449	-	-	0.504	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.294	-	-	0.330	-	
	Left Cheek With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.366	0.392	0.349	0.411	0.440	0.392	
10MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.56	23.58	23.56	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.56	23.58	23.56	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.43	22.49	22.66	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.43	22.49	22.66	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE700 (Band 17) Head SAR Table continues)

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(LTE700 (Band 17) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.70	22.69	22.70	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.70	22.69	22.70	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.344	-	-	0.386	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.222	-	-	0.249	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.368	-	-	0.413	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.245	-	-	0.275	
10MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.66	22.57	22.43	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.66	22.57	22.43	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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850MHz Band Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		33.31	33.63	33.36	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.28	24.60	24.33	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.475	-	-	0.533	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
2-slot GPRS	Tuning Target + Tolerance [dBm]		30.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		31.78	32.02	31.60	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		25.76	26.00	25.58	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.563	-	-	0.632	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.369	-	-	0.414	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	2
		Full SAR	0.417	0.638	0.418	0.468	**0.716**	0.469	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.425	-	-	0.477	-	
	Right Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.607	0.524	0.439	0.681	0.588	0.493	

(850MHz Head SAR Table continues)

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(850MHz Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
3-slot GPRS	Tuning Target + Tolerance [dBm]		28.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		29.90	30.00	29.50	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		25.64	25.74	25.24	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.546	-	-	0.613	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
4-slot GPRS	Tuning Target + Tolerance [dBm]		27.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		28.80	28.80	28.68	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		25.79	25.79	25.67	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.547	-	-	0.614	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(850MHz Head SAR Table continues)

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(850MHz Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
2-slot 8PSK EGPRS	Tuning Target + Tolerance [dBm]		26.35			Scaling factor*			
	Conducted Slot Average Power [dBm]		27.40	27.44	27.27	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		21.38	21.42	21.25	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.312	-	-	0.350	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		24.36	24.49	24.38	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.36	24.49	24.38	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.530	-	-	0.595	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.346	-	-	0.388	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	3
		Full SAR	0.678	0.729	0.702	0.761	**0.818**	0.788	
	Right Tilt	Estimated SAR	-		-	-	-	-	-
		Full SAR	-	0.431	-	-	0.484	-	
	Right Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.655	0.622	0.577	0.735	0.698	0.647	

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LTE850 (Band 5) Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.66	23.70	23.82	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.66	23.70	23.82	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.54	24.05	23.58	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.54	24.05	23.58	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.514	-	-	0.577	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.372	-	-	0.417	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	4
		Full SAR	0.522	0.612	0.613	0.586	**0.687**	0.688	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.341	-	-	0.383	-	
	Right Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.519	0.564	0.507	0.582	0.633	0.569	
10MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.96	23.53	23.57	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.96	23.53	23.57	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.26	22.73	22.48	0.59	0.50	0.50	dB
	Time-averaged power [dBm]		22.26	22.73	22.48	1.15	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE850 (Band 5) Head SAR Table continues)

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(LTE850 (Band 5) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.32	22.92	22.33	0.53	0.50	0.52	dB
	Time-averaged power [dBm]		22.32	22.92	22.33	1.13	1.12	1.13	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.391	-	-	0.439	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.288	-	-	0.323	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.472	-	-	0.530	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.265	-	-	0.297	-	
10MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.50	22.67	22.37	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.50	22.67	22.37	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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WCDMA1700/2100 Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*			
	Conducted Power [dBm]		24.42	24.44	24.44	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.42	24.44	24.44	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.618	0.781	0.950	0.693	0.876	1.07	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.315	-	-	0.353	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.411	-	-	0.461	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.517	-	-	0.580	-	
	Left Cheek with CC-3065	Estimated SAR	-		-	-	-	-	-
		Full SAR	0.851	0.966	1.07	0.955	1.084	1.20	
	Repeated: Left Cheeck with CC-3065	Estimated SAR	-	-	-	-	-	-	5
		Full SAR	-	-	1.09	-	-	1.22	

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LTE1700/2100 (Band 4) Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.71	23.79	24.00	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.71	23.79	24.00	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.65	24.07	23.41	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.65	24.07	23.41	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.504	0.631	0.628	0.565	0.708	0.705	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.283	-	-	0.318	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.324	-	-	0.364	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.376	-	-	0.422	-	
	Left Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.744	0.866	0.803	0.835	0.972	0.901	
	Repeated Left Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	6
		Full SAR	-	**0.878**	-	-	**0.985**	-	
20MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.85	23.62	23.25	0.50	0.50	0.60	dB
	Time-averaged Power [dBm]		23.85	23.62	23.25	1.12	1.12	1.15	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.36	22.68	22.44	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.36	22.68	22.44	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE1700/2100 (Band 4) Head SAR Table continues)

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(LTE1700/2100 (Band 4) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.36	22.69	22.22	0.50	0.50	0.63	dB
	Time-averaged power [dBm]		22.36	22.69	22.22	1.12	1.12	1.16	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.468	-	-	0.525	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.208	-	-	0.233	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.233	-	-	0.261	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.280	-	-	0.314	-	
20MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.52	22.53	22.19	0.50	0.50	0.66	dB
	Time-averaged power [dBm]		22.52	22.53	22.19	1.12	1.12	1.16	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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1900MHz Band Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		30.83	30.81	31.09	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		21.80	21.78	22.06	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.650	-	-	0.729	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
2-slot GPRS	Tuning Target + Tolerance [dBm]		27.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		28.54	28.49	28.75	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.52	22.47	22.73	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	7
		Full SAR	0.652	0.673	0.641	0.732	**0.755**	0.719	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.130	-	-	0.146	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.369	-	-	0.414	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.231	-	-	0.259	-	
	Left Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.598	0.628	0.642	0.671	0.705	0.720	
3-slot GPRS	Tuning Target + Tolerance [dBm]		25.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		26.47	26.46	26.73	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.21	22.20	22.47	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.644	-	-	0.723	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(1900MHz Head SAR Table continues)

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(1900MHz Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
4-slot GPRS	Tuning Target + Tolerance [dBm]		24.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		25.16	25.20	25.39	25.16	25.20	25.39	dB
	Time-averaged power [dBm]		22.15	22.19	22.38	22.15	22.19	22.38	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.633	-	-	0.710	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
2-slot 8PSK EGPRS	Tuning Target + Tolerance [dBm]		25.35			Scaling factor*			
	Conducted Slot Average Power [dBm]		26.14	26.13	26.29	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.13	23.12	23.28	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.447	-	-	0.502	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(1900MHz Head SAR Table continues)

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(1900MHz Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		24.21	24.35	24.49	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.21	24.35	24.49	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	8
		Full SAR	0.784	0.976	1.20	0.880	1.10	1.35	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.203	-	-	0.228	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.573	-	-	0.643	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.355	-	-	0.398	-	
	Left Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	1.14	1.08	1.14	1.28	1.21	1.28	
	Repeated SAR: Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	1.18	-	-	1.32	

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LTE1900 (Band 2) Head SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.75	23.77	23.83	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.75	23.77	23.83	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.835	-	0.996	0.937	-	1.12	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
20MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.43	23.95	23.49	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.43	23.95	23.49	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	1.00	-	-	1.12	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.279	-	-	0.313	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.582	-	-	0.653	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.420	-	-	0.471	-	

(LTE1900 (Band 2) Head SAR Table continues)

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(LTE1900 (Band 2) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.67	23.71	23.52	0.50	0.50	0.50	dB
	Time-averaged Power [dBm]		23.67	23.71	23.52	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	9
		Full SAR	0.930	1.04	1.06	1.04	1.17	1.19	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left Cheek with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	1.05	1.02	0.987	1.18	1.14	1.11	
	Repeated SAR: Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	1.00	-	-	1.12	
20MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.37	22.71	22.39	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.37	22.71	22.39	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.608	-	-	0.682	-	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(LTE1900 (Band 2) Head SAR Table continues)

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(LTE1900 (Band 2) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.18	22.80	22.33	0.67	0.50	0.52	dB
	Time-averaged power [dBm]		22.18	22.80	22.33	1.17	1.12	1.13	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.726	-	-	0.815	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.213	-	-	0.239	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.434	-	-	0.487	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.316	-	-	0.355	-	
20MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.34	22.64	22.41	0.51	0.50	0.50	dB
	Time-averaged power [dBm]		22.34	22.64	22.41	1.12	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.763	-	-	0.856	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(LTE1900 (Band 2) Head SAR Table continues)

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(LTE1900 (Band 2) Head SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 100%RB	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.26	22.65	22.34	0.59	0.50	0.51	dB
	Time-averaged power [dBm]		22.26	22.65	22.34	1.15	1.12	1.12	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.734	-	-	0.824	-	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

2450MHz Head SAR results**

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		16.17	16.35	16.58	1.83	1.65	1.42	dB
	Time-averaged power [dBm]		16.17	16.35	16.58	1.52	1.46	1.39	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	10
		Full SAR	0.786	0.775	0.695	1.20	1.13	0.964	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.501	-	-	0.733	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.248	-	-	0.363	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.182	-	-	0.266	-	
	Left Cheek, with CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.608	0.551	0.479	0.927	0.806	0.664	

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

Mode	Test Configu-ration	SAR Measure-ment	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Plot #
			Ch 40 5200.0 MHz	Ch 48 5240.0 MHz	Ch 56 5280.0 MHz	Ch 64 5320.0 MHz	Ch 40 5200.0 MHz	Ch 48 5240.0 MHz	Ch 56 5280.0 MHz	Ch 64 5320.0 MHz	
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		17.00				Scaling factor*				
	Conducted Power [dBm]		16.25	16.53	16.61	16.44	1.25	0.97	0.89	1.06	dB
	Time-averaged power [dBm]		16.25	16.53	16.61	16.44	1.33	1.25	1.23	1.28	Lin
	Left Cheek	Estimated SAR	-	-	-		-	-	-	-	-
		Full SAR	0.175	0.223	0.219	0.207	0.233	0.279	0.269	0.264	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.148	0.178	-	-	0.185	0.218	-	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.082	0.106	-	-	0.102	0.130	-	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.101	0.108	-	-	0.126	0.133	-	
	Left Cheek, with CC-3065	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	0.203	0.196	-	-	0.254	0.241	-	

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5000MHz Head SAR results
5470–5725 MHz**

Mode	Test Configu-ration	SAR Measure-ment	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Plot #
			Ch 108 5540.0 MHz	Ch 120 5600.0 MHz	Ch 128 5640.0 MHz	Ch 136 5680.0 MHz	Ch 108 5540.0 MHz	Ch 120 5600.0 MHz	Ch 128 5640.0 MHz	Ch 136 5680.0 MHz	
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		17.00				Scaling factor*				
	Conducted Power [dBm]		16.28	16.73	16.58	16.59	1.22	0.77	0.92	0.91	dB
	Time-averaged power [dBm]		16.28	16.73	16.58	16.59	1.32	1.19	1.24	1.23	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	0.236	0.255	0.201	0.294	0.313	0.304	0.248	0.363	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	0.191	-	-	-	0.236	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	0.045	-	-	-	0.056	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	0.050	-	-	-	0.061	
	Left Cheek, with CC-3065	Estimated SAR	-	-	-	-	-	-	-	-	-
		Full SAR	-	-	-	0.411	-	-	-	0.507	

5000MHz Head SAR results
5725–5850 MHz**

Mode	Test Configu-ration	SAR Measure-ment	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 161 5805.0 MHz	Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 161 5805.0 MHz	
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]		17.00			Scaling factor*			
	Conducted Power [dBm]		16.75	16.75	16.76	0.75	0.75	0.74	dB
	Time-averaged power [dBm]		16.75	16.75	16.76	1.19	1.19	1.19	Lin
	Left Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.445	0.486	0.644	0.529	0.578	0.764	
	Left Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.413	-	-	0.490	
	Right Cheek	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.151	-	-	0.179	
	Right Tilt	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.139	-	-	0.165	
	Left Cheek, with CC-3065	Estimated SAR	-	-	-	-	-	-	11
		Full SAR	-	-	0.691	-	-	**0.819**	

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

Test configuration	*Reported Max. 1g SAR results										
	WLAN 2450**	WLAN 5000**	LTE 700	2-slot GPRS 850	WCDMA 850	LTE 850	WCDMA 1700/ 2100	LTE 1700/ 2100	2-slot GPRS 1900	WCDMA 1900	LTE 1900
Head: Left, Cheek	1.20	0.819	0.505	0.632	0.595	0.577	1.22	0.985	0.755	1.35	1.19
Head: Left, Tilt	0.733	0.490	0.316	0.414	0.388	0.417	0.353	0.318	0.146	0.228	0.313
Head: Right, Cheek	0.363	0.179	0.504	0.716	0.818	0.687	0.561	0.364	0.414	0.643	0.653
Head: Right, Tilt	0.266	0.165	0.330	0.477	0.484	0.383	0.580	0.422	0.259	0.398	0.471

**SAR data taken from FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892.

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

Test configuration	*Reported Max. 1g SAR results								
	LTE700 +WLAN 2450	2-slot GPRS850 +WLAN 2450	WCDMA 850 +WLAN 2450	LTE850 +WLAN 2450	WCDMA 1700/ 2100 +WLAN 2450	LTE 1700/ 2100 +WLAN 2450	2-slot GPRS1900 + WLAN 2450	WCDMA 1900 +WLAN 2450	LTE1900 +WLAN 2450
Head: Left, Cheek	**1.71**	**1.83**	**1.80**	**1.78**	**2.42**	**2.19**	**1.96**	**2.55**	**2.39**
Head: Left, Tilt	1.05	1.15	1.12	1.15	1.09	1.05	0.879	0.961	1.05
Head: Right, Cheek	0.867	1.08	1.18	1.05	0.924	0.727	0.777	1.01	1.02
Head: Right, Tilt	0.596	0.743	0.750	0.649	0.846	0.688	0.525	0.664	0.737
Test configuration	**LTE700 +WLAN 5000**	**2-slot GPRS850 +WLAN 5000**	**WCDMA 850 +WLAN 5000**	**LTE850 +WLAN 5000**	**WCDMA 1700/ 2100 +WLAN 5000**	**LTE 1700/ 2100 +WLAN 5000**	**2-slot GPRS1900 + WLAN 5000**	**WCDMA 1900 +WLAN 5000**	**LTE1900 +WLAN 5000**
Head: Left, Cheek	**1.32**	**1.45**	**1.41**	**1.40**	**2.04**	**1.80**	**1.57**	**2.17**	**2.01**
Head: Left, Tilt	0.806	0.904	0.878	0.907	0.843	0.808	0.636	0.718	0.803
Head: Right, Cheek	0.683	0.895	0.997	0.866	0.740	0.543	0.593	0.822	0.832
Head: Right, Tilt	0.495	0.642	0.649	0.548	0.745	0.587	0.424	0.563	0.636

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

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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	*Reported Max. 1g SAR results								
	LTE700 +WLAN 2450	2-slot GPRS850 +WLAN 2450	WCDMA 850 +WLAN 2450	LTE850 +WLAN 2450	WCDMA 1700/ 2100 +WLAN 2450	LTE 1700/ 2100 +WLAN 2450	2-slot GPRS1900 + WLAN 2450	WCDMA 1900 +WLAN 2450	LTE1900 +WLAN 2450
Head: Left, Cheek	1.25	1.29	1.30	1.30	1.24	1.27	1.22	1.40	1.25
-Head: Left, Tilt	-	-	-	-	-	-	-	-	-
Head: Right, Cheek	-	-	-	-	-	-	-	-	-
Head: Right, Tilt	-	-	-	-	-	-	-	-	-
Test configuration	**LTE700 +WLAN 5000**	**2-slot GPRS850 +WLAN 5000**	**WCDMA 850 +WLAN 5000**	**LTE850 +WLAN 5000**	**WCDMA 1700/ 2100 +WLAN 5000**	**LTE 1700/ 2100 +WLAN 5000**	**2-slot GPRS1900 + WLAN 5000**	**WCDMA 1900 +WLAN 5000**	**LTE1900 +WLAN 5000**
Head: Left, Cheek	0.577	0.640	0.606	0.605	1.17	0.989	0.767	1.36	1.12
Head: Left, Tilt	-	-	-	-	-	-	-	-	-
Head: Right, Cheek	-	-	-	-	-	-	-	-	-
Head: Right, Tilt	-	-	-	-	-	-	-	-	-

Note: Plots #12-29

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 or WLAN band.

Plots of the Measurement scans are given in Appendix B.1.

7.1.1 Simultaneous Transmission SAR Test Exclusion Considerations for Head Measurements

Simultaneous transmission SAR test exclusion procedures as described in KDB 447498 D01 v05.

Following table gives antenna pair SAR to peak location separation ratios for the transmitter

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combinations for which the sum of simultaneously transmitting 1g SAR was above limit (See "Max+Max Combined results" table in previous section).

Antenna Pair SAR to Peak Location Separation Ratio

Left Cheek	WLAN 2450	LTE700	WLAN 2450	2-slot GPRS850	WLAN 2450	WCDMA 850	WLAN 2450	LTE850
X [mm]	37.2	65.7	37.2	69.1	37.2	68.6	37.2	61.9
Y [mm]	327.2	251.9	327.2	250.1	327.2	252.1	327.2	266.3
Z [mm]	-173.5	-173.4	-173.5	-169.7	-173.5	-170.2	-173.5	-174.5
DISTANCE [mm]	80.52		83.54		81.48		65.72	
MAX + MAX (Reported SAR)	1.71		1.83		1.80		1.78	
SAR to peak location separation ratio	0.03		0.03		0.03		0.04	
Left Cheek	**WLAN 2450**	**WCDMA 1700/ 2100**	**WLAN 2450**	**LTE1700/ 2100**	**WLAN 2450**	**2-slot GPRS 1900**	**WLAN 2450**	**WCDMA 1900**
X [mm]	37.2	61.8	37.2	61.2	37.2	57.2	37.2	57.2
Y [mm]	327.2	254.2	327.2	256.4	327.2	255.3	327.2	255.2
Z [mm]	-173.5	-173.0	-173.5	-172.6	-173.5	-172.7	-173.5	-172.7
DISTANCE [mm]	77.04		74.77		74.64		74.74	
MAX + MAX (Reported SAR)	2.42		2.19		1.96		2.55	
SAR to peak location separation ratio	**0.05**		0.04		0.04		**0.05**	
Left Cheek	**WLAN 2450**	**LTE1900**	**WLAN 5000**	**WCDMA 1700/ 2100**	**WLAN 5000**	**LTE1700/ 2100**	**WLAN 5000**	**WCDMA 1900**
X [mm]	37.2	63.0	29.7	61.8	29.7	61.2	29.7	57.2
Y [mm]	327.2	253.5	330.4	254.2	330.4	256.4	330.4	255.2
Z [mm]	-173.5	-172.6	-174.1	-173.0	-174.1	-172.6	-174.1	-172.7
DISTANCE [mm]	78.11		82.68		80.44		80.08	
MAX + MAX (Reported SAR)	2.39		2.04		1.80		2.17	
SAR to peak location separation ratio	**0.05**		0.04		0.03		0.04	

(Table continues)

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(Table continues)

Left Cheek	WLAN 5000	LTE1900	-	-	-	-	-	-
X [mm]	29.7	63.0	-	-	-	-	-	-
Y [mm]	330.4	253.5	-	-	-	-	-	-
Z [mm]	-174.1	-172.6	-	-	-	-	-	-
DISTANCE [mm]	83.82		-		-		-	
MAX + MAX (Reported SAR)	2.01		-		-		-	
SAR to peak location separation ratio	0.03		-		-		-	

All simultaneous transmitter configurations where all antenna pairs' SPLSR is equal to or below 0.04 are excluded from expanded zoom scan testing.

For all transmitters where SPLSR is >0.04, the following tables give individual and combined expanded zoom scan results.

WCDMA1700/2100 (Band 4) Head SAR Expanded Volume Scan results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*			
	Conducted Power [dBm]		24.42	24.44	24.44	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.42	24.44	24.44	1.12	1.12	1.12	Lin
	Left Cheek With CC-3065	Full SAR	-	-	0.946	-	-	1.06	30
	Left Tilt	Full SAR	-	-	-	-	-	-	-
	Right Cheek	Full SAR	-	-	-	-	-	-	-
	Right Tilt	Full SAR	-	-	-	-	-	-	-

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WCDMA1900 (Band 2) Head SAR Expanded Volume Scan results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
WCDMA	Tuning Target + Tolerance [dBm]		23.85			Scaling factor*			
	Conducted Power [dBm]		24.21	24.35	24.49	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.21	24.35	24.49	1.12	1.12	1.12	Lin
	Left Cheek	Full SAR	-	-	1.18	-	-	1.32	31
	Left Tilt	Full SAR	-	-	-	-	-	-	-
	Right Cheek	Full SAR	-	-	-	-	-	-	-
	Right Tilt	Full SAR	-	-	-	-	-	-	-

LTE1900 (Band 2) Head SAR Expanded Volume Scan results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
20MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.67	23.71	23.52	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.67	23.71	23.52	1.12	1.12	1.12	Lin
	Left Cheek	Full SAR	-	-	0.991	-	-	1.11	32
	Left Tilt	Full SAR	-	-	-	-	-	-	-
	Right Cheek	Full SAR	-	-	-	-	-	-	-
	Right Tilt	Full SAR	-	-	-	-	-	-	-

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2450MHz Head SAR Expanded Volume Scan results**

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		16.17	16.35	16.58	1.83	1.65	1.42	dB
	Time-averaged power [dBm]		16.17	16.35	16.58	1.52	1.46	1.39	Lin
	Left Cheek	Full SAR	0.872	-	-	1.33	-	-	33
	Left Tilt	Full SAR	-	-	-	-	-	-	-
	Right Cheek	Full SAR	-	-	-	-	-	-	-
	Right Tilt	Full SAR	-	-	-	-	-	-	-

**SAR data taken from FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892.

Simultaneous transmissions: Combined head SAR results – SPEAG Combined Expanded Volume scans results

Reported Max. 1g SAR results	Reported Max. 1g SAR results		
	WCDMA 1700/ 2100 +WLAN 2450	WCDMA 1900 +WLAN 2450	LTE1900 +WLAN 2450
Head: Left, Cheek	0.959 1.38	1.20 1.42	1.01 1.41
Head: Left, Tilt	-	-	-
Head: Right, Cheek	-	-	-
Head: Right, Tilt	-	-	-

Note: Plot #34-36

Highest result within individual zoom scan or individual expanded zoom scan results is given in Section 1.2 for each transmitter. Highest result within contributing individual zoom scan, individual expanded zoom scan, Speag combined algorithm or combined expanded zoom scan results are given in Section for each simultaneous transmitter combination.

Note:
* Reported SAR values are scaled to, or measured at, upper limit of power tuning tolerance. In addition, SAR values are scaled up by 12% to cover measurement drift. As a consequence of this upward drift correction, the contribution of measurement drift to the overall measurement uncertainty (Section 6) is reduced to zero.

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Plots of the Expanded Volume Measurement scans are given in Appendix B.1.

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

LTE700 (Band 17) Body SAR results

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.58	23.53	23.47	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.58	23.53	23.47	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.88	24.22	23.62	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.88	24.22	23.62	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	37
			Full SAR	0.485	0.557	0.472	0.544	**0.625**	0.530	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.468	-	-	0.525	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.548	-	-	0.615	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.499	-	-	0.560	-	
	Back facing phantom Without headset With CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.333	0.317	0.271	0.374	0.356	0.304	
10MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.56	23.58	23.56	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.56	23.58	23.56	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.43	22.49	22.66	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.43	22.49	22.66	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE700 (Band 17) Body SAR Table continues)

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(LTE700 (Band 17) Body SAR Table continues)

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.70	22.69	22.70	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.70	22.69	22.70	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.397	-	-	0.445	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.338	-	-	0.379	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.390	-	-	0.438	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.354	-	-	0.397	-	
10MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.66	22.57	22.43	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.66	22.57	22.43	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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850MHz Band Body SAR results

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
2-slot GPRS	Tuning Target + Tolerance [dBm]			30.85			Scaling factor*			
	Conducted Slot Average Power [dBm]			31.78	32.02	31.60	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			25.76	26.00	25.58	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	38
			Full SAR	0.603	0.613	0.578	0.677	**0.688**	0.649	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.524	-	-	0.588	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.593	-	-	0.665	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.530	-	-	0.595	-	
	Back facing phantom, without headset, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.348	0.349	0.371	0.390	0.392	0.416	

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]			24.36	24.49	24.38	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			24.36	24.49	24.38	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	39
			Full SAR	0.602	0.595	0.609	0.675	0.668	**0.683**	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.513	-	-	0.576	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.574	-	-	0.644	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.522	-	-	0.586	-	
	Back facing phantom, without headset, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.390	0.385	0.377	0.438	0.432	0.423	

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LTE850 (Band 5) Body SAR results

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.66	23.70	23.82	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.66	23.70	23.82	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.54	24.05	23.58	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.54	24.05	23.58	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.553	-	-	0.620	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	40
			Full SAR	0.375	0.559	0.423	0.421	**0.627**	0.475	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.552	-	-	0.619	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.451	-	-	0.506	-	
	Back facing phantom Headset WH-208, With CC-3065		Estimated SAR		-		-	-	-	-
			Full SAR	0.269	0.301	0.260	0.302	0.338	0.292	
10MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.96	23.53	23.57	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.96	23.53	23.57	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.26	22.73	22.48	0.59	0.50	0.50	dB
	Time-averaged power [dBm]			22.26	22.73	22.48	1.15	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE850 (Band 5) Body SAR Table continues)

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Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.32	22.92	22.33	0.53	0.50	0.52	dB
	Time-averaged power [dBm]			22.32	22.92	22.33	1.13	1.12	1.13	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.434	-	-	0.487	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.437	-	-	0.490	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.427	-	-	0.479	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.351	-	-	0.394	-	
10MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.50	22.67	22.37	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.50	22.67	22.37	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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WCDMA1700/2100 Body SAR results

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
WCDMA	Tuning Target + Tolerance [dBm]			23.85			Scaling factor*			
	Conducted Power [dBm]			24.42	24.44	24.44	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			24.42	24.44	24.44	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.717	0.764	0.772	0.804	0.857	0.866	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.749	0.798	0.794	0.840	0.895	0.891	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.750	0.811	0.840	0.842	0.910	0.942	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	41
			Full SAR	0.767	0.866	0.887	0.861	0.972	**0.995**	
	Display facing phantom Headset WH-208, With CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.679	0.642	0.574	0.762	0.720	0.644	
	Repeated SAR: Display facing phantom Headset WH-208		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.846	-	-	0.949	

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LTE1700/2100 (Band 4) Body SAR results

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.71	23.79	24.00	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.71	23.79	24.00	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.636	-	-	0.714	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.720	-	-	0.808	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	
20MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.65	24.07	23.41	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.65	24.07	23.41	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.718	-	-	0.806	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	42
			Full SAR	0.660	0.732	0.704	0.741	**0.821**	0.790	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.659	-	-	0.739	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.680	-	-	0.763	-	
	Back facing phantom Headset WH-208, With CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.417	0.479	0.397	0.468	0.537	0.445	

(LTE1700/2100 (Band 4) Body SAR Table continues)

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(LTE1700/2100 (Band 4) Body SAR Table continues)

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz 1RB 100% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.85	23.62	23.25	0.50	0.50	0.60	dB
	Time-averaged power [dBm]			23.85	23.62	23.25	1.12	1.12	1.15	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.677	-	-	0.760	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.674	-	-	0.756	-	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	
20MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.36	22.68	22.44	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.36	22.68	22.44	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.36	22.69	22.22	0.50	0.50	0.63	dB
	Time-averaged power [dBm]			22.36	22.69	22.22	1.12	1.12	1.16	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.529	-	-	0.594	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.534	-	-	0.599	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.510	-	-	0.572	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.496	-	-	0.557	-	
20MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.52	22.53	22.19	0.50	0.50	0.66	dB
	Time-averaged power [dBm]			22.52	22.53	22.19	1.12	1.12	1.16	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE1700/2100 (Band 4) Body SAR Table continues)

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(LTE1700/2100 (Band 4) Body SAR Table continues)

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 100%RB	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.37	22.53	22.32	0.50	0.50	0.53	dB
	Time-averaged power [dBm]			22.37	22.53	22.32	1.12	1.12	1.13	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.481	-	-	0.540	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.510	-	-	0.572	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	-	-	-	-	

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1900MHz Band Body SAR results

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
2-slot GPRS	Tuning Target + Tolerance [dBm]			27.85			Scaling factor*			
	Conducted Slot Average Power [dBm]			28.54	28.49	28.75	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.52	22.47	22.73	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	43
			Full SAR	0.435	0.412	0.373	**0.488**	0.462	0.419	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.345	-	-	0.387	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.392	-	-	0.440	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.390	-	-	0.438	-	
	Back facing phantom, without headset, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.198	0.204	0.192	0.222	0.229	0.215	

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]			24.21	24.35	24.49	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			24.21	24.35	24.49	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	
			Full SAR	-	0.582	-	-	0.653	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	44
			Full SAR	0.549	0.636	0.671	0.616	0.714	**0.753**	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.604	-	-	0.678	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.609	-	-	0.683	-	
	Back facing phantom, Headset WH-208, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.397	0.404	0.380	0.445	0.453	0.426	

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LTE1900 (Band 2) Body SAR results

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 1RB 0% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.75	23.77	23.83	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.75	23.77	23.83	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 1RB 50% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.43	23.95	23.49	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.43	23.95	23.49	1.12	1.12	1.12	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.532	-	-	0.597	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	45
			Full SAR	0.408	0.551	0.464	0.458	**0.618**	0.521	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.493	-	-	0.553	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.517	-	-	0.580	-	
	Back facing phantom, Headset WH-208, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.309	0.344	0.297	0.347	0.386	0.333	
20MHz Ch BW 1RB 100% offset	Tuning Target + Tolerance [dBm]			23.35			Scaling factor*			
	Conducted Power [dBm]			23.67	23.71	23.52	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			23.67	23.71	23.52	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 50% RB 0% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.37	22.71	22.39	0.50	0.50	0.50	dB
	Time-averaged power [dBm]			22.37	22.71	22.39	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE1900 (Band 2) Body SAR Table continues)

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(LTE1900 (Band 2) Body SAR Table continues)

Mode	Test configuration		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 50% RB 50% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.18	22.80	22.33	0.67	0.50	0.52	dB
	Time-averaged power [dBm]			22.18	22.80	22.33	1.17	1.12	1.13	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.424	-	-	0.476	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.410	-	-	0.460	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.355	-	-	0.398	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.388	-	-	0.435	-	
20MHz Ch BW 50% RB 100% offset	Tuning Target + Tolerance [dBm]			22.35			Scaling factor*			
	Conducted Power [dBm]			22.34	22.64	22.41	0.51	0.50	0.50	dB
	Time-averaged power [dBm]			22.34	22.64	22.41	1.12	1.12	1.12	Lin
				No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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2450MHz Body SAR results**

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 1 2412 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz	Ch 1 2412 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]			16.17	16.35	16.58	1.83	1.65	1.42	dB
	Time-averaged power [dBm]			16.17	16.35	16.58	1.52	1.46	1.39	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.052	-	-	0.076	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.047	-	-	0.069	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	46
			Full SAR	0.077	0.083	0.078	0.117	**0.122**	0.107	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	0.082	-	-	0.119	-	
	Display facing phantom, without headset, with CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.068	0.059	0.051	0.103	0.086	0.071	

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

Mode	Test configurtion		SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Plot #
				Ch 40 5200.0 MHz	Ch 48 5240.0 MHz	Ch 56 5280.0 MHz	Ch 64 5320.0 MHz	Ch 40 5200.0 MHz	Ch 48 5240.0 MHz	Ch 56 5280.0 MHz	Ch 64 5320.0 MHz	
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]			17.00				Scaling factor*				
	Conducted Power [dBm]			16.25	16.53	16.61	16.44	1.25	0.97	0.89	1.06	dB
	Time-averaged power [dBm]			16.25	16.53	16.61	16.44	1.33	1.25	1.23	1.28	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	47
			Full SAR	0.106	0.107	0.068	0.072	**0.141**	0.134	0.084	0.092	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.061	-	-	0.061	0.081	-	-	0.078	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.014	-	-	0.012	0.019	-	-	0.015	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.009	-	-	0.013	0.012	-	-	0.017	
	Back facing phantom, Without headset, CC-3065		Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.082	-	-	0.091	0.109	-	-	0.116	

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5000MHz Body SAR results
5470–5725 MHz**

Mode	Test configurtion		SAR measurement	Measured 1g SAR [W/kg]				Reported* 1g SAR [W/kg]				Plot #
				Ch 108 5540.0 MHz	Ch 120 5600.0 MHz	Ch 128 5640.0 MHz	Ch 136 5680.0 MHz	Ch 108 5540.0 MHz	Ch 120 5600.0 MHz	Ch 128 5640.0 MHz	Ch 136 5680.0 MHz	
WLAN a-mode OFDM 6 Mbps	Tuning Target + Tolerance [dBm]			17.00				Scaling factor*				
	Conducted Power [dBm]			16.28	16.73	16.58	16.59	1.22	0.77	0.92	0.91	dB
	Time-averaged power [dBm]			16.28	16.73	16.58	16.59	1.32	1.19	1.24	1.23	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.048	0.040	0.031	0.031	0.064	0.048	0.038	0.038	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.053	-	-	-	0.070	-	-	-	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.013	-	-	-	0.017	-	-	-	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.003	-	-	-	0.003	-	-	-	
	Back facing hantom, Headset WH-208, With CC-3065		Estimated SAR	-	-	-	-	-	-	-	-	-
			Full SAR	0.026	-	-	-	0.034	-	-	-	

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5000MHz Body SAR results
5725–5850 MHz**

Mode	Device orientation		SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
				Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 161 5805.0 MHz	Ch 149 5745.0 MHz	Ch 153 5765.0 MHz	Ch 161 5805.0 MHz	
WLAN b-mode DSSS 1 Mbps	Tuning Target + Tolerance [dBm]			17.00			Scaling factor*			
	Conducted Power [dBm]			16.75	16.75	16.76	0.75	0.75	0.74	dB
	Time-averaged power [dBm]			16.75	16.75	16.76	1.19	1.19	1.19	Lin
	Back facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	0.023	0.025	0.029	0.027	0.029	0.034	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.019	-	-	0.023	
	Display facing phantom	Without headset	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.019	-	-	0.022	
		Headset WH-208	Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.003	-	-	0.004	
	Back facing phantom, Without headset, With CC-3065		Estimated SAR	-	-	-	-	-	-	-
			Full SAR	-	-	0.045	-	-	0.053	

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

Test configuration	*Reported Max. 1g SAR results										
	WLAN 2450**	WLAN 5000**	LTE 700	2-slot GPRS 850	WCDMA 850	LTE 850	WCDMA 1700/ 2100	LTE 1700/ 2100	2-slot GPRS 1900	WCDMA 1900	LTE 1900
Body: Back facing phantom, Without Headset	0.076	0.141	0.625	0.688	0.683	0.620	0.866	0.806	0.488	0.653	0.597
Body: Back facing phantom, Headset WH-208	0.069	0.081	0.525	0.588	0.576	0.627	0.895	0.821	0.387	0.753	0.618
Body: Display facing phantom, Without Headset	0.122	0.022	0.615	0.665	0.644	0.619	0.942	0.739	0.440	0.678	0.553
Body: Display facing phantom, Headset WH-208	0.119	0.017	0.560	0.595	0.586	0.506	0.995	0.763	0.438	0.683	0.580

**SAR data taken from FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892.

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

Test configuration	*Reported Max. 1g SAR results								
	LTE700 +WLAN 2450	2-slot GPRS850 +WLAN 2450	WCDMA 850 +WLAN 2450	LTE850 +WLAN 2450	WCDMA 1700/ 2100 +WLAN 2450	LTE 1700/ 2100 +WLAN 2450	2-slot GPRS1900 + WLAN 2450	WCDMA 1900 +WLAN 2450	LTE1900 +WLAN 2450
Body: Back facing phantom, Without Headset	0.701	0.764	0.759	0.696	0.942	0.882	**0.564**	0.729	0.673
Body: Back facing phantom, Headset WH-208	0.594	0.657	0.645	0.696	0.964	**0.890**	0.456	**0.822**	0.687
Body: Display facing phantom, Without Headset	**0.737**	**0.787**	**0.766**	**0.741**	1.06	0.861	0.562	0.800	0.675
Body: Display facing phantom, Headset WH-208	0.679	0.714	0.705	0.625	**1.11**	0.882	0.557	0.802	**0.699**
Test configuration	**LTE700 +WLAN 5000**	**2-slot GPRS850 +WLAN 5000**	**WCDMA 850 +WLAN 5000**	**LTE850 +WLAN 5000**	**WCDMA 1700/ 2100 +WLAN 5000**	**LTE 1700/ 2100 +WLAN 5000**	**2-slot GPRS1900 + WLAN 5000**	**WCDMA 1900 +WLAN 5000**	**LTE1900 +WLAN 5000**
Body: Back facing phantom, Without Headset	**0.766**	**0.829**	**0.824**	**0.761**	1.01	**0.947**	**0.629**	0.794	**0.738**
Body: Back facing phantom, Headset WH-208	0.606	0.669	0.657	0.708	0.976	0.902	0.468	**0.834**	0.699
Body: Display facing phantom, Without Headset	0.637	0.687	0.666	0.641	0.964	0.761	0.462	0.700	0.575
Body: Display facing phantom, Headset WH-208	0.577	0.612	0.603	0.523	**1.01**	0.780	0.455	0.700	0.597

Note: Simultaneous Transmission Procedures as described in KDB447498 are not required for this product.

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

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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 body SAR results – SPEAG Combined Multiband algorithm results

Test configuration	*Reported Max. 1g SAR results								
	LTE700 +WLAN 2450	2-slot GPRS850 +WLAN 2450	WCDMA 850 +WLAN 2450	LTE850 +WLAN 2450	WCDMA 1700/ 2100 +WLAN 2450	LTE 1700/ 2100 +WLAN 2450	2-slot GPRS1900 + WLAN 2450	WCDMA 1900 +WLAN 2450	LTE1900 +WLAN 2450
Body: Back facing phantom, Without Headset	-	-	-	-	-	-	0.488	-	-
Body: Back facing phantom, Headset WH-208	-	-	-	-	-	0.794	-	0.763	-
Body: Display facing phantom, Without Headset	0.636	0.694	0.665	0.650	-	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	-	-	-	0.906	-	-	-	0.567
Test configuration	**LTE700 +WLAN 5000**	**2-slot GPRS850 +WLAN 5000**	**WCDMA 850 +WLAN 5000**	**LTE850 +WLAN 5000**	**WCDMA 1700/ 2100 +WLAN 5000**	**LTE 1700/ 2100 +WLAN 5000**	**2-slot GPRS1900 + WLAN 5000**	**WCDMA 1900 +WLAN 5000**	**LTE1900 +WLAN 5000**
Body: Back facing phantom, Without Headset	0.627	0.715	0.676	0.631	-	0.750	0.465	-	0.579
Body: Back facing phantom, Headset WH-208	-	-	-	-	-	-	-	0.736	-
Body: Display facing phantom, Without Headset	-	-	-	-	-	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	-	-	-	0.891	-	-	-	-

Note: Plots #48-65

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

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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 or WLAN band.
Plots of the Measurement scans are given in Appendix B.2.

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

LTE700 (Band 17) Wireless Router SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 1RB 0 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.58	23.53	23.47	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.58	23.53	23.47	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 1RB 50 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.88	24.22	23.62	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.88	24.22	23.62	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	66
		Full SAR	0.675	0.711	0.653	0.757	**0.798**	0.733	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.665	-	-	0.746	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.031	-	-	0.035	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.249	-	-	0.279	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.397	-	-	0.445	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.365	-	-	0.410	-	
	Back facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.432	0.471	0.418	0.485	0.528	0.469	

(LTE700 (Band 17) WR SAR Table continues)

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(LTE700 (Band 17) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz	
10MHz Ch BW 1RB 100 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.56	23.58	23.56	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.56	23.58	23.56	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 0 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.43	22.49	22.66	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.43	22.49	22.66	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
10MHz Ch BW 50% RB 50 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.70	22.69	22.70	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.70	22.69	22.70	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.519	-	-	0.582	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.497	-	-	0.558	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.022	-	-	0.025	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.178	-	-	0.200	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.287	-	-	0.322	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.262	-	-	0.294	
10MHz Ch BW 50% RB 100 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.66	22.57	22.43	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.66	22.57	22.43	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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850MHz Band Wireless Router SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
2-slot GPRS	Tuning Target + Tolerance [dBm]		30.85			Scaling factor*			
	Conducted Slot Average Power [dBm]		31.78	32.02	31.60	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		25.76	26.00	25.58	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	67
		Full SAR	0.784	0.778	0.717	0.880	0.873	0.804	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.690	-	-	0.774	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.039	-	-	0.044	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.390	-	-	0.438	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.425	-	-	0.477	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.628	-	-	0.705	-	
	Back facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.451	0.439	0.407	0.506	0.493	0.457	

(850MHz WR SAR Table continues)

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(850MHz WR SAR Table continues)

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		24.36	24.49	24.38	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		24.36	24.49	24.38	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	68
		Full SAR	0.866	0.831	0.846	**0.972**	0.932	0.949	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.752	0.742	0.745	0.844	0.833	0.836	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.043	-	-	0.048	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.367	-	-	0.412	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.546	-	-	0.613	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.610	-	-	0.684	-	
	Back facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.511	0.508	0.496	0.573	0.570	0.557	
	Repeated SAR: Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.827	-	-	0.928	-	-	

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LTE850 (Band 5) Wireless Router SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 1RB 0 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.66	23.70	23.82	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.66	23.70	23.82	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.710	-	-	0.797	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
10MHz Ch BW 1RB 50 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.54	24.05	23.58	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.54	24.05	23.58	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	69
		Full SAR	0.662	0.757	0.663	0.743	**0.849**	0.744	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.705	-	-	0.791	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.041	-	-	0.045	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.254	-	-	0.285	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.609	-	-	0.683	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.587	-	-	0.659	-	
	Back facing phantom With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.403	0.427	0.365	0.452	0.479	0.410	

(LTE850 (Band 5) WR SAR Table continues)

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(LTE850 (Band 5) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 1RB 100 % offset	Tuning Target + Tolerance [dBm]		23.35			Scaling factor*			
	Conducted Power [dBm]		23.96	23.53	23.57	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		23.96	23.53	23.57	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.715	-	-	0.802	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
10MHz Ch BW 50% RB 0 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.26	22.73	22.48	0.59	0.50	0.50	dB
	Time-averaged power [dBm]		22.26	22.73	22.48	1.15	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE850 (Band 5) WR SAR Table continues)

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(LTE850 (Band 5) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz	
10MHz Ch BW 50% RB 50 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.32	22.92	22.33	0.53	0.50	0.52	dB
	Time-averaged power [dBm]		22.32	22.92	22.33	1.13	1.12	1.13	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.582	-	-	0.653	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.549	-	-	0.616	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.034	-	-	0.038	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.198	-	-	0.222	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.476	-	-	0.534	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.453	-	-	0.508	-	
10MHz Ch BW 50% RB 100 % offset	Tuning Target + Tolerance [dBm]		22.35			Scaling factor*			
	Conducted Power [dBm]		22.50	22.67	22.37	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		22.50	22.67	22.37	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

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WCDMA1700/2100 Wireless Router SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz	
WCDMA	Tuning Target + Tolerance [dBm]		19.55			Scaling factor*			
	Conducted Power [dBm]		20.08	19.95	20.01	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.08	19.95	20.01	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.568	-	-	0.637	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.656	-	-	0.736	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.129	-	-	0.145	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.879	0.974	1.11	0.986	1.09	1.25	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.194	-	-	0.218	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.023	-	-	0.026	-	
	Bottom facing phantom With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.935	0.819	0.817	1.05	0.919	0.917	
	Repeated SAR: Bottom facing phantom	Estimated SAR	-	-	-	-	-	-	70
		Full SAR	-	-	1.12	-	-	**1.26**	

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LTE1700/2100 (Band 4) Wireless Router SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 1RB 0 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.28	20.53	20.78	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.28	20.53	20.78	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.731	-	-	0.820	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.737	-	-	0.827	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.109	-	-	0.122	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	1.10	1.30	-	1.23	1.46	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.235	-	-	0.264	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.023	-	-	0.025	
20MHz Ch BW 1RB 50 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.31	20.77	20.32	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.31	20.77	20.32	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.777	-	-	0.872	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.771	-	-	0.865	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	71
		Full SAR	1.07	1.31	1.180	1.20	**1.47**	1.32	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom facing phantom With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.777	0.862	0.736	0.872	0.967	0.826	
	Repeated SAR: Bottom facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	1.16	-	-	1.30	-	

(LTE1700/2100 (Band 4) WR SAR Table continues)

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(LTE1700/2100 (Band 4) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 1RB 100 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.47	20.30	20.01	0.50	0.50	0.54	dB
	Time-averaged power [dBm]		20.47	20.30	20.01	1.12	1.12	1.13	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.735	-	-	0.825	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.783	-	-	0.879	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	1.20	1.17	1.06	1.35	1.31	1.20	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
20MHz Ch BW 50% RB 0 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.09	20.49	20.34	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.09	20.49	20.34	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.661	-	-	0.742	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	0.639	-	-	0.717	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	1.22	-	-	1.37	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(LTE1700/2100 (Band 4) WR SAR Table continues)

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(LTE1700/2100 (Band 4) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 50% RB 50 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.01	20.57	20.09	0.54	0.50	0.50	dB
	Time-averaged power [dBm]		20.01	20.57	20.09	1.13	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.751	-	-	0.843	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.724	-	-	0.812	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.121	-	-	0.136	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	1.26	-	-	1.41	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.227	-	-	0.255	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.021	-	-	0.023	-	
20MHz Ch BW 50% RB 100 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.26	20.35	19.96	0.50	0.50	0.59	dB
	Time-averaged power [dBm]		20.26	20.35	19.96	1.12	1.12	1.15	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.705	-	-	0.791	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.739	-	-	0.829	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	1.12	-	-	1.26	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(LTE1700/2100 (Band 4) WR SAR Table continues)

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(LTE1700/2100 (Band 4) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	Ch 20050 1720.0 MHz	Ch 23175 1732.5 MHz	Ch 20300 1745.0 MHz	
20MHz Ch BW 100% RB	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.16	20.43	20.25	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.16	20.43	20.25	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.713	-	-	0.800	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.739	-	-	0.829	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	1.22	-	-	1.37	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

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1900MHz Band Wireless Router SAR results

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
1-slot GPRS	Tuning Target + Tolerance [dBm]		29.55			Scaling factor*			
	Conducted Slot Average Power [dBm]		29.71	29.76	30.17	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.68	20.73	21.14	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.486	-	-	0.545	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(1900MHz WR SAR Table continues)

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(1900MHz WR SAR Table continues)

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
2-slot GPRS	Tuning Target + Tolerance [dBm]		27.05			Scaling factor*			
	Conducted Slot Average Power [dBm]		27.28	27.46	27.54	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		21.26	21.44	21.52	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.528	-	-	0.592	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.632	-	-	0.709	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.032	-	-	0.036	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	72
		Full SAR	1.34	1.28	1.10	1.50	1.44	1.23	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.399	-	-	0.448	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.022	-	-	0.025	-	
	Bottom edge facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.796	0.785	0.686	0.893	0.881	0.770	
	Repeated SAR: Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	1.26	-	-	1.41	-	-	
3-slot GPRS	Tuning Target + Tolerance [dBm]		25.05			Scaling factor*			
	Conducted Slot Average Power [dBm]		25.32	25.46	25.62	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		21.06	21.20	21.36	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.505	-	-	0.567	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(1900MHz WR SAR Table continues)

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(1900MHz WR SAR Table continues)

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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	
4-slot GPRS	Tuning Target + Tolerance [dBm]		24.05			Scaling factor*			
	Conducted Slot Average Power [dBm]		24.20	24.28	24.47	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		21.19	21.27	21.46	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.517	-	-	0.580	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

(1900MHz WR SAR Table continues)

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(1900MHz WR SAR Table continues)

Mode	Device orientation	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		20.55			Scaling factor*			
	Conducted Power [dBm]		20.77	21.03	21.05	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.77	21.03	21.05	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.475	-	-	0.533	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.527	-	-	0.591	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.031	-	-	0.034	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.922	1.08	1.14	1.04	1.21	1.28	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.373	-	-	0.419	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.031	-	-	0.034	-	
	Bottom edge facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.770	0.661	0.610	0.864	0.742	0.684	
	Repeated SAR: Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	73
		Full SAR	-	-	1.16	-	-	**1.30**	

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LTE1900 (Band 2) Wireless Router SAR results

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 1RB 0 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.54	20.75	20.51	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.54	20.75	20.51	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.883	-	0.897	0.991	-	1.01	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
20MHz Ch BW 1RB 50 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.38	20.78	20.18	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.38	20.78	20.18	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.412	-	-	0.462	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.457	-	-	0.513	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.047	-	-	0.052	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	74
		Full SAR	0.846	0.983	0.865	0.949	1.10	0.971	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.697	-	-	0.782	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.026	-	-	0.029	-	
	Bottom edge facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.597	0.592	0.452	0.670	0.664	0.507	
	Repeated SAR: Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.840	-	-	0.942	-	

(LTE1900 (Band 2) WR SAR Table continues)

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(LTE1900 (Band 2) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 1RB 100 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.52	20.51	20.10	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.52	20.51	20.10	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						
20MHz Ch BW 50% RB 0 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.17	20.53	20.22	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.17	20.53	20.22	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.400	-	-	0.449	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.436	-	-	0.489	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.040	-	-	0.045	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.947	0.823	-	1.06	0.923	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.523	-	-	0.587	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.021	-	-	0.023	-	
20MHz Ch BW 50% RB 50 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.05	20.51	20.04	0.50	0.50	0.51	dB
	Time-averaged power [dBm]		20.05	20.51	20.04	1.12	1.12	1.12	Lin
			No testing required for this CBW/RB/RB offset configuration according to KDB 941225 D05 SAR for LTE Devices v02r02						

(LTE1900 (Band 2) WR SAR Table continues)

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(LTE1900 (Band 2) WR SAR Table continues)

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g SAR [W/kg]			Plot #
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz	
20MHz Ch BW 50% RB 100 % offset	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.18	20.36	20.10	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.18	20.36	20.10	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.913	-	-	1.02	-	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
20MHz Ch BW 100% RB	Tuning Target + Tolerance [dBm]		20.05			Scaling factor*			
	Conducted Power [dBm]		20.23	20.49	20.10	0.50	0.50	0.50	dB
	Time-averaged power [dBm]		20.23	20.49	20.10	1.12	1.12	1.12	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.879	-	-	0.986	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	-	-	-	-	-	

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2450MHz Wireless Router SAR results**

Mode	Test configuration	SAR measurement	Measured 1g SAR [W/kg]			Reported* 1g 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]		16.17	16.35	16.58	1.83	1.65	1.42	dB
	Time-averaged power [dBm]		16.17	16.35	16.58	1.52	1.46	1.39	Lin
	Back facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.107	-	-	0.156	-	
	Display facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.142	-	-	0.208	-	
	Top edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.076	-	-	0.111	-	
	Bottom edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.005	-	-	0.008	-	
	Left edge facing phantom	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	-	0.009	-	-	0.013	-	
	Right edge facing phantom	Estimated SAR	-	-	-	-	-	-	75
		Full SAR	0.227	0.222	0.139	**0.346**	0.325	0.193	
	Right edge facing phantom, With CC-3065	Estimated SAR	-	-	-	-	-	-	-
		Full SAR	0.164	0.187	0.137	0.250	0.273	0.190	

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Simultaneous transmissions: Combined Wireless Router SAR results – Individual band Max results

Test configuration	*Reported Max. 1g SAR results									
	WLAN 2450**	LTE 700	2-slot GPRS 850	WCDMA 850	LTE 850	WCDMA 1700/ 2100	LTE 1700/ 2100	2-slot GPRS 1900	WCDMA 1900	LTE 1900
Back facing phantom	0.156	0.798	0.880	0.972	0.849	0.637	0.872	0.592	0.533	0.462
Display facing phantom	0.208	0.746	0.774	0.844	0.791	0.736	0.879	0.709	0.591	0.513
Top edge facing phantom	0.111	0.035	0.044	0.048	0.045	0.145	0.138	0.036	0.034	0.052
Bottom edge facing phantom	0.008	0.279	0.438	0.412	0.285	1.26	1.47	1.50	1.30	1.10
Left edge facing phantom	0.013	0.445	0.477	0.613	0.683	0.218	0.265	0.448	0.419	0.782
Right edge facing phantom	0.346	0.410	0.705	0.684	0.659	0.026	0.025	0.025	0.034	0.029

**SAR data taken from FCC_RM-892_09 for RM-892 / FCC ID: PYARM-892.

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

Test configuration	*Reported Max. 1g SAR results								
	LTE 850 + WLAN 2450	2-slot GPRS 850 + WLAN 2450	WCDMA 850 + WLAN 2450	LTE 850 + WLAN 2450	WCDMA 1700/ 2100 + WLAN 2450	LTE 1700/ 2100 + WLAN 2450	2-slot GPRS 1900 + WLAN 2450	WCDMA 1900 + WLAN 2450	LTE 1900 + WLAN 2450
Back facing phantom	**0.954**	1.04	**1.13**	**1.01**	0.793	1.03	0.748	0.689	0.618
Display facing phantom	0.954	0.982	1.05	0.999	0.944	1.09	0.917	0.799	0.721
Top edge facing phantom	0.146	0.155	0.159	0.156	0.256	0.249	0.147	0.145	0.163
Bottom edge facing phantom	0.287	0.446	0.420	0.293	**1.27**	**1.48**	**1.51**	**1.31**	**1.11**
Left edge facing phantom	0.458	0.490	0.626	0.696	0.231	0.278	0.461	0.432	0.795
Right edge facing phantom	0.756	**1.05**	1.03	1.01	0.372	0.371	0.371	0.380	0.375

Note: Simultaneous Transmission Procedures as described in KDB447498 are not required for this product.

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

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

Test configuration	*Reported Max. 1g SAR results								
	LTE 850 + WLAN 2450	2-slot GPRS 850 + WLAN 2450	WCDMA 850 + WLAN 2450	LTE 850 + WLAN 2450	WCDMA 1700/ 2100 + WLAN 2450	LTE 1700/ 2100 + WLAN 2450	2-slot GPRS 1900 + WLAN 2450	WCDMA 1900 + WLAN 2450	LTE 1900 + WLAN 2450
Back facing phantom	**0.838**	-	**0.985**	**0.887**	-	-	-	-	-
Display facing phantom	-	-	-	-	-	-	-	-	-
Top edge facing phantom	-	-	-	-	-	-	-	-	-
Bottom edge facing phantom	-	-	-	-	**1.28**	**1.44**	**1.49**	**1.30**	**1.11**
Left edge facing phantom	-	-	-	-	-	-	-	-	-
Right edge facing phantom	-	**0.838**	-	-	-	-	-	-	-

Note: Plots #76-84

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

Plots of the Measurement scans are given in Appendix B.3.

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APPENDIX A: SYSTEM CHECKING SCANS

Plot #1

Date/Time: 2013-04-26 09:24:10

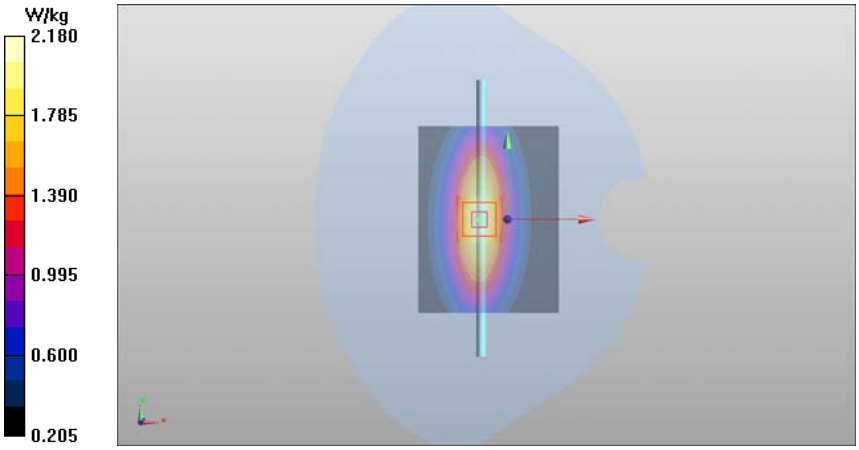
Test Laboratory: TCC Nokia
Type: D750V3; Serial: D750V3 - SN:1057

Communication System: CW750
Frequency: 750 MHz; Duty Cycle: 1:1
Medium: HSL750; Medium Notes: t=21.5C
Medium parameters used: f = 750 MHz; σ = 0.907 S/m; ε_r = 41.197; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.5, 6.5, 6.5); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: SAM3 04/03/2013; Type: QD000P40CD; Serial: TP: 1729
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.15 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.326 V/m
Peak SAR (extrapolated) = 2.96 W/kg
SAR(1 g) = 2.01 W/kg
SAR(10 g) = 1.32 W/kg
Power Drift = -0.03 dB
Maximum value of SAR (measured) = 2.18 W/kg



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Plot #2

Date/Time: 2013-04-29 07:55:35

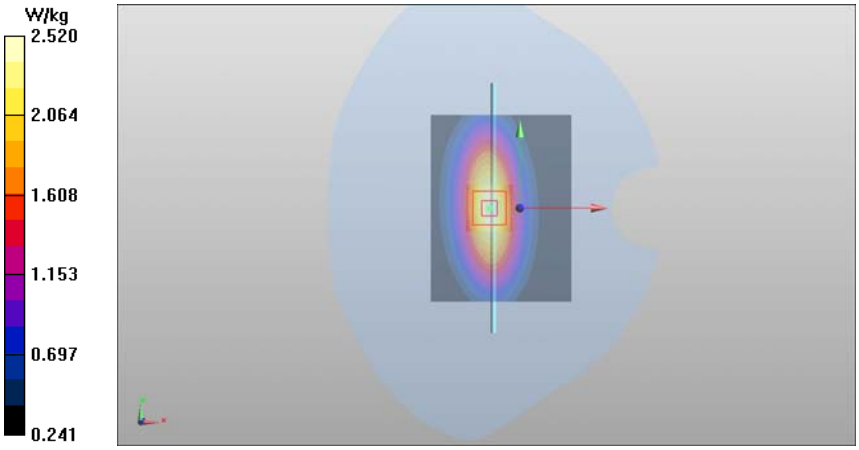
Test Laboratory: TCC Nokia
Type: Type: D835V2; Serial: D835V2 - SN:4d040

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL850; Medium Notes: T=21.5C
Medium parameters used: f = 835 MHz; σ = 0.903 S/m; ε_r = 42.01; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.22, 6.22, 6.22); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: SAM1 04/03/2013; Type: QD000P40CC; Serial: TP:1279
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.49 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.485 V/m
Peak SAR (extrapolated) = 3.39 W/kg
SAR(1 g) = 2.33 W/kg
SAR(10 g) = 1.54 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 2.52 W/kg



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Plot #3

Date/Time: 2013-04-24 06:24:46

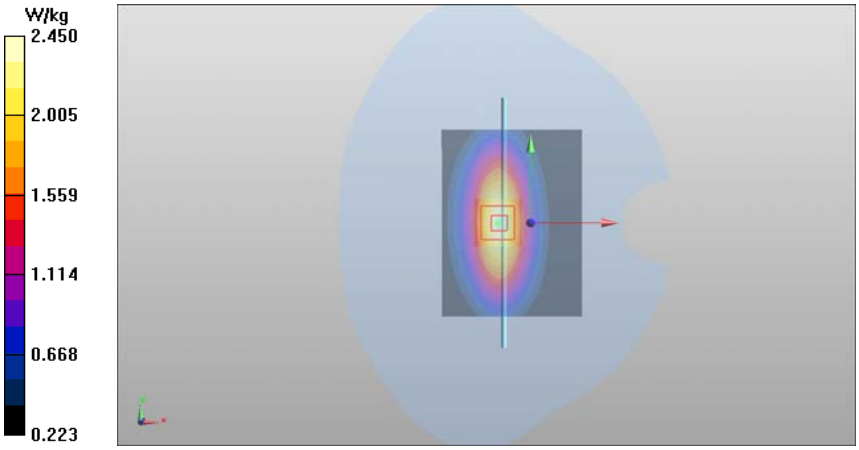
Test Laboratory: TCC Nokia
Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL850; Medium Notes: t= 21.5 C
Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ε_r = 40.824; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.41 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.088 V/m
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 2.27 W/kg
SAR(10 g) = 1.49 W/kg
Power Drift = 0.01 dB
Maximum value of SAR (measured) = 2.45 W/kg



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Plot #4

Date/Time: 2013-05-10 13:23:12

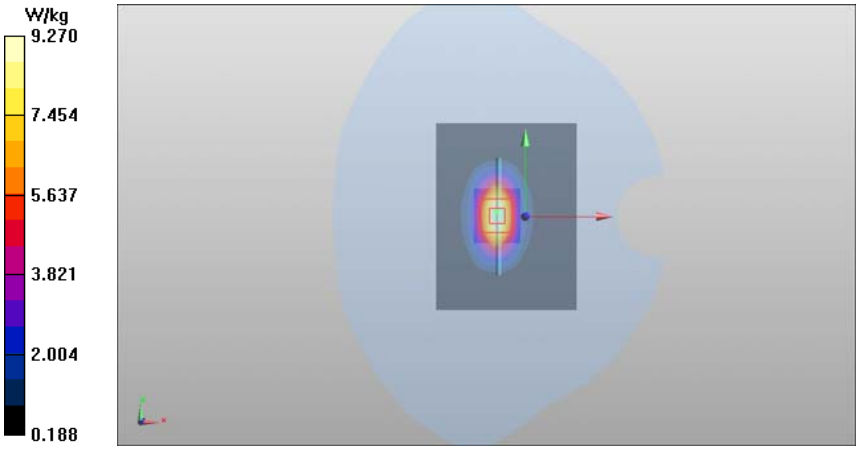
Test Laboratory: TCC Nokia
Type: D1750V2; Serial: D1750V2 - SN:1081

Communication System: CW1750
Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: HSL1750; Medium Notes: T=21.5 C
Medium parameters used: f = 1750 MHz; σ = 1.365 S/m; ε_r = 39.645; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(5.51, 5.51, 5.51); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: SAM1 04/25/2013; Type: QD000P40CD; Serial: TP: 1735
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.70 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 84.530 V/m
Peak SAR (extrapolated) = 15.0 W/kg
SAR(1 g) = 8.29 W/kg
SAR(10 g) = 4.39 W/kg
Power Drift = -0.05 dB
Maximum value of SAR (measured) = 9.27 W/kg



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Plot #5

Date/Time: 2013-05-13 16:37:22

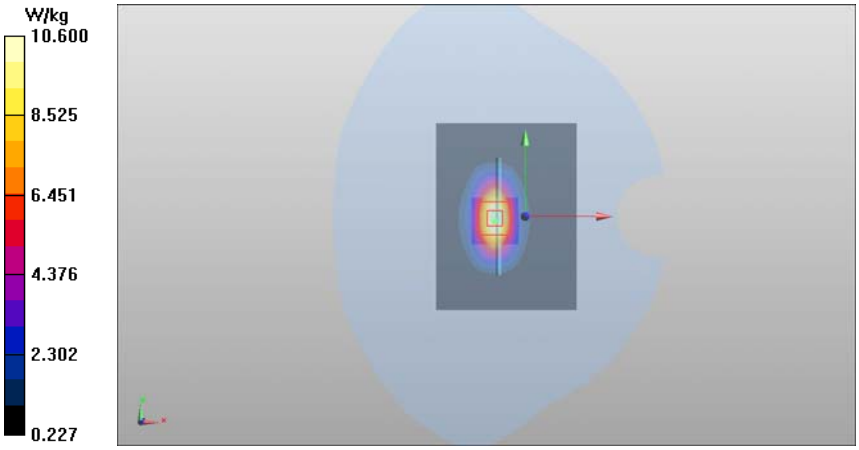
Test Laboratory: TCC Nokia
Type: D1750V2; Serial: D1750V2 - SN:1082

Communication System: CW1750
Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: HSL1800; Medium Notes: t= 21.9 C
Medium parameters used: f = 1750 MHz; σ = 1.344 S/m; ε_r = 38.811; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

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 = 88.534 V/m
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 9.43 W/kg
SAR(10 g) = 5.01 W/kg
Power Drift = -0.04 dB
Maximum value of SAR (measured) = 10.6 W/kg



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Plot #6

Date/Time: 2013-05-13 14:40:36

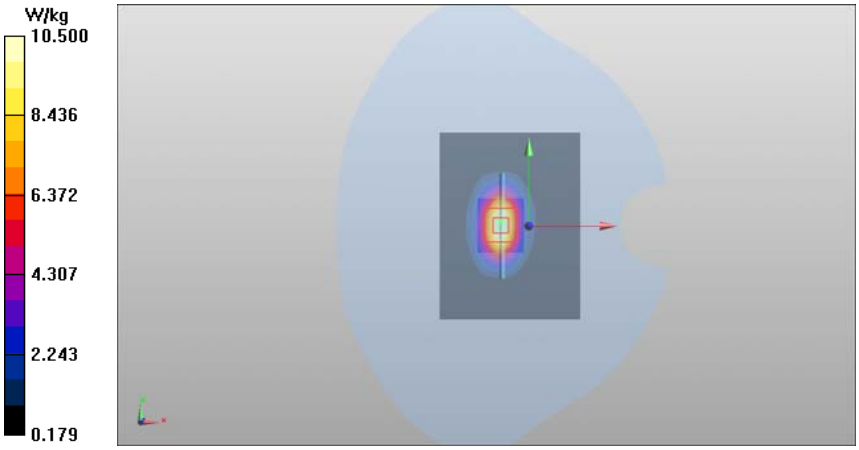
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d099

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: T=21.5C
Medium parameters used: f = 1900 MHz; σ = 1.391 S/m; ε_r = 39.276; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.2 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.909 V/m
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 9.37 W/kg
SAR(10 g) = 4.88 W/kg
Power Drift = -0.02 dB
Maximum value of SAR (measured) = 10.5 W/kg



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Plot #7

Date/Time: 2013-04-22 06:40:55

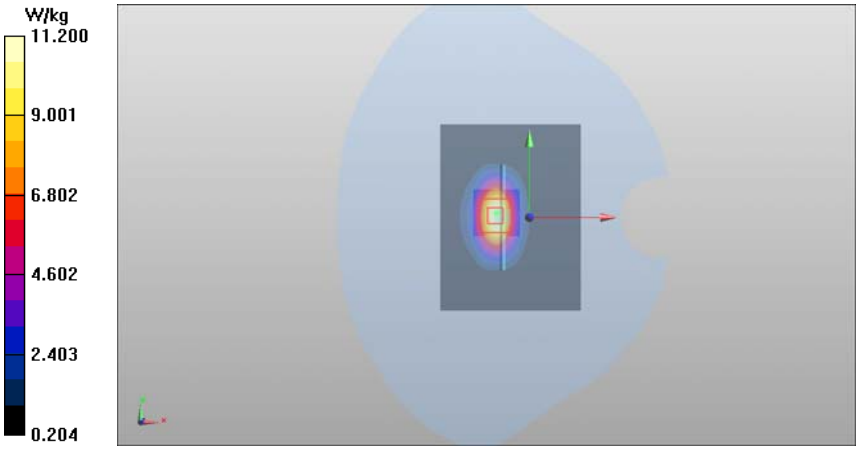
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: t= 21.5 C
Medium parameters used: f = 1900 MHz; σ = 1.38 S/m; ε_r = 38.56; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): 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 = 84.534 V/m
Peak SAR (extrapolated) = 18.9 W/kg
SAR(1 g) = 10.1 W/kg
SAR(10 g) = 5.26 W/kg
Power Drift = 0.12 dB
Maximum value of SAR (measured) = 11.2 W/kg



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Plot #8

Date/Time: 2013-05-14 16:25:43

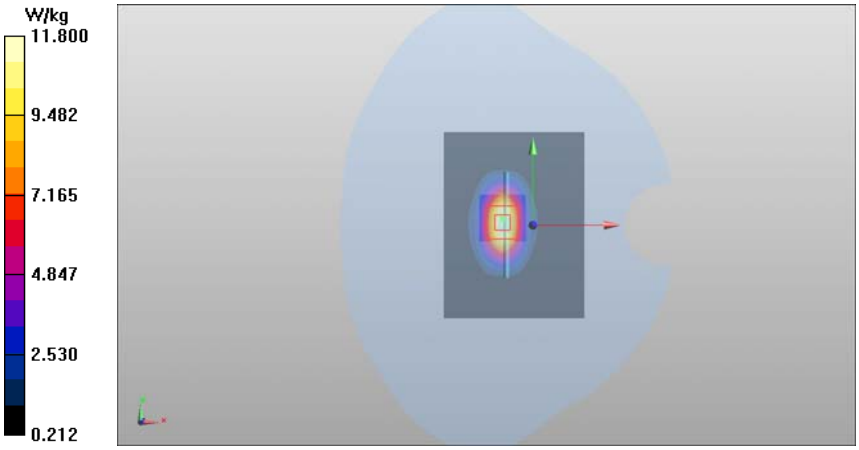
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d013

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: t= 22.3 C
Medium parameters used: f = 1900 MHz; σ = 1.384 S/m; ε_r = 38.628; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.7 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.677 V/m
Peak SAR (extrapolated) = 19.7 W/kg
SAR(1 g) = 10.6 W/kg
SAR(10 g) = 5.53 W/kg
Power Drift = -0.02 dB
Maximum value of SAR (measured) = 11.8 W/kg



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Plot #9

Date/Time: 2013-04-19 06:32:56

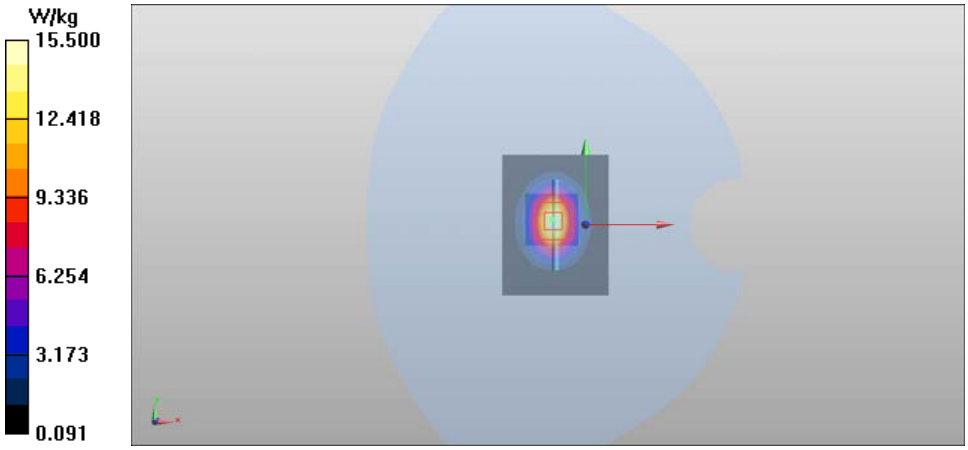
Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:729

Communication System: CW2450
Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HSL2450; Medium Notes: t= 21.3 C
Medium parameters used: f = 2450 MHz; σ = 1.803 S/m; ε_r = 37.937; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #4 SAM, SAR4 ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.7 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 93.211 V/m
Peak SAR (extrapolated) = 28.4 W/kg
SAR(1 g) = 13.5 W/kg
SAR(10 g) = 6.22 W/kg
Power Drift = 0.00 dB
Maximum value of SAR (measured) = 15.5 W/kg



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Plot #10

Date/Time: 2013-04-20 12:44:14

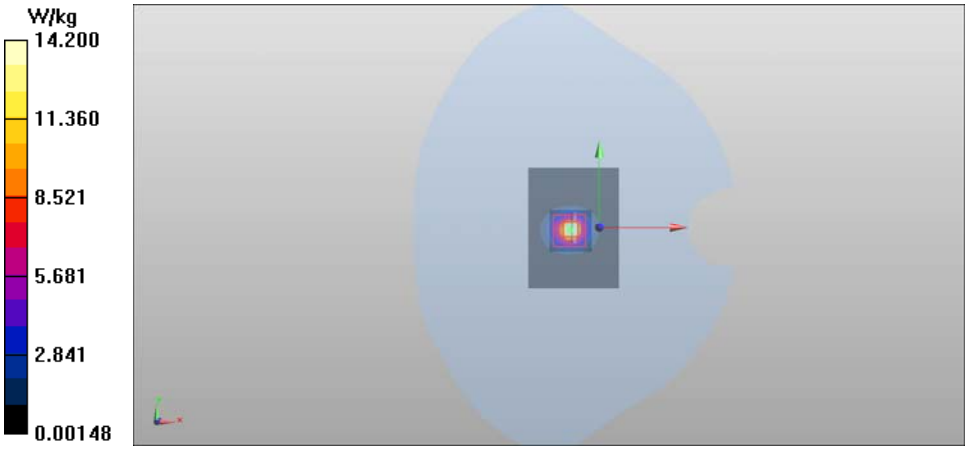
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5200
Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.0 C
Medium parameters used: f = 5200 MHz; σ = 4.476 S/m; ε_r = 35.615; ρ = 1000 kg/m^3
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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.3 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 60.886 V/m
Peak SAR (extrapolated) = 27.3 W/kg
SAR(1 g) = 7.38 W/kg
SAR(10 g) = 2.18 W/kg
Power Drift = -0.21 dB
Maximum value of SAR (measured) = 14.2 W/kg



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Plot #11

Date/Time: 2013-04-23 06:03:59

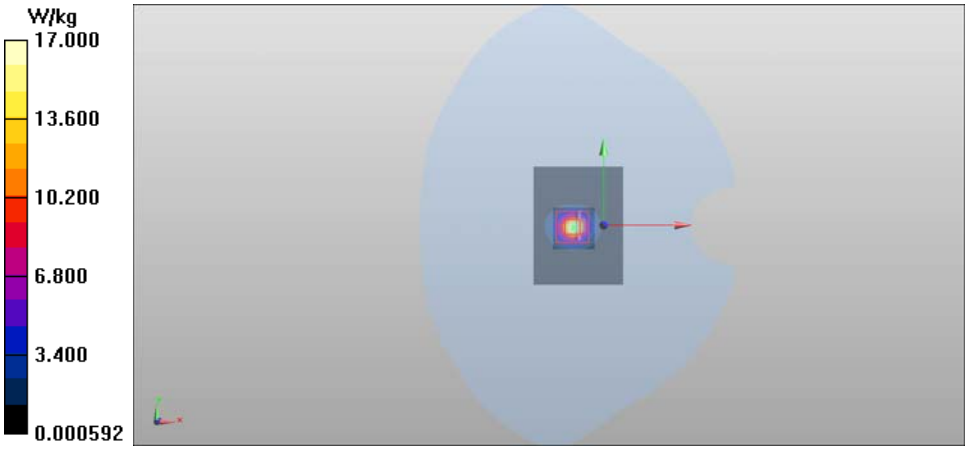
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5300
Frequency: 5300 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.7 C
Medium parameters used: f = 5300 MHz; σ = 4.678 S/m; ε_r = 36.056; ρ = 1000 kg/m^3
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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.0 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 62.397 V/m
Peak SAR (extrapolated) = 34.7 W/kg
SAR(1 g) = 8.85 W/kg
SAR(10 g) = 2.51 W/kg
Power Drift = -0.08 dB
Maximum value of SAR (measured) = 17.0 W/kg



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Plot #12

Date/Time: 2013-04-23 06:36:06

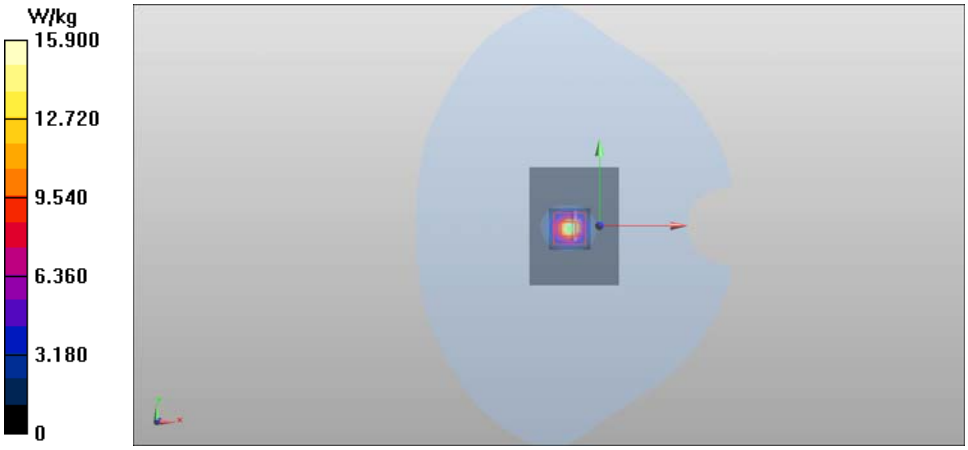
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5500
Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.7 C
Medium parameters used: f = 5500 MHz; σ = 4.886 S/m; ε_r = 35.699; ρ = 1000 kg/m^3
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 (Locations From Previous Scan Used)), 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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.5 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.438 V/m
Peak SAR (extrapolated) = 32.7 W/kg
SAR(1 g) = 8.08 W/kg
SAR(10 g) = 2.29 W/kg
Power Drift = -0.07 dB
Maximum value of SAR (measured) = 15.9 W/kg



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Plot #13

Date/Time: 2013-04-23 07:05:15

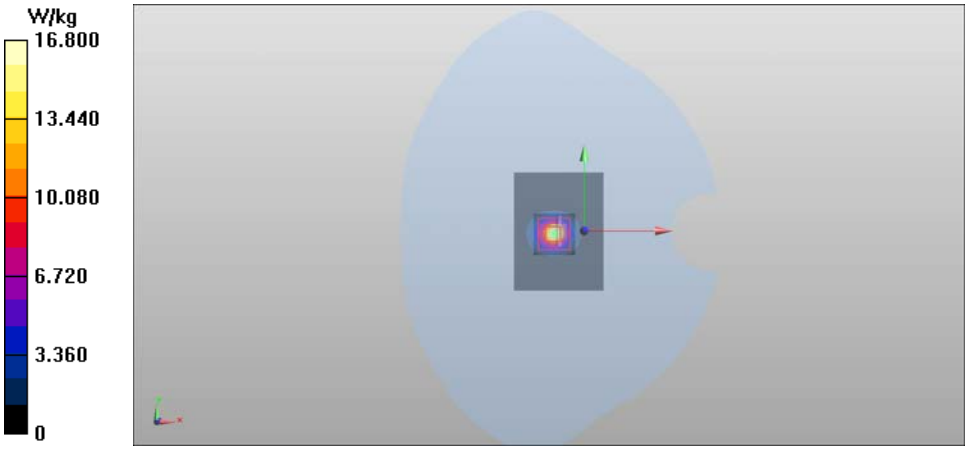
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5600
Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.7 C
Medium parameters used: f = 5600 MHz; σ = 4.981 S/m; ε_r = 35.536; ρ = 1000 kg/m^3
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 (Locations From Previous Scan Used)), 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 14.6.9 (7117)

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 = 59.319 V/m
Peak SAR (extrapolated) = 37.1 W/kg
SAR(1 g) = 8.5 W/kg
SAR(10 g) = 2.38 W/kg
Power Drift = -0.13 dB
Maximum value of SAR (measured) = 16.8 W/kg



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Plot #14

Date/Time: 2013-04-24 07:04:16

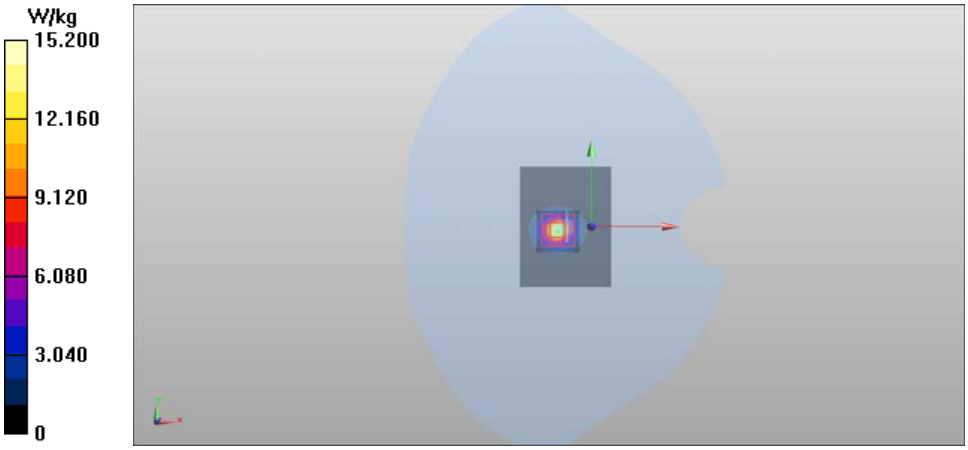
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5800
Frequency: 5800 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.6 C
Medium parameters used: f = 5800 MHz; σ = 5.143 S/m; ε_r = 35.063; ρ = 1000 kg/m^3
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 (Locations From Previous Scan Used)), 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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.2 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 49.473 V/m
Peak SAR (extrapolated) = 33.4 W/kg
SAR(1 g) = 7.67 W/kg
SAR(10 g) = 2.16 W/kg
Power Drift = -0.06 dB
Maximum value of SAR (measured) = 15.2 W/kg



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Plot #15

Date/Time: 2013-05-02 07:14:39

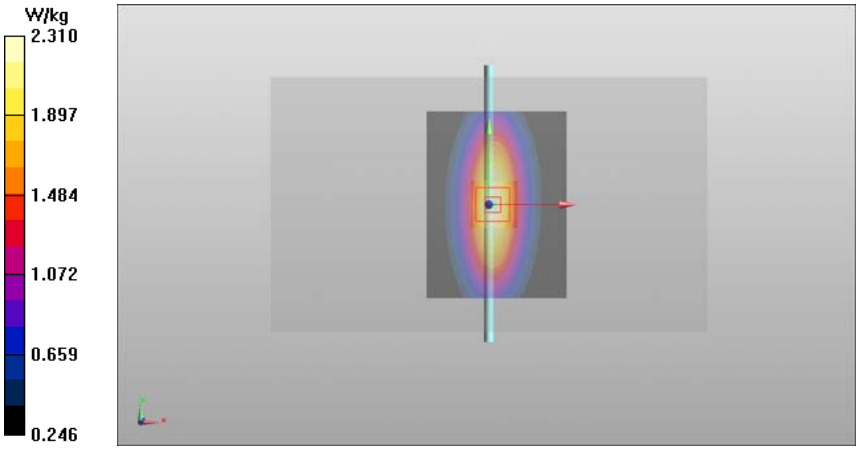
Test Laboratory: TCC Nokia
Type: D750V3; Serial: D750V3 - SN:1057

Communication System: CW750
Frequency: 750 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium Notes: T21.5
Medium parameters used: f = 750 MHz; σ = 0.962 S/m; ε_r = 55.24; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.32 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.129 V/m
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 2.14 W/kg
SAR(10 g) = 1.43 W/kg
Power Drift = 0.02 dB
Maximum value of SAR (measured) = 2.31 W/kg



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Plot #16

Date/Time: 2013-05-01 09:14:29

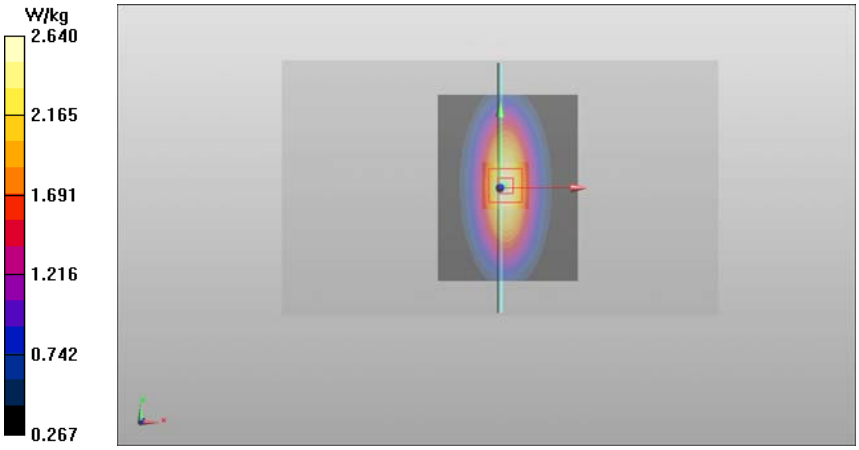
Test Laboratory: TCC Nokia
Type: D835V2; Serial: D835V2 - SN:4d040

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium Notes: T21.5
Medium parameters used: f = 835 MHz; σ = 0.999 S/m; ε_r = 55.467; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.65 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.034 V/m
Peak SAR (extrapolated) = 3.53 W/kg
SAR(1 g) = 2.44 W/kg
SAR(10 g) = 1.62 W/kg
Power Drift = 0.07 dB
Maximum value of SAR (measured) = 2.64 W/kg



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Plot #17

Date/Time: 2013-04-30 06:42:21

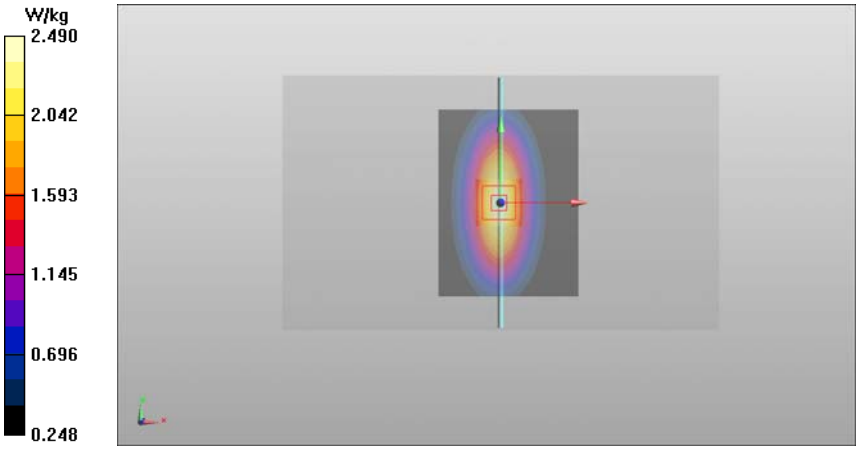
Test Laboratory: TCC Nokia
Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: BSL850; Medium Notes: t= 22.2 C
Medium parameters used: f = 835 MHz; σ = 0.973 S/m; ε_r = 52.988; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.46 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.643 V/m
Peak SAR (extrapolated) = 3.41 W/kg
SAR(1 g) = 2.32 W/kg
SAR(10 g) = 1.53 W/kg
Power Drift = 0.04 dB
Maximum value of SAR (measured) = 2.49 W/kg



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Plot #18

Date/Time: 2013-05-07 06:34:19

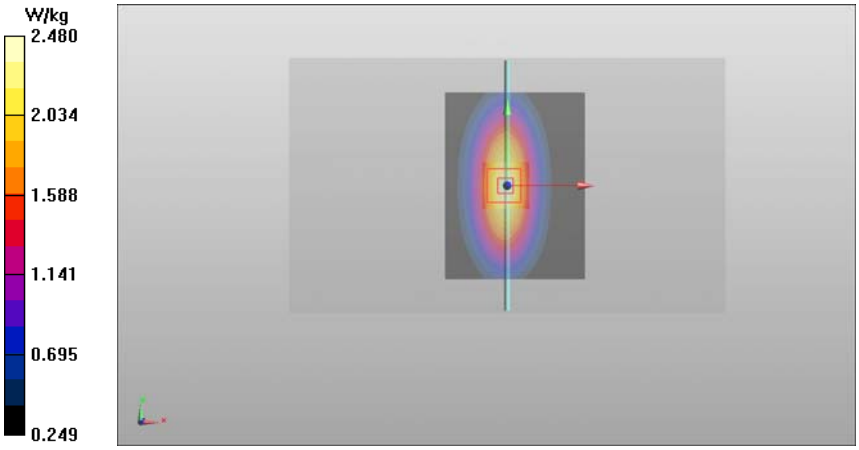
Test Laboratory: TCC Nokia
Type: D835V2; Serial: D835V2 - SN:480

Communication System: CW835
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: BSL850; Medium Notes: t= 21.8 C
Medium parameters used: f = 835 MHz; σ = 0.982 S/m; ε_r = 53.777; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3165
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.41 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.906 V/m
Peak SAR (extrapolated) = 3.35 W/kg
SAR(1 g) = 2.3 W/kg
SAR(10 g) = 1.52 W/kg
Power Drift = -0.02 dB
Maximum value of SAR (measured) = 2.48 W/kg



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Plot #19

Date/Time: 2013-05-10 07:57:58

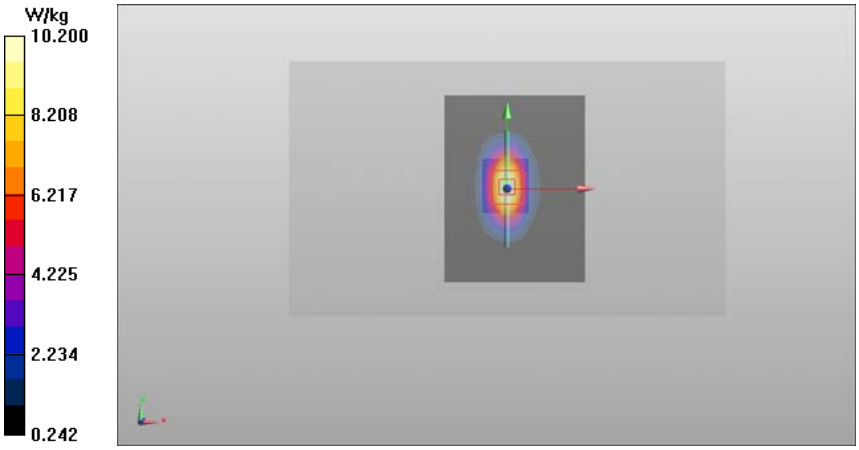
Test Laboratory: TCC Nokia
Type: D1750V2; Serial: D1750V2 - SN:1081

Communication System: CW1750
Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: MSL1800; Medium Notes: T=21.5C
Medium parameters used: f = 1750 MHz; σ = 1.435 S/m; ε_r = 52.209; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.0 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.588 V/m
Peak SAR (extrapolated) = 15.9 W/kg
SAR(1 g) = 9.13 W/kg
SAR(10 g) = 4.93 W/kg
Power Drift = -0.03 dB
Maximum value of SAR (measured) = 10.2 W/kg



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Plot #20

Date/Time: 2013-04-26 07:27:35

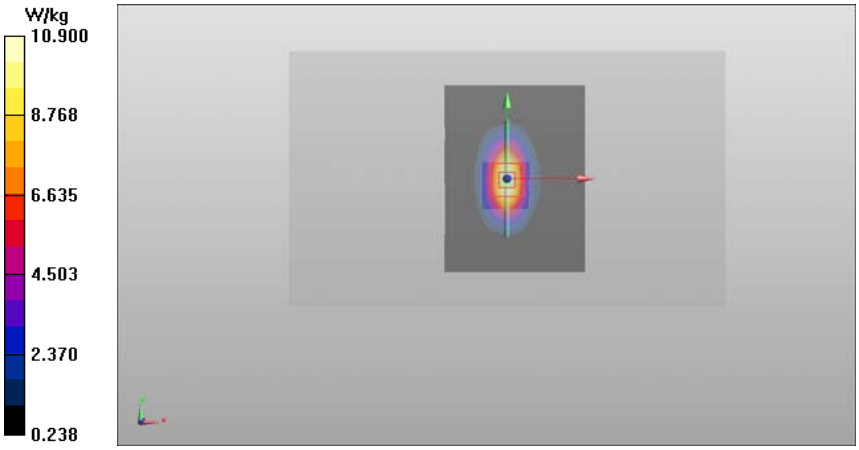
Test Laboratory: TCC Nokia
Type: D1750V2; Serial: D1750V2 - SN:1082

Communication System: CW1750
Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: BSL1800; Medium Notes: t= 21.5 C
Medium parameters used: f = 1750 MHz; σ = 1.463 S/m; ε_r = 52.072; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.5 W/kg

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.323 V/m
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 9.74 W/kg
SAR(10 g) = 5.21 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 10.9 W/kg



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Plot #21

Date/Time: 2013-05-01 11:21:36

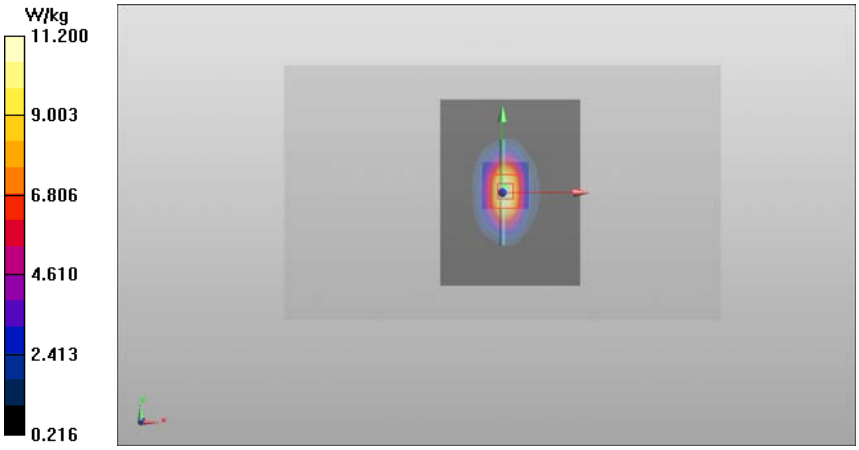
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d099

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium Notes: T=21.5 C
Medium parameters used: f = 1900 MHz; σ = 1.519 S/m; ε_r = 52.857; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.6 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.721 V/m
Peak SAR (extrapolated) = 17.8 W/kg
SAR(1 g) = 9.9 W/kg
SAR(10 g) = 5.23 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 11.2 W/kg



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Plot #22

Date/Time: 2013-04-28 08:46:08

Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d030

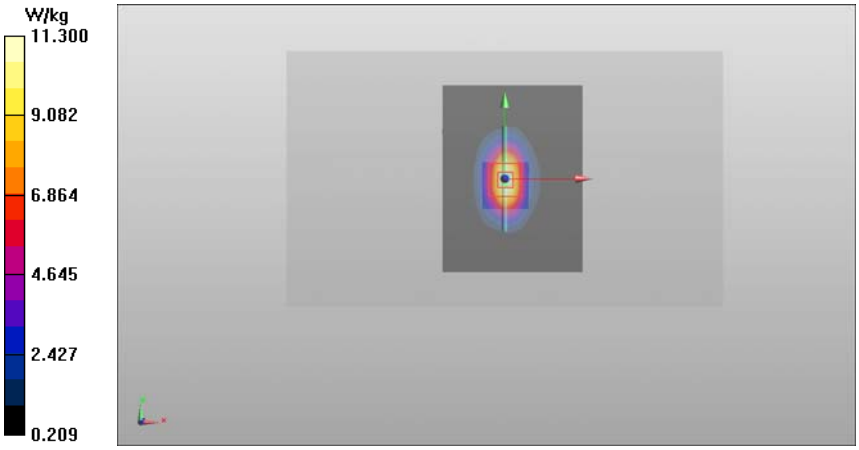
Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: BSL1900; Medium Notes: t= 21.2 C
Medium parameters used: f = 1900 MHz; σ = 1.534 S/m; ε_r = 51.14; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): 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 = 87.510 V/m
Peak SAR (extrapolated) = 18.0 W/kg
SAR(1 g) = 9.97 W/kg
SAR(10 g) = 5.24 W/kg
Power Drift = -0.06 dB

Maximum value of SAR (measured) = 11.3 W/kg



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Plot #23

Date/Time: 2013-05-13 07:48:27

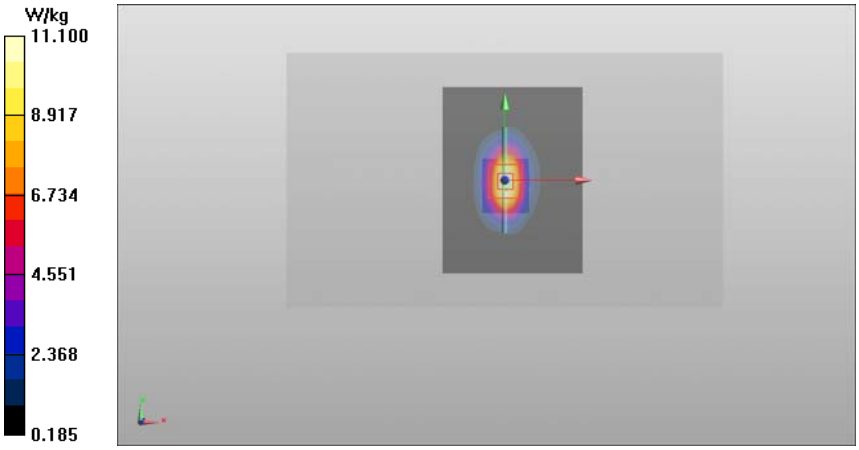
Test Laboratory: TCC Nokia
Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: BSL1900; Medium Notes: t= 22.0 C
Medium parameters used: f = 1900 MHz; σ = 1.475 S/m; ε_r = 50.999; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.7 W/kg

d=10mm, Pin=250mW/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.006 V/m
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.78 W/kg
SAR(10 g) = 5.16 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 11.1 W/kg



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Plot #24

Date/Time: 2013-04-22 06:45:08

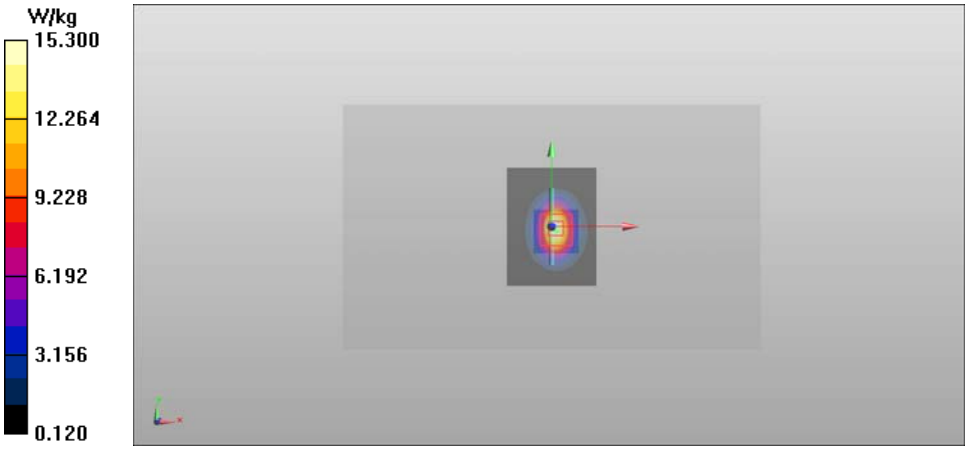
Test Laboratory: TCC Nokia
Type: D2450V2; Serial: D2450V2 - SN:729

Communication System: CW2450
Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: BSL2450; Medium Notes: t= 21.4 C
Medium parameters used: f = 2450 MHz; σ = 1.944 S/m; ε_r = 51.164; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=250mW/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=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.208 V/m
Peak SAR (extrapolated) = 28.3 W/kg
SAR(1 g) = 13.4 W/kg
SAR(10 g) = 6.22 W/kg
Power Drift = -0.06 dB
Maximum value of SAR (measured) = 15.3 W/kg



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Plot #25

Date/Time: 2013-04-26 06:22:11

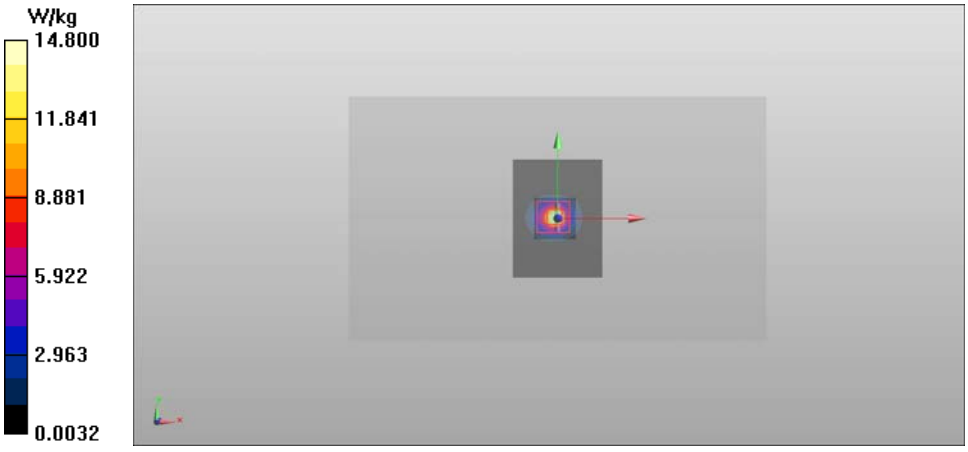
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5200
Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.5 C
Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
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: xxxx
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.9 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.510 V/m
Peak SAR (extrapolated) = 29.8 W/kg
SAR(1 g) = 7.6 W/kg
SAR(10 g) = 2.16 W/kg
Power Drift = -0.07 dB
Maximum value of SAR (measured) = 14.8 W/kg



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Plot #26

Date/Time: 2013-04-26 06:59:18

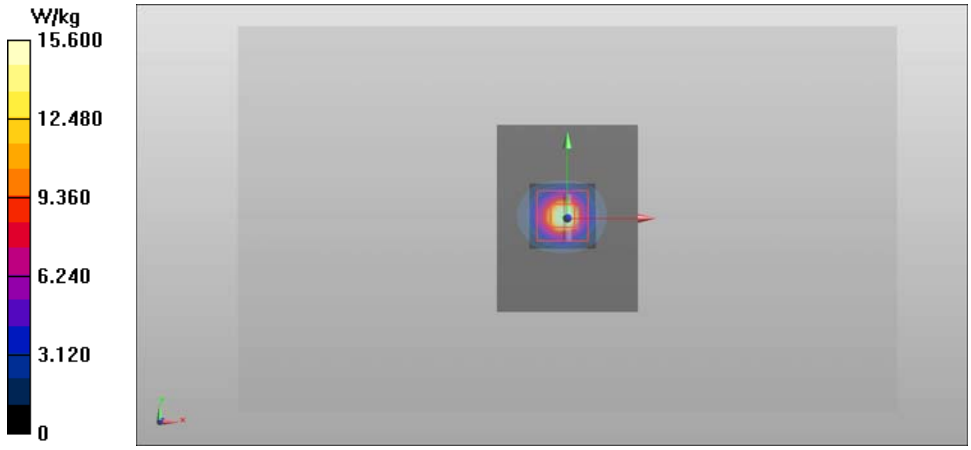
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5300
Frequency: 5300 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.5 C
Medium parameters used: f = 5300 MHz; σ = 5.606 S/m; ε_r = 47.994; ρ = 1000 kg/m^3
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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.4 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.949 V/m
Peak SAR (extrapolated) = 32.9 W/kg
SAR(1 g) = 8.08 W/kg
SAR(10 g) = 2.26 W/kg
Power Drift = -0.07 dB
Maximum value of SAR (measured) = 15.6 W/kg



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Plot #27

Date/Time: 2013-04-27 08:51:59

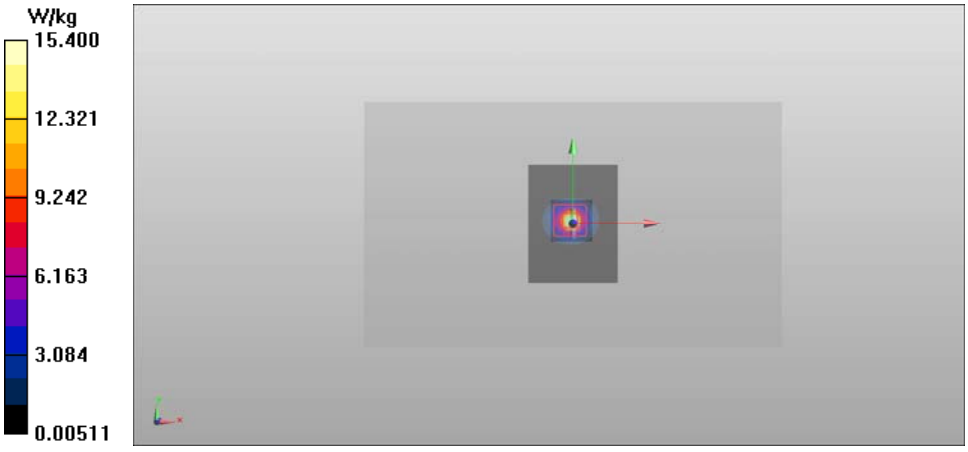
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5500
Frequency: 5500 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.3 C
Medium parameters used: f = 5500 MHz; σ = 5.812 S/m; ε_r = 47.042; ρ = 1000 kg/m^3
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)
- 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 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.6 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.542 V/m
Peak SAR (extrapolated) = 31.3 W/kg
SAR(1 g) = 7.81 W/kg
SAR(10 g) = 2.21 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 15.4 W/kg



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Plot #28

Date/Time: 2013-04-27 09:26:06

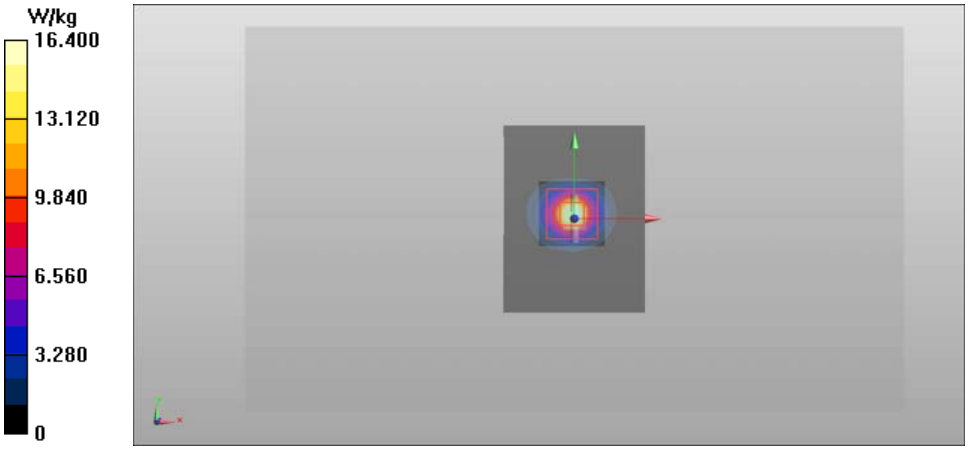
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5600
Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.3 C
Medium parameters used: f = 5600 MHz; σ = 5.952 S/m; ε_r = 46.868; ρ = 1000 kg/m^3
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: xxxx
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.4 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 59.031 V/m
Peak SAR (extrapolated) = 35.1 W/kg
SAR(1 g) = 8.3 W/kg
SAR(10 g) = 2.3 W/kg
Power Drift = -0.09 dB
Maximum value of SAR (measured) = 16.4 W/kg



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Plot #29

Date/Time: 2013-04-28 08:29:26

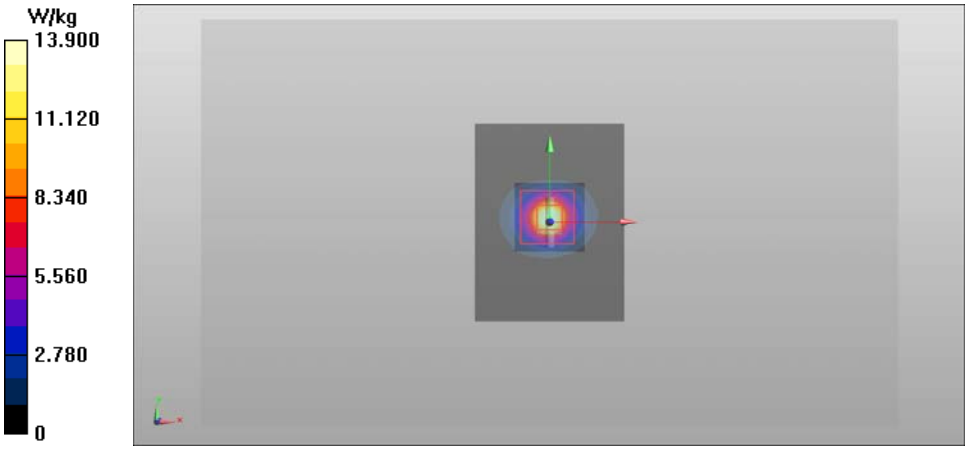
Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048

Communication System: CW5800
Frequency: 5800 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.3 C
Medium parameters used: f = 5800 MHz; σ = 6.229 S/m; ε_r = 47.458; ρ = 1000 kg/m^3
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: xxxx
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

d=10mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.2 W/kg

d=10mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.430 V/m
Peak SAR (extrapolated) = 28.7 W/kg
SAR(1 g) = 7.03 W/kg
SAR(10 g) = 1.99 W/kg
Power Drift = -0.08 dB
Maximum value of SAR (measured) = 13.9 W/kg



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APPENDIX B.1: HEAD MEASUREMENT SCANS

Plot #1

Date/Time: 2013-04-26 11:25:50

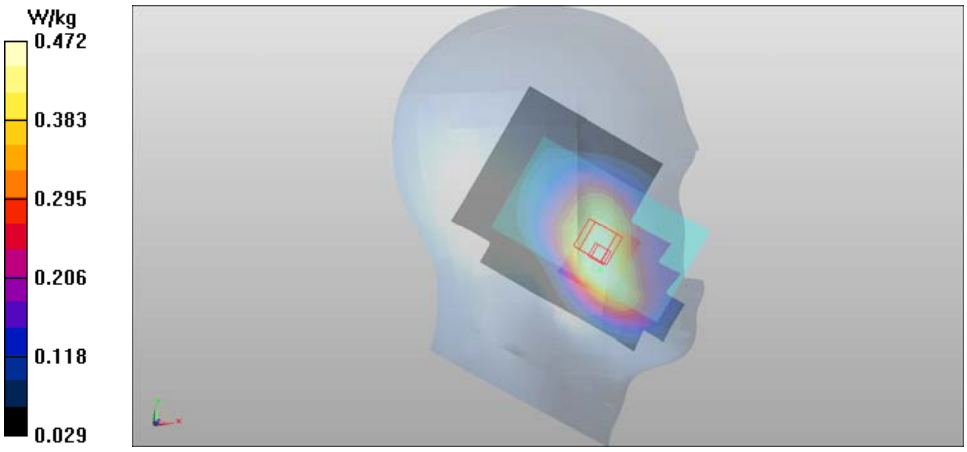
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6

Communication System: LTE700 (Band 17)
Frequency: 710 MHz; Duty Cycle: 1:1
Medium: HSL750; Medium Notes: t=21.5C
Medium parameters used: f = 710 MHz; σ = 0.882 S/m; ε_r = 41.493; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.5, 6.5, 6.5); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: SAM3 04/03/2013; Type: QD000P40CD; Serial: TP: 1729
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

LTE700 (Band 17) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.490 W/kg

LTE700 (Band 17) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Zoom Scan (7x6x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.547 V/m
Peak SAR (extrapolated) = 0.586 W/kg
SAR(1 g) = 0.450 W/kg
SAR(10 g) = 0.342 W/kg
Power Drift = -0.31 dB
Maximum value of SAR (measured) = 0.472 W/kg



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Plot #2

Date/Time: 2013-04-23 12:30:34

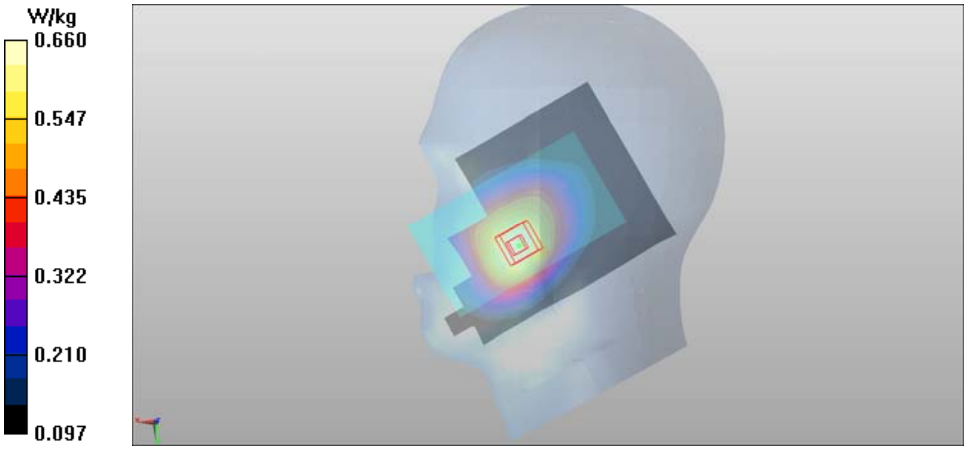
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: HSL850; Medium Notes: t= 21.6 C
Medium parameters used: f = 837 MHz; σ = 0.906 S/m; ε_r = 40.021; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS850 - Right/Cheek - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.671 W/kg

2-slot GPRS850 - Right/Cheek - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.006 V/m
Peak SAR (extrapolated) = 0.756 W/kg
SAR(1 g) = 0.638 W/kg
SAR(10 g) = 0.507 W/kg
Power Drift = -0.02 dB
Maximum value of SAR (measured) = 0.660 W/kg



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Plot #3

Date/Time: 2013-04-24 09:16:43

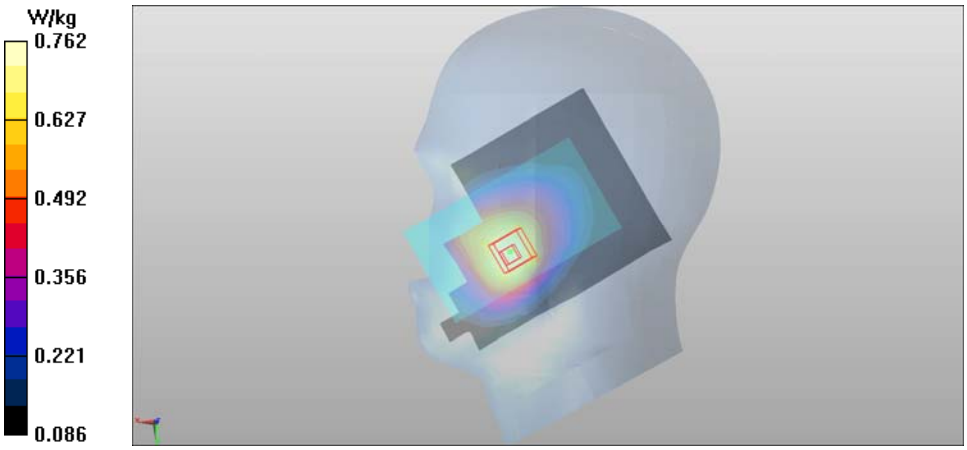
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: WCDMA850 (Band 5)
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL850; Medium Notes: t= 21.5 C
Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ε_r = 40.824; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WCDMA850 (Band 5) - Right/Cheek - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.771 W/kg

WCDMA850 (Band 5) - Right/Cheek - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.591 V/m
Peak SAR (extrapolated) = 0.872 W/kg
SAR(1 g) = 0.729 W/kg
SAR(10 g) = 0.566 W/kg
Power Drift = 0.02 dB
Maximum value of SAR (measured) = 0.762 W/kg



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Plot #4

Date/Time: 2013-04-29 14:35:58

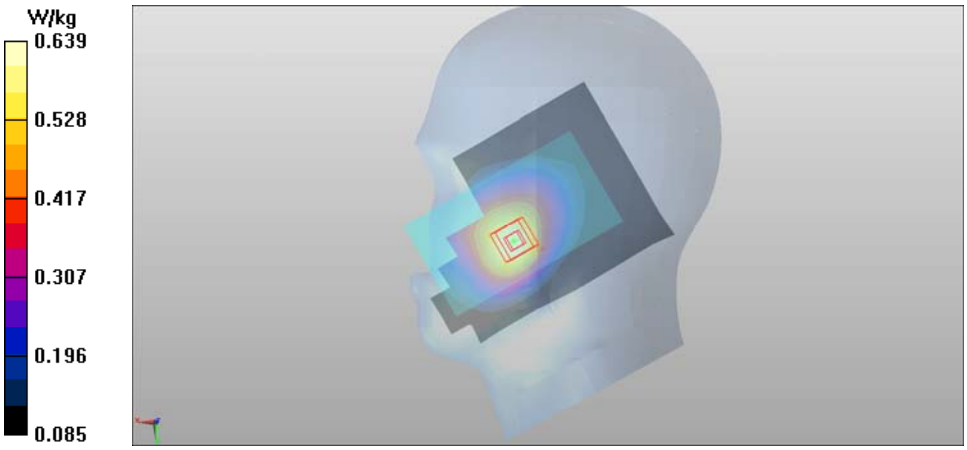
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6

Communication System: LTE850 (Band 5)
Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: HSL835; Medium Notes: T=21.5C
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.904 S/m; ε_r = 42.002; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.22, 6.22, 6.22); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: SAM1 04/03/2013; Type: QD000P40CC; Serial: TP:1279
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

LTE850 (Band 5) - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.652 W/kg

LTE850 (Band 5) - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.337 V/m
Peak SAR (extrapolated) = 0.732 W/kg
SAR(1 g) = 0.612 W/kg
SAR(10 g) = 0.480 W/kg
Power Drift = -0.02 dB
Maximum value of SAR (measured) = 0.639 W/kg



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Plot #5

Date/Time: 2013-05-10 09:10:14

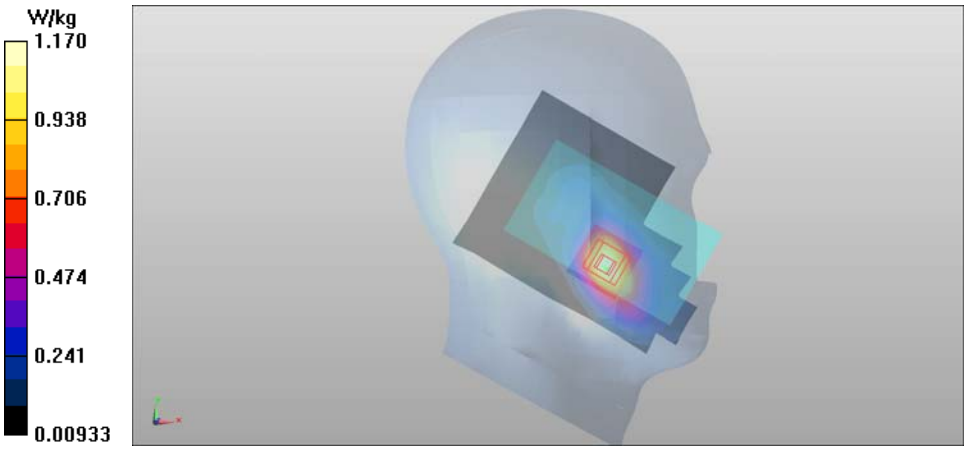
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1700/2100 (Band 4)
Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: HSL1800; Medium Notes: t= 21.2 C
Medium parameters used: f = 1753 MHz; σ = 1.341 S/m; ε_r = 39.09; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065 - Repeated/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.17 W/kg

WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065 - Repeated/Zoom Scan (6x6x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.356 V/m
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 1.09 W/kg
SAR(10 g) = 0.682 W/kg
Power Drift = 0.03 dB
Maximum value of SAR (measured) = 1.17 W/kg



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Plot #6

Date/Time: 2013-05-10 21:16:51

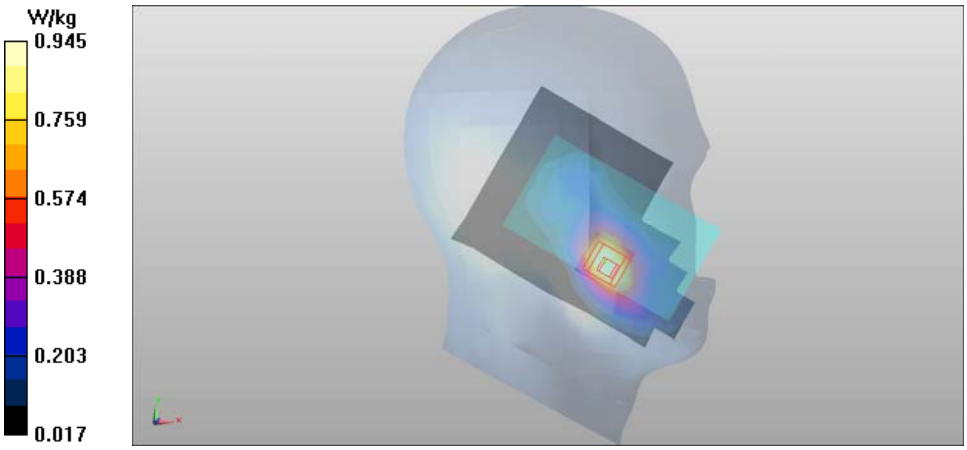
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6

Communication System: LTE1700/2100 (Band 4)
Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium: HSL1750; Medium Notes: T=21.5 C
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.35 S/m; ε_r = 39.707; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(5.51, 5.51, 5.51); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: SAM1 04/25/2013; Type: QD000P40CD; Serial: TP: 1735
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1700/2100 (Band 4) - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset - Cover CC-3065 - Repeated/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

LTE1700/2100 (Band 4) - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset - Cover CC-3065 - Repeated/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.324 V/m
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.878 W/kg
SAR(10 g) = 0.550 W/kg
Power Drift = 0.06 dB
Maximum value of SAR (measured) = 0.933 W/kg



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Plot #7

Date/Time: 2013-04-23 07:21:50

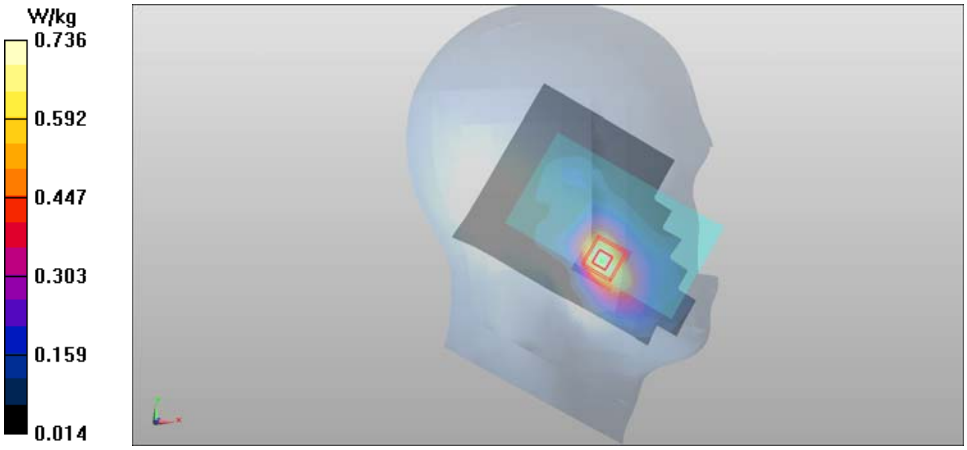
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: 2-slot GPRS1900
Frequency: 1880 MHz; Duty Cycle: 1:4.2
Medium: HSL1900; Medium Notes: t= 21.2 C
Medium parameters used: f = 1880 MHz; σ = 1.375 S/m; ε_r = 39.281; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS1900 - Left/Cheek - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.797 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 = 21.727 V/m
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.673 W/kg
SAR(10 g) = 0.416 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 0.736 W/kg



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Plot #8

Date/Time: 2013-04-22 12:59:53

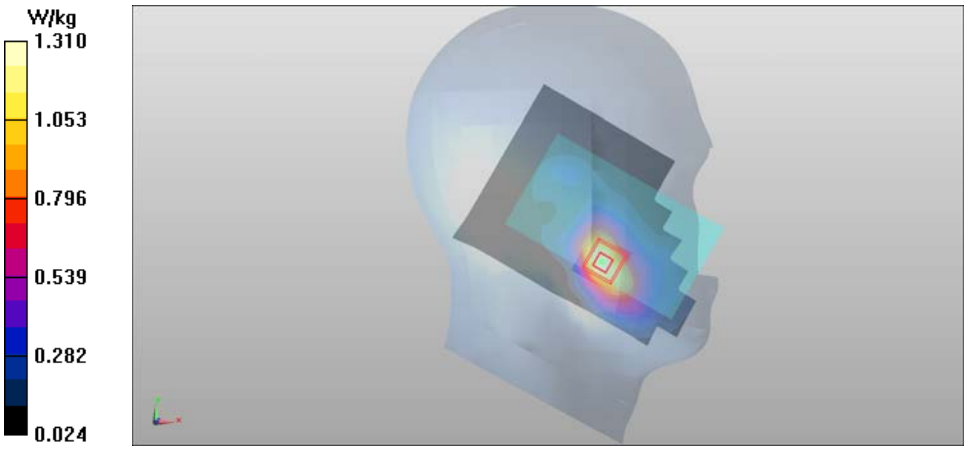
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1900 (Band 2)
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: t= 21.5 C
Medium parameters used: f = 1908 MHz; σ = 1.387 S/m; ε_r = 38.536; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.9 (7117)

WCDMA1900 (Band 2) - Left/Cheek - High/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.40 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 = 29.585 V/m
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 1.2 W/kg
SAR(10 g) = 0.741 W/kg
Power Drift = -0.19 dB
Maximum value of SAR (measured) = 1.31 W/kg



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Plot #9

Date/Time: 2013-04-24 14:58:33

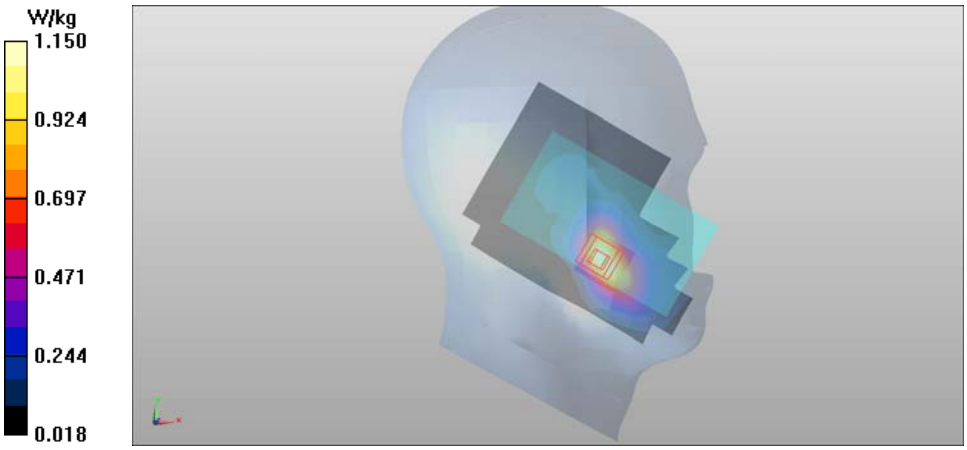
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9

Communication System: LTE1900 (Band 2)
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: T=21.8
Medium parameters used: f = 1900 MHz; σ = 1.413 S/m; ε_r = 39.739; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.524 V/m
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 1.06 W/kg
SAR(10 g) = 0.637 W/kg
Power Drift = 0.29 dB
Maximum value of SAR (measured) = 1.15 W/kg



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Plot #10

Date/Time: 2013-04-18 15:02:20

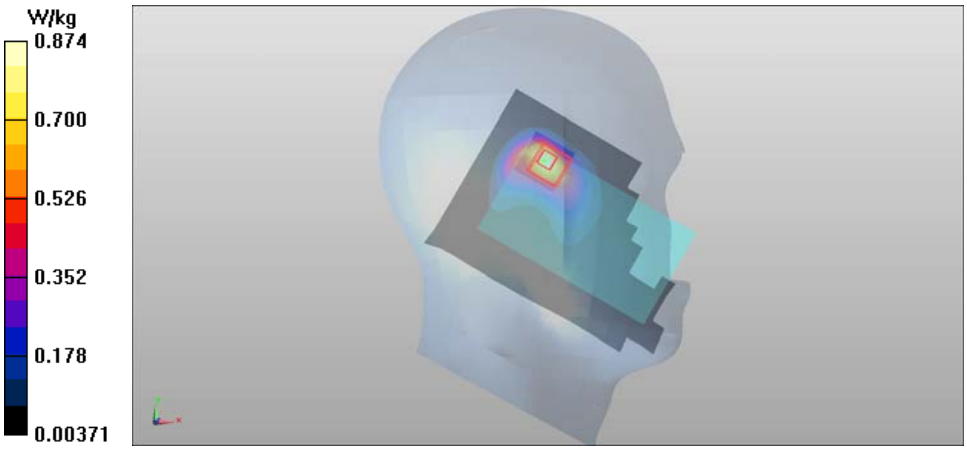
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5

Communication System: WLAN2450 b-mode
Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: HSL2450; Medium Notes: t= 21.2 C
Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan (121x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.880 W/kg

WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.439 V/m
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.786 W/kg
SAR(10 g) = 0.391 W/kg
Power Drift = -0.07 dB
Maximum value of SAR (measured) = 0.874 W/kg



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Plot #11

Date/Time: 2013-04-25 17:28:41

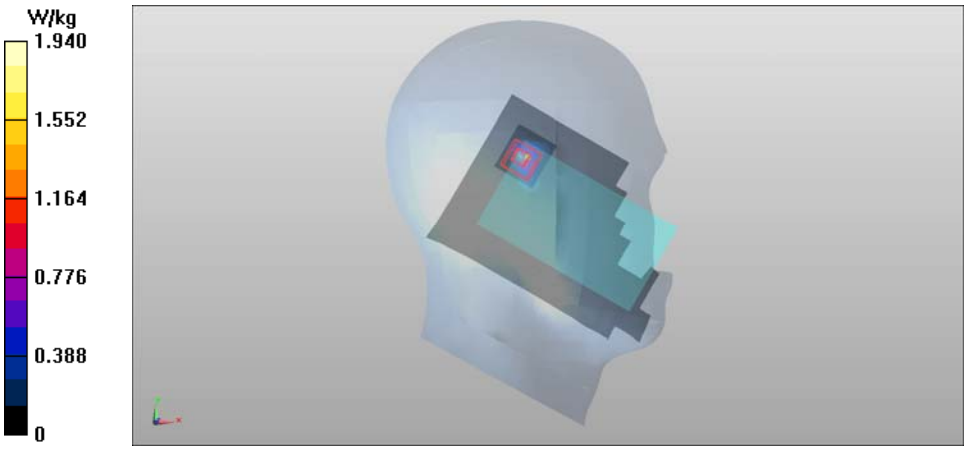
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3

Communication System: WLAN5000 a-mode
Frequency: 5805 MHz; Duty Cycle: 1:1
Medium: HSL5000; Medium Notes: t= 21.6 C
Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: EX3DV4 - SN3573
- ConvF(4.08, 4.08, 4.08); 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 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan (121x181x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.977 W/kg

WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Zoom Scan (10x9x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.157 V/m
Peak SAR (extrapolated) = 4.78 W/kg
SAR(1 g) = 0.691 W/kg
SAR(10 g) = 0.161 W/kg
Power Drift = 0.23 dB
Maximum value of SAR (measured) = 1.94 W/kg



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Plot #12

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

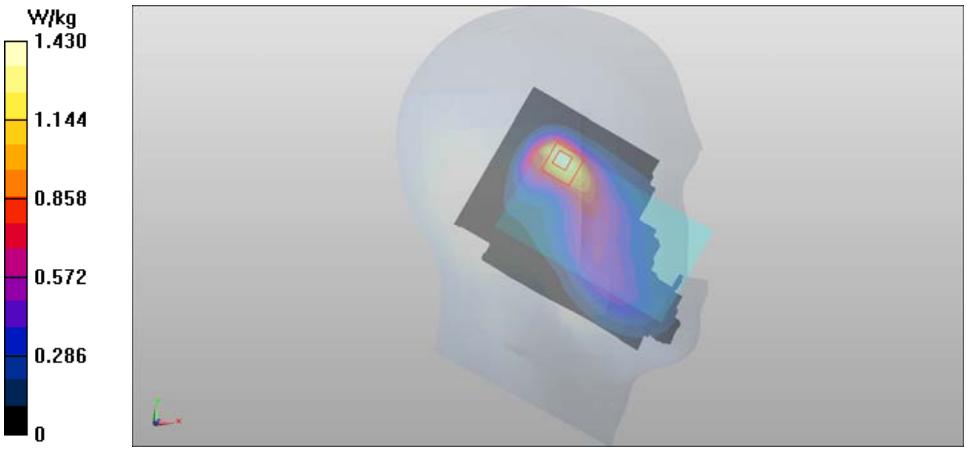
Date/Time: 2013-04-26 11:25:50

DASY Configuration for LTE700 (Band 17) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6
Communication System: LTE700 (Band 17); Frequency: 710 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL750 Medium parameters used: f = 710 MHz; σ = 0.882 S/m; ε_r = 41.493; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3275; ConvF(6.5, 6.5, 6.5); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: SAM3 04/03/2013; Type: QD000P40CD; Serial: TP: 1729
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.642 W/kg
Maximum value of SAR (interpolated) = 1.43 W/kg

WLAN2450 b-mode was scaled with factor 1.52, LTE700 (Band 17) with factor 1.12, before combining in SEMCAD SW.



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Plot #13

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

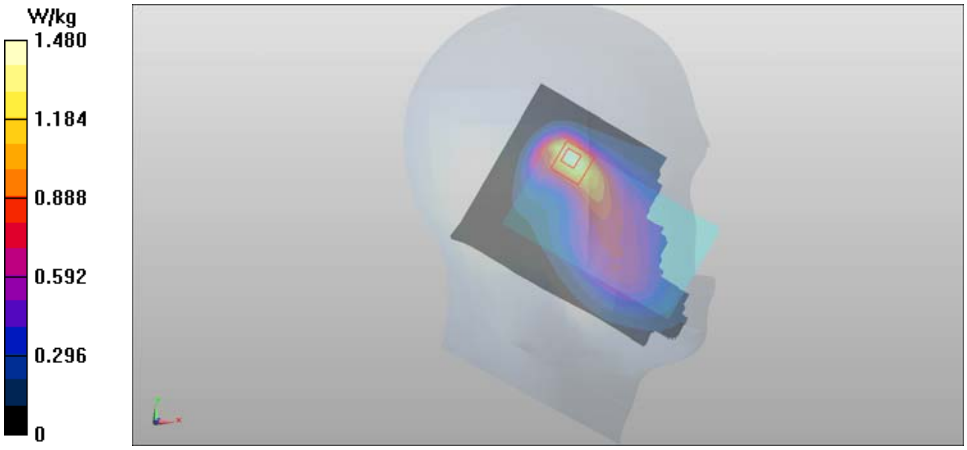
Date/Time: 2013-04-23 09:26:28

DASY Configuration for 2-slot GPRS850 - Left/Cheek - Middle/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: HSL850 Medium parameters used: f = 837 MHz; σ = 0.906 S/m; ε_r = 40.021; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3892; ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.677 W/kg
Maximum value of SAR (interpolated) = 1.48 W/kg

WLAN2450 b-mode was scaled with factor 1.52, 2-slot GPRS850 with factor 1.12, before combining in SEMCAD SW.



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Plot #14

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

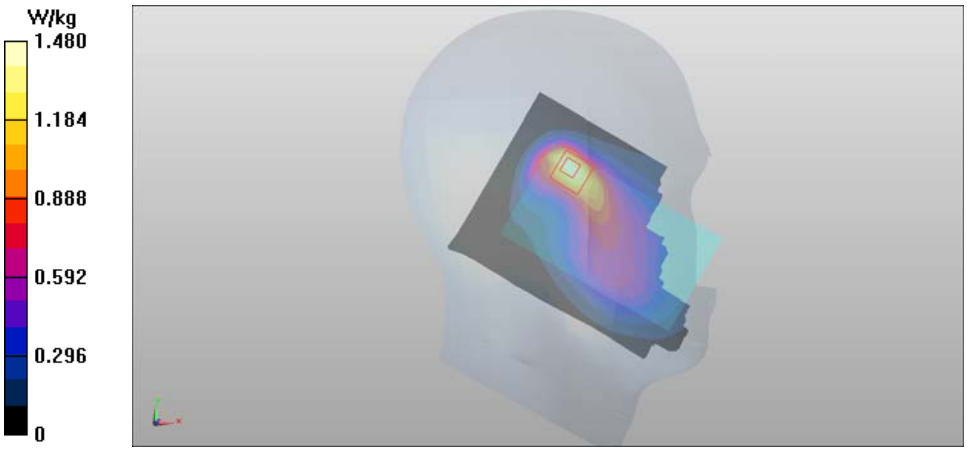
Date/Time: 2013-04-24 07:14:26

DASY Configuration for WCDMA850 (Band 5) - Left/Cheek - Middle/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: WCDMA850 (Band 5); Frequency: 835 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL850 Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ε_r = 40.824; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3892; ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.682 W/kg
Maximum value of SAR (interpolated) = 1.48 W/kg

WLAN2450 b-mode was scaled with factor 1.52, WCDMA850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #15

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m³
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

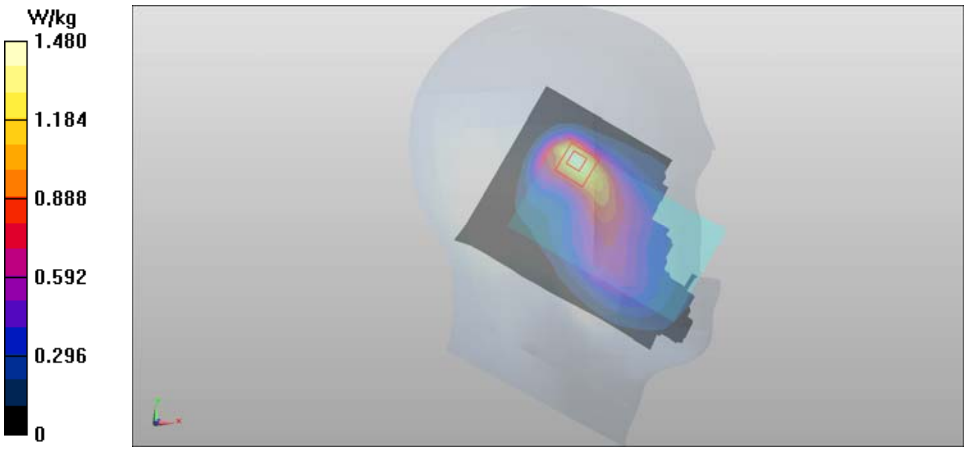
Date/Time: 2013-04-26 15:35:19

DASY Configuration for LTE850 (Band 5) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6
Communication System: LTE850 (Band 5); Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL900 Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.903 S/m; ε_r = 41.819; ρ = 1000 kg/m³
Phantom section: Left Section

Probe: ES3DV3 - SN3275; ConvF(6.22, 6.22, 6.22); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: SAM1 04/03/2013; Type: QD000P40CC; Serial: TP:1279
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.679 W/kg
Maximum value of SAR (interpolated) = 1.48 W/kg

WLAN2450 b-mode was scaled with factor 1.52, LTE850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #16

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

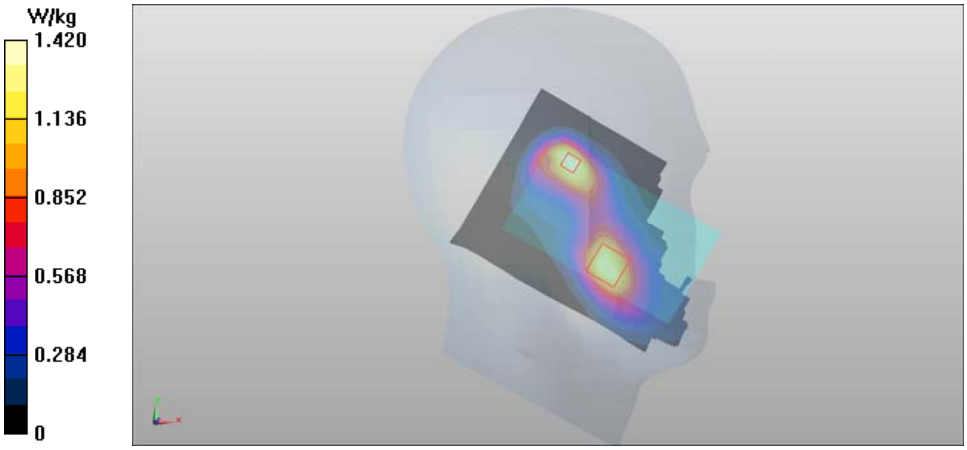
Date/Time: 2013-05-10 09:10:14

DASY Configuration for WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065 - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1800 Medium parameters used: f = 1753 MHz; σ = 1.341 S/m; ε_r = 39.09; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 1.24 W/kg; SAR(10 g) = 0.712 W/kg
Maximum value of SAR (interpolated) = 1.42 W/kg

WLAN2450 b-mode was scaled with factor 1.52, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #17

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

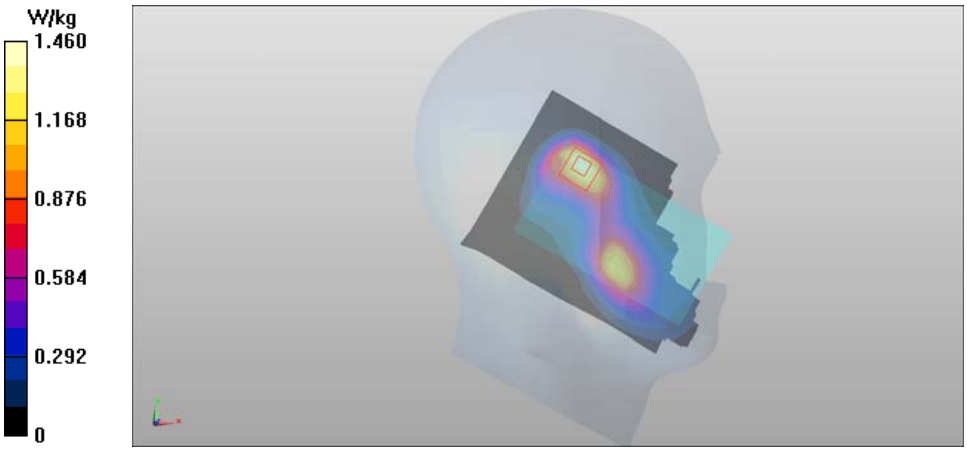
Date/Time: 2013-05-10 21:16:51

DASY Configuration for LTE1700/2100 (Band 4) - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset - Cover CC-3065 - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6
Communication System: LTE1700/2100 (Band 4); Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1750 Medium parameters used: f = 1732.5 MHz; σ = 1.35 S/m; ε_r = 39.707; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3276; ConvF(5.51, 5.51, 5.51); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: SAM1 04/25/2013; Type: QD000P40CD; Serial: TP: 1735
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.27 W/kg; SAR(10 g) = 0.649 W/kg
Maximum value of SAR (interpolated) = 1.46 W/kg

WLAN2450 b-mode was scaled with factor 1.52, LTE1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #18

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

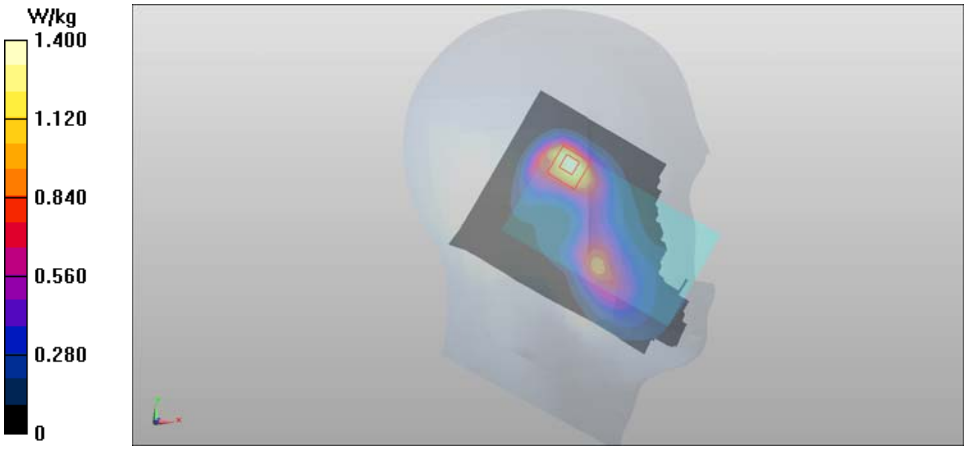
Date/Time: 2013-04-23 07:21:50

DASY Configuration for 2-slot GPRS1900 - Left/Cheek - Middle/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.375 S/m; ε_r = 39.281; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.611 W/kg
Maximum value of SAR (interpolated) = 1.40 W/kg

WLAN2450 b-mode was scaled with factor 1.52, 2-slot GPRS1900 with factor 1.12, before combining in SEMCAD SW.



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Plot #19

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

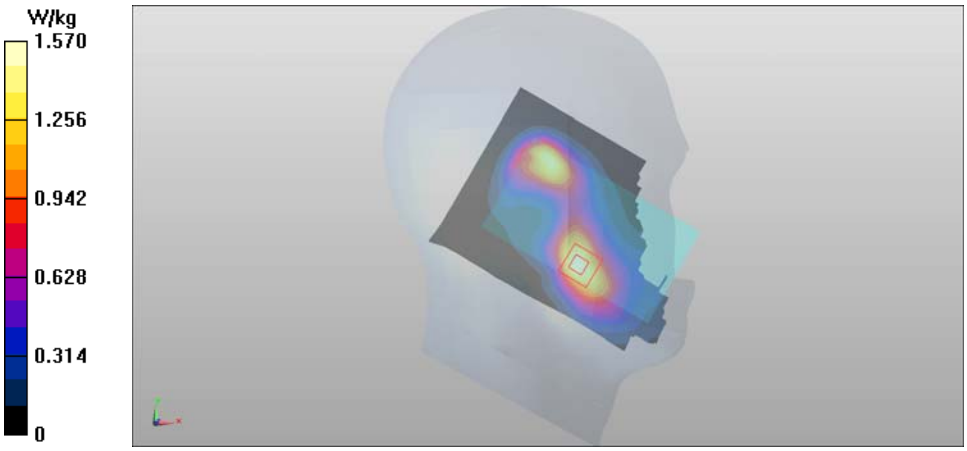
Date/Time: 2013-04-22 12:59:53

DASY Configuration for WCDMA1900 (Band 2) - Left/Cheek - High/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1908 MHz; σ = 1.387 S/m; ε_r = 38.536; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY52, Version 52.8 (2)

Fast SAR of Combined Scans: SAR(1 g) = 1.4 W/kg; SAR(10 g) = 0.788 W/kg
Maximum value of SAR (interpolated) = 1.57 W/kg

WLAN2450 b-mode was scaled with factor 1.52, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #20

Date/Time: 2013-04-18 15:02:20

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.76 S/m; ε_r = 37.864; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

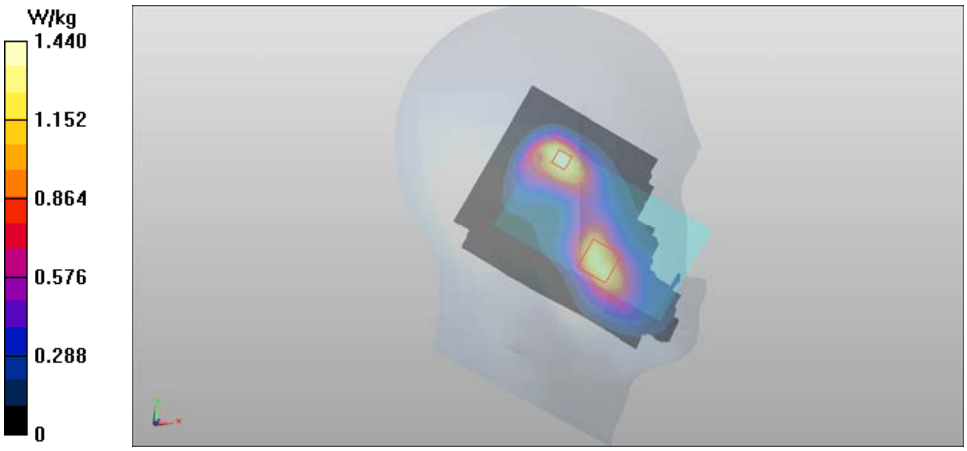
Date/Time: 2013-04-24 14:58:33

DASY Configuration for LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9
Communication System: LTE1900 (Band 2); Frequency: 1900 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1900 MHz; σ = 1.413 S/m; ε_r = 39.739; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3276; ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.668 W/kg
Maximum value of SAR (interpolated) = 1.44 W/kg

WLAN2450 b-mode was scaled with factor 1.52, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #21

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

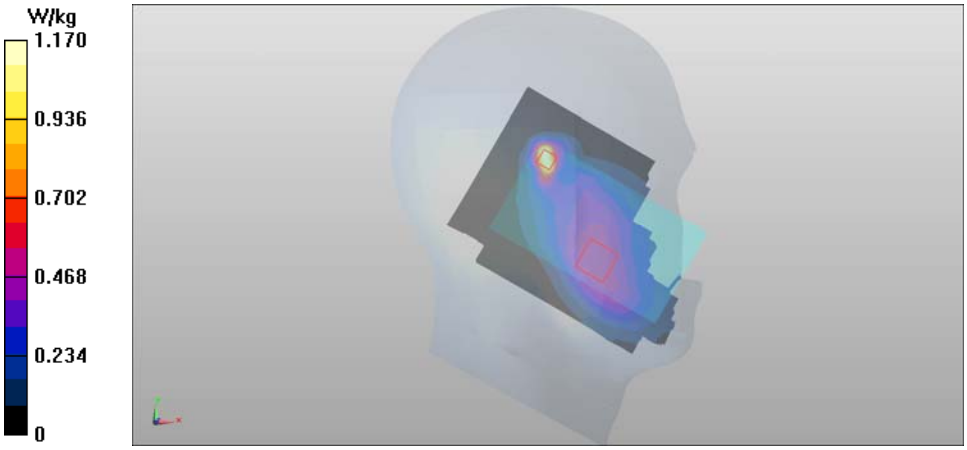
Date/Time: 2013-04-26 11:25:50

DASY Configuration for LTE700 (Band 17) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6
Communication System: LTE700 (Band 17); Frequency: 710 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL750 Medium parameters used: f = 710 MHz; σ = 0.882 S/m; ε_r = 41.493; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3275; ConvF(6.5, 6.5, 6.5); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: SAM3 04/03/2013; Type: QD000P40CD; Serial: TP: 1729
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.366 W/kg
Maximum value of SAR (interpolated) = 1.17 W/kg

WLAN5000 a-mode was scaled with factor 1.19, LTE700 (Band 17) with factor 1.12, before combining in SEMCAD SW.



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Plot #22

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-892; Serial: 004402/47/223426/3

Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

Date/Time: 2013-04-23 09:26:28

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

Test Laboratory: TCC Nokia

Type: RM-893; Serial: 355519/05/000395/3

Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2; PMF: 2.04939

Medium: HSL850 Medium parameters used: f = 837 MHz; σ = 0.906 S/m; ε_r = 40.021; ρ = 1000 kg/m^3

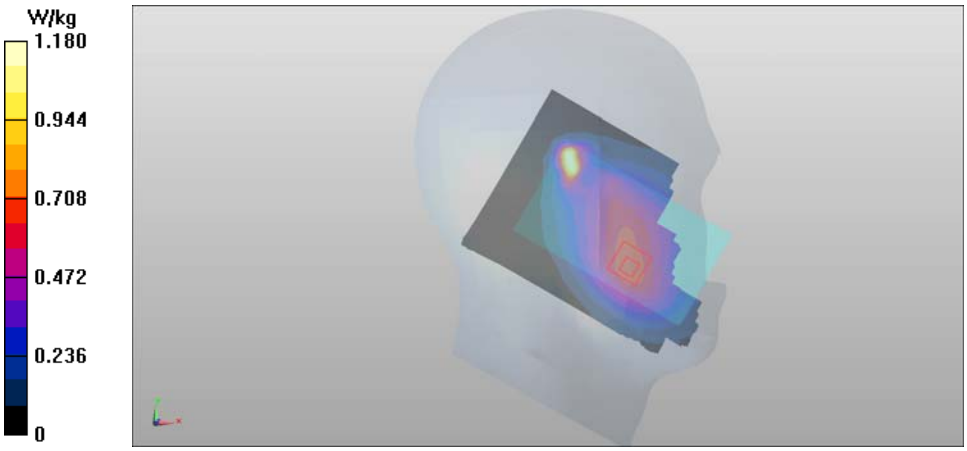
Phantom section: Left Section

Probe: EX3DV4 - SN3892; ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.457 W/kg

Maximum value of SAR (interpolated) = 1.18 W/kg

WLAN5000 a-mode was scaled with factor 1.19, 2-slot GPRS850 with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #23

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

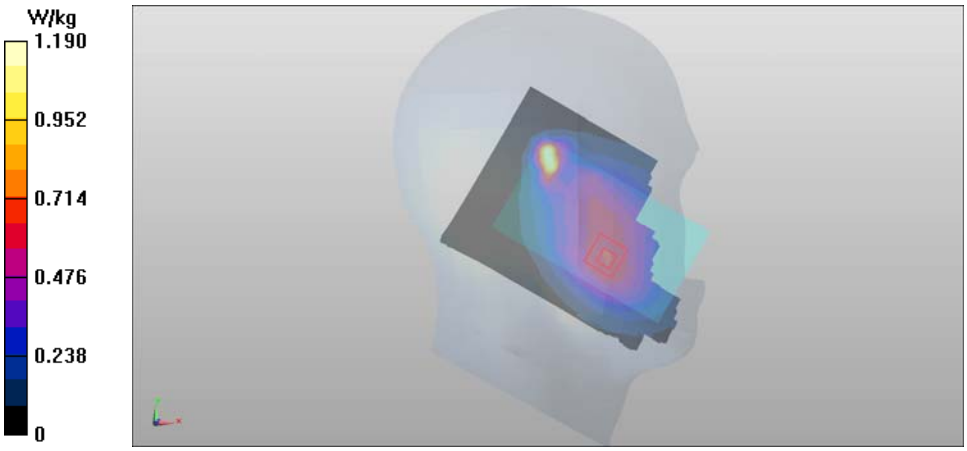
Date/Time: 2013-04-24 07:14:26

DASY Configuration for WCDMA850 (Band 5) - Left/Cheek - Middle/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: WCDMA850 (Band 5); Frequency: 835 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL850 Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ε_r = 40.824; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3892; ConvF(9.75, 9.75, 9.75); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.606 W/kg; SAR(10 g) = 0.434 W/kg
Maximum value of SAR (interpolated) = 1.19 W/kg

WLAN5000 a-mode was scaled with factor 1.19, WCDMA850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #24

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m³
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

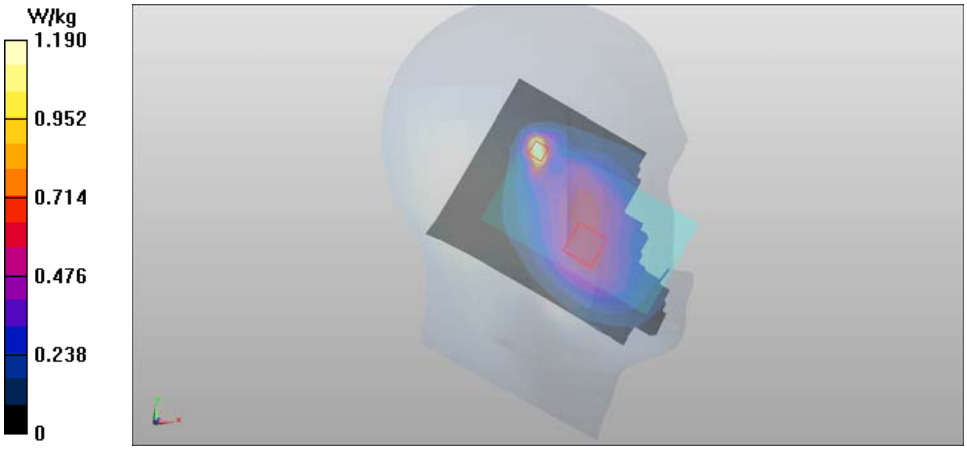
Date/Time: 2013-04-26 15:35:19

DASY Configuration for LTE850 (Band 5) - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6
Communication System: LTE850 (Band 5); Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL900 Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.903 S/m; ε_r = 41.819; ρ = 1000 kg/m³
Phantom section: Left Section

Probe: ES3DV3 - SN3275; ConvF(6.22, 6.22, 6.22); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: SAM1 04/03/2013; Type: QD000P40CC; Serial: TP:1279
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.605 W/kg; SAR(10 g) = 0.418 W/kg
Maximum value of SAR (interpolated) = 1.19 W/kg

WLAN5000 a-mode was scaled with factor 1.19, LTE850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #25

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

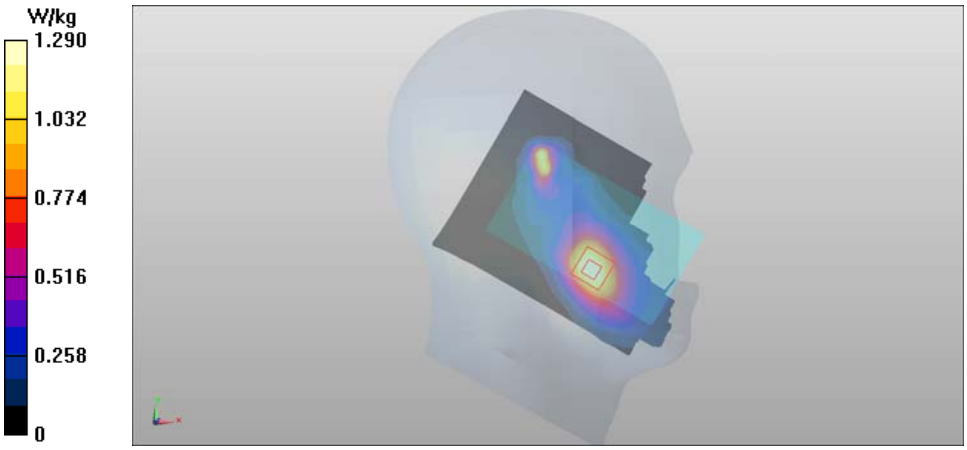
Date/Time: 2013-05-10 09:10:14

DASY Configuration for WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065 - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1800 Medium parameters used: f = 1753 MHz; σ = 1.341 S/m; ε_r = 39.09; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.691 W/kg
Maximum value of SAR (interpolated) = 1.29 W/kg

WLAN5000 a-mode was scaled with factor 1.19, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #26

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

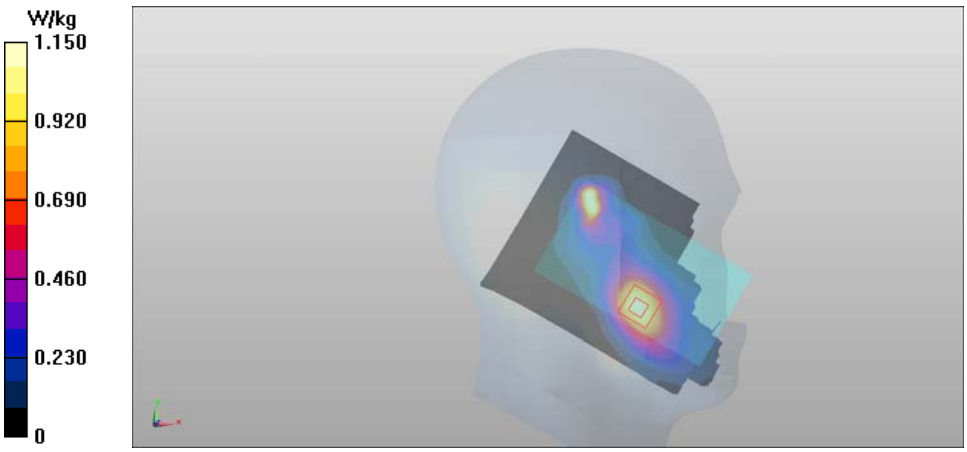
Date/Time: 2013-05-10 21:16:51

DASY Configuration for LTE1700/2100 (Band 4) - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset - Cover CC-3065 - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6
Communication System: LTE1700/2100 (Band 4); Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1750 Medium parameters used: f = 1732.5 MHz; σ = 1.35 S/m; ε_r = 39.707; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3276; ConvF(5.51, 5.51, 5.51); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: SAM1 04/25/2013; Type: QD000P40CD; Serial: TP: 1735
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.989 W/kg; SAR(10 g) = 0.581 W/kg
Maximum value of SAR (interpolated) = 1.15 W/kg

WLAN5000 a-mode was scaled with factor 1.19, LTE1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #27

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

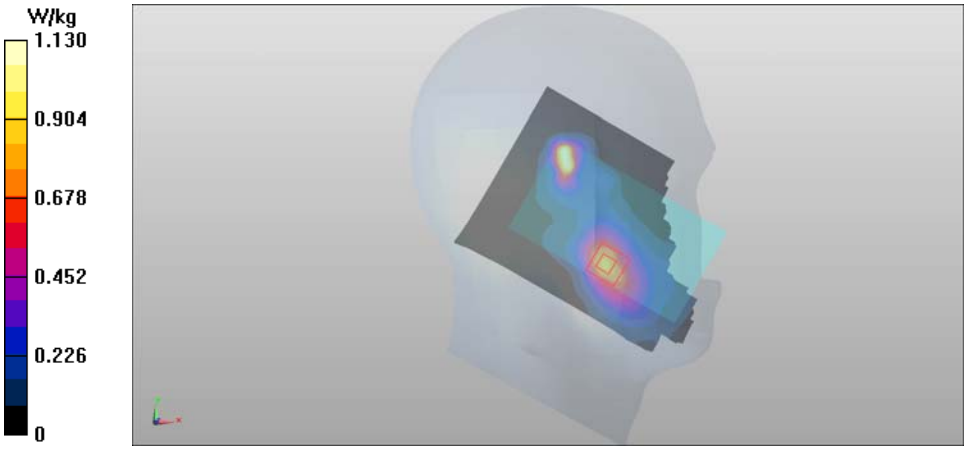
Date/Time: 2013-04-23 07:21:50

DASY Configuration for 2-slot GPRS1900 - Left/Cheek - Middle/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: HSL1900 Medium parameters used: f = 1880 MHz; σ = 1.375 S/m; ε_r = 39.281; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.767 W/kg; SAR(10 g) = 0.431 W/kg
Maximum value of SAR (interpolated) = 1.13 W/kg

WLAN5000 a-mode was scaled with factor 1.19, 2-slot GPRS1900 with factor 1.12, before combining in SEMCAD SW.



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Plot #28

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

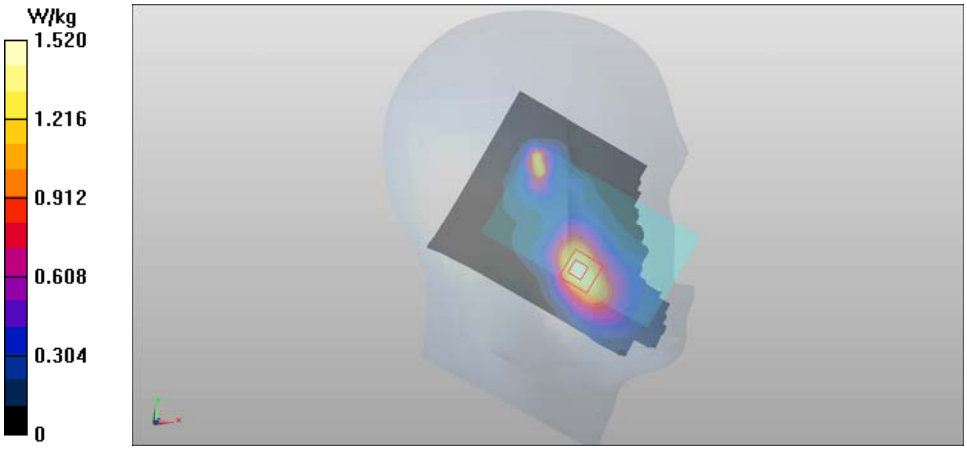
Date/Time: 2013-04-22 12:59:53

DASY Configuration for WCDMA1900 (Band 2) - Left/Cheek - High/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1908 MHz; σ = 1.387 S/m; ε_r = 38.536; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY52, Version 52.8 (2)

Fast SAR of Combined Scans: SAR(1 g) = 1.36 W/kg; SAR(10 g) = 0.766 W/kg
Maximum value of SAR (interpolated) = 1.52 W/kg

WLAN5000 a-mode was scaled with factor 1.19, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #29

Date/Time: 2013-04-25 17:28:41

DASY Configuration for WLAN5000 a-mode - Left/Cheek - Channel 161 - OFDM 6 Mbps - Cover CC-3065/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5805 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL5000 Medium parameters used: f = 5805 MHz; σ = 5.16 S/m; ε_r = 35.127; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(4.08, 4.08, 4.08); Calibrated: 2013-01-23;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
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)

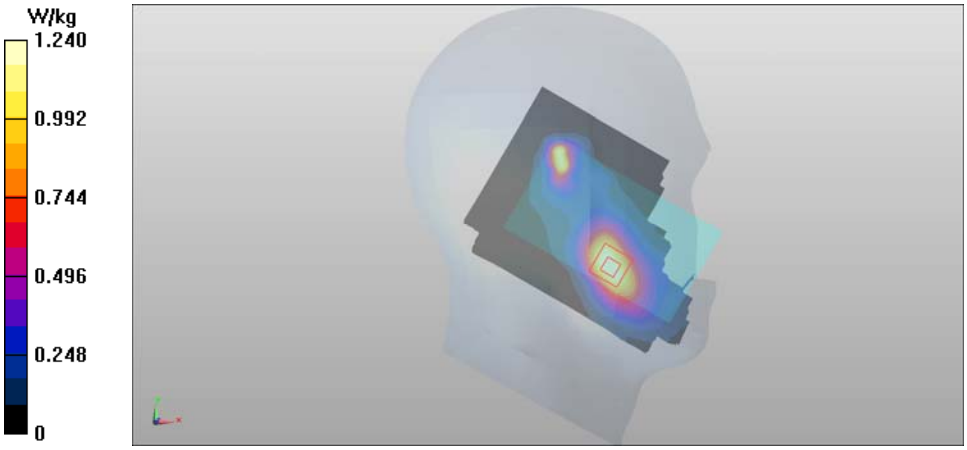
Date/Time: 2013-04-24 14:58:33

DASY Configuration for LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9
Communication System: LTE1900 (Band 2); Frequency: 1900 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1900 MHz; σ = 1.413 S/m; ε_r = 39.739; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3276; ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.643 W/kg
Maximum value of SAR (interpolated) = 1.24 W/kg

WLAN5000 a-mode was scaled with factor 1.19, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #30 – EXPANDED VOLUME SCAN

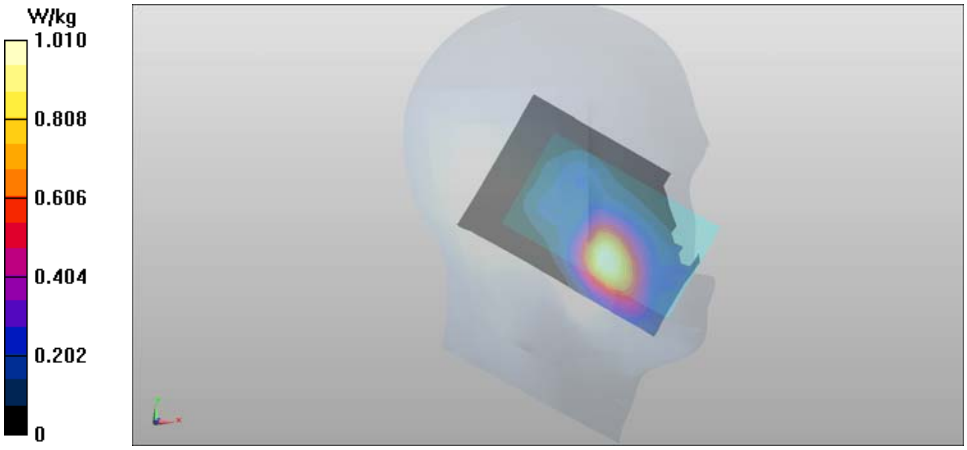
Date/Time: 2013-05-13 17:31:03

Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1700/2100 (Band 4)
Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: HSL1800; Medium Notes: t= 21.9 C
Medium parameters used: f = 1753 MHz; σ = 1.347 S/m; ε_r = 38.798; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065/Volume Scan (21x31x7): Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.415 V/m
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.946 W/kg
SAR(10 g) = 0.595 W/kg
Power Drift = 0.04 dB
Total Absorbed Power = 0.0480 W
Maximum value of SAR (measured) = 1.01 W/kg



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Plot #31– EXPANDED VOLUME SCAN

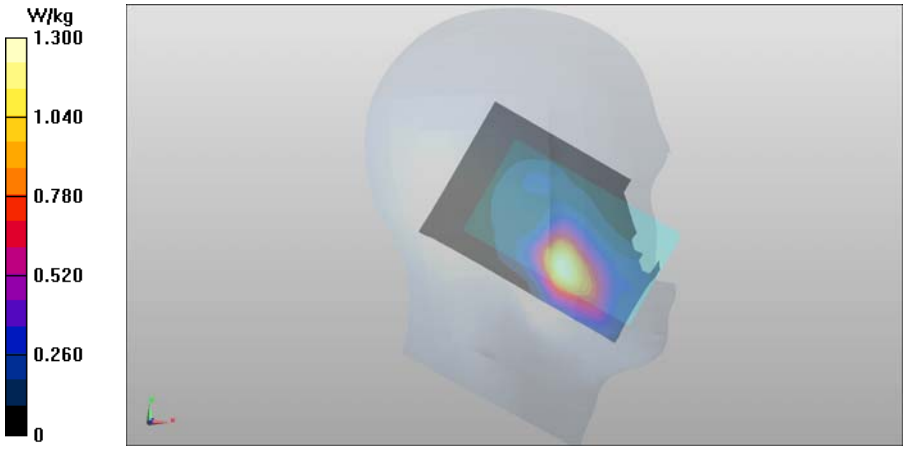
Date/Time: 2013-05-14 16:54:44

Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1900 (Band 2)
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: t= 22.3 C
Medium parameters used: f = 1908 MHz; σ = 1.389 S/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA1900 (Band 2) - Left/Cheek - High/Volume Scan (21x31x7): Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.830 V/m
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.18 W/kg
SAR(10 g) = 0.720 W/kg
Power Drift = 0.10 dB
Total Absorbed Power = 0.0545 W
Maximum value of SAR (measured) = 1.30 W/kg



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Plot #32– EXPANDED VOLUME SCAN

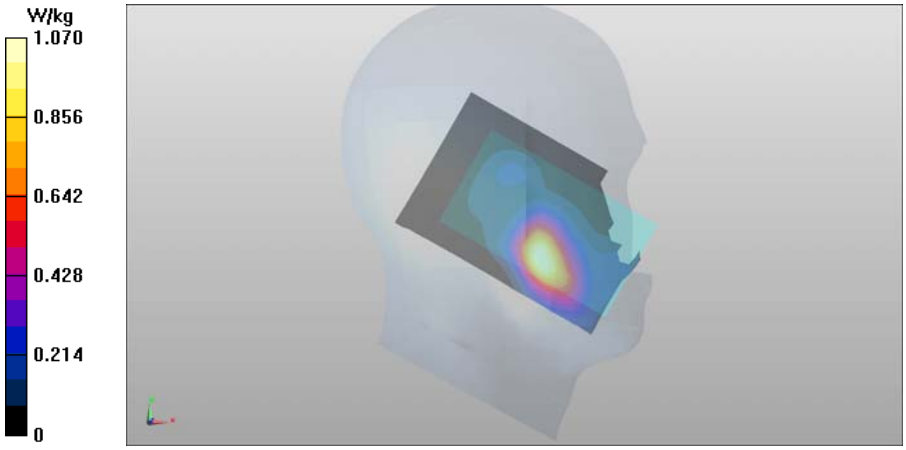
Date/Time: 2013-05-13 15:21:29

Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9

Communication System: LTE1900 (Band 2)
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium Notes: T=21.5C
Medium parameters used: f = 1900 MHz; σ = 1.391 S/m; ε_r = 39.276; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Volume Scan (21x31x7):
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.691 V/m
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.991 W/kg
SAR(10 g) = 0.595 W/kg
Power Drift = 0.24 dB
Total Absorbed Power = 0.0420 W
Maximum value of SAR (measured) = 1.07 W/kg



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Plot #33 – EXPANDED VOLUME SCAN

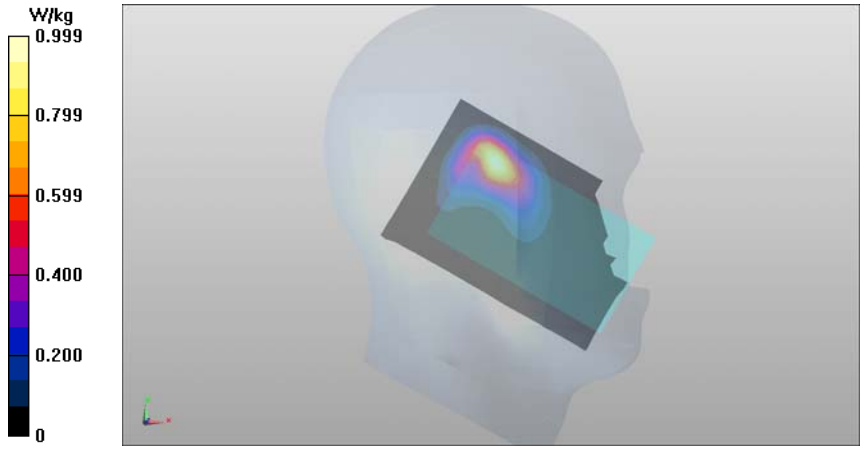
Date/Time: 2013-04-30 08:36:11

Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5

Communication System: WLAN2450 b-mode
Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: HSL2450; Medium Notes: t= 21.5 C
Medium parameters used: f = 2412 MHz; σ = 1.751 S/m; ε_r = 38.353; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Volume Scan (21x31x7): Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.772 V/m
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.872 W/kg
SAR(10 g) = 0.420 W/kg
Power Drift = -0.23 dB
Total Absorbed Power = 0.0168 W
Maximum value of SAR (measured) = 0.999 W/kg



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Plot #34 – EXPANDED VOLUME SCAN

Date/Time: 2013-04-30 08:36:11

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.751 S/m; ε_r = 38.353; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

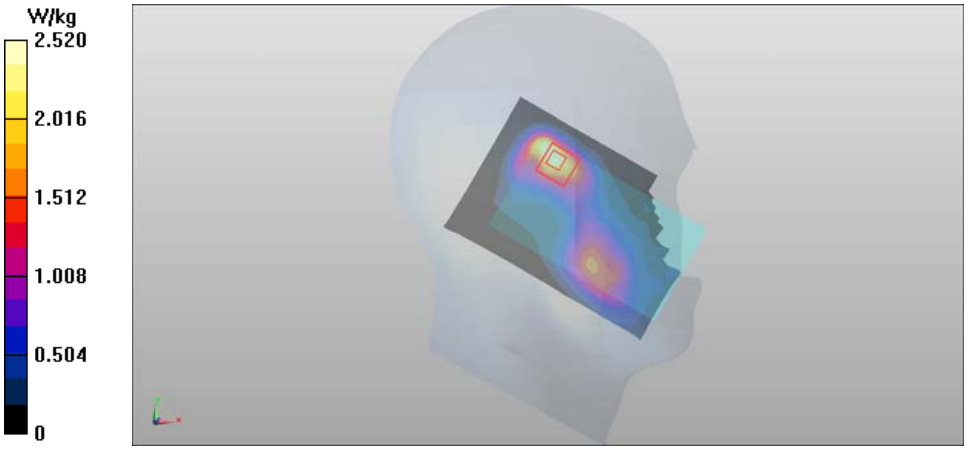
Date/Time: 2013-05-13 17:31:03

DASY Configuration for WCDMA1700/2100 (Band 4) - Left/Cheek - High - Cover CC-3065/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1800 Medium parameters used: f = 1753 MHz; σ = 1.347 S/m; ε_r = 38.798; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(5.17, 5.17, 5.17); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1692
Measurement SW: DASY52, Version 52.8 (6)

Multi Band Result:
SAR(1 g) = 1.38 W/kg; SAR(10 g) = 0.704 W/kg
Maximum value of SAR (interpolated) = 2.52 W/kg

WLAN2450 b-mode was scaled with factor 1.52, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #35 – EXPANDED VOLUME SCAN

Date/Time: 2013-04-30 08:36:11

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.751 S/m; ε_r = 38.353; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

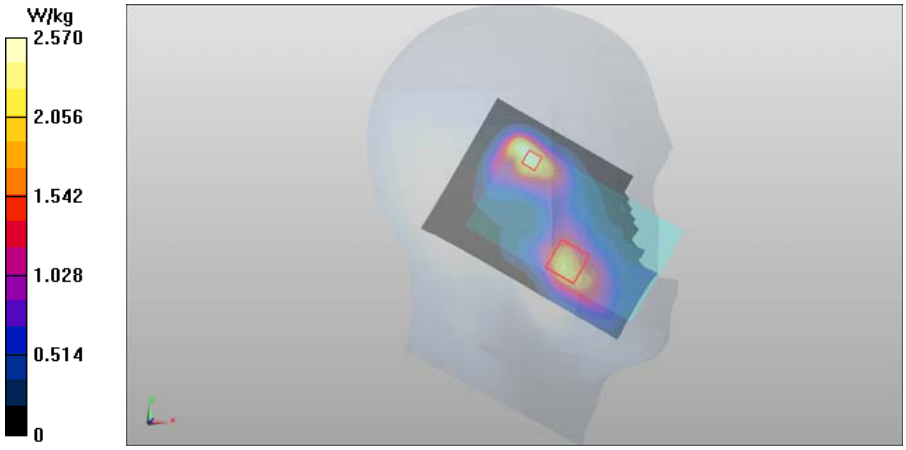
Date/Time: 2013-05-14 16:54:44

DASY Configuration for WCDMA1900 (Band 2) - Left/Cheek - High/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1908 MHz; σ = 1.389 S/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3194; ConvF(4.97, 4.97, 4.97); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY52, Version 52.8 (6)

Multi Band Result:
SAR(1 g) = 1.42 W/kg; SAR(10 g) = 0.824 W/kg
Maximum value of SAR (interpolated) = 2.57 W/kg

WLAN2450 b-mode was scaled with factor 1.52, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #36 – EXPANDED VOLUME SCAN

Date/Time: 2013-04-30 08:36:11

DASY Configuration for WLAN2450 b-mode - Left/Cheek - Channel 1 - DSSS 1 Mbps/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL2450 Medium parameters used: f = 2412 MHz; σ = 1.751 S/m; ε_r = 38.353; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3131; ConvF(4.34, 4.34, 4.34); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #4 SAM, SAR4 ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (5)

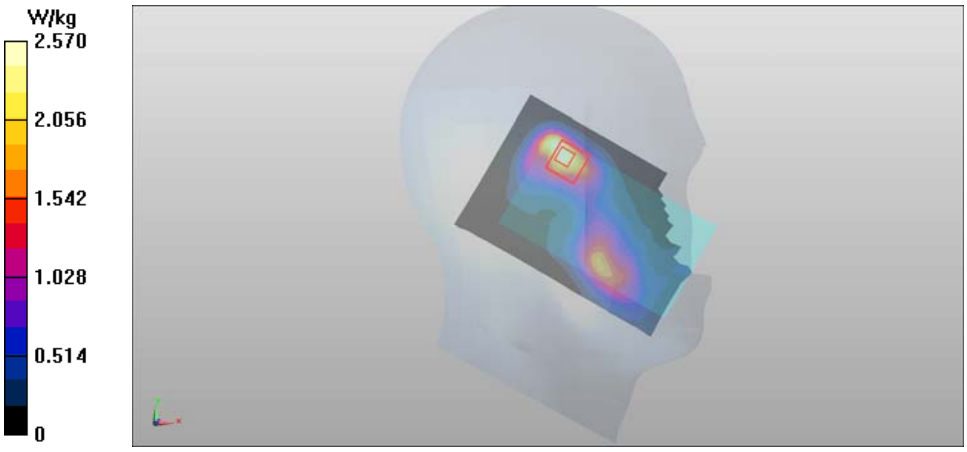
Date/Time: 2013-05-13 15:21:29

DASY Configuration for LTE1900 (Band 2) - Left/Cheek - High - QPSK - 20MHz - 1RB - 100% offset/Volume Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9
Communication System: LTE1900 (Band 2); Frequency: 1900 MHz; Duty Cycle: 1:1; PMF: 1
Medium: HSL1900 Medium parameters used: f = 1900 MHz; σ = 1.391 S/m; ε_r = 39.276; ρ = 1000 kg/m^3
Phantom section: Left Section

Probe: ES3DV3 - SN3276; ConvF(5.21, 5.21, 5.21); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: SAM3 04/24/2013; Type: QD000P40CD; Serial: TP: 1630
Measurement SW: DASY52, Version 52.8 (5)

Multi Band Result:
SAR(1 g) = 1.41 W/kg; SAR(10 g) = 0.708 W/kg
Maximum value of SAR (interpolated) = 2.57 W/kg

WLAN2450 b-mode was scaled with factor 1.52, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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APPENDIX B.2: BODY-WORN MEASUREMENT SCANS

Plot #37

Date/Time: 2013-05-01 14:52:30

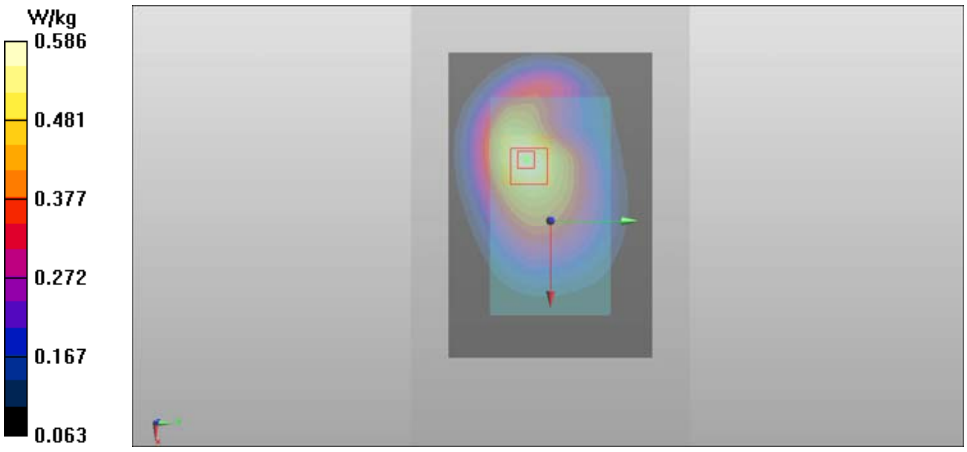
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6

Communication System: LTE700 (Band 17)
Frequency: 710 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium Notes: T21.5
Medium parameters used: f = 710 MHz; σ = 0.939 S/m; ε_r = 55.501; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.596 W/kg

LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.371 V/m
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.557 W/kg
SAR(10 g) = 0.409 W/kg
Power Drift = -0.00 dB
Maximum value of SAR (measured) = 0.586 W/kg



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Plot #38

Date/Time: 2013-04-30 07:18:03

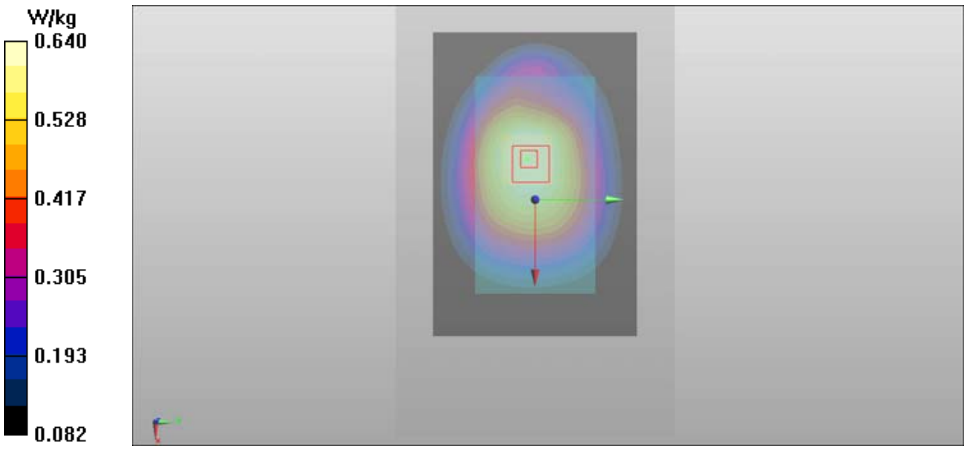
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: 2-slot GPRS850
Frequency: 836.6 MHz; Duty Cycle: 1:4.2
Medium: BSL850; Medium Notes: t= 22.2 C
Medium parameters used: f = 837 MHz; σ = 0.974 S/m; ε_r = 52.975; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS850/Body - Middle - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (81x121x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.663 W/kg

2-slot GPRS850/Body - Middle - Spacer 15mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.858 V/m
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.613 W/kg
SAR(10 g) = 0.471 W/kg
Power Drift = -0.12 dB
Maximum value of SAR (measured) = 0.640 W/kg



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Plot #39

Date/Time: 2013-05-07 08:13:56

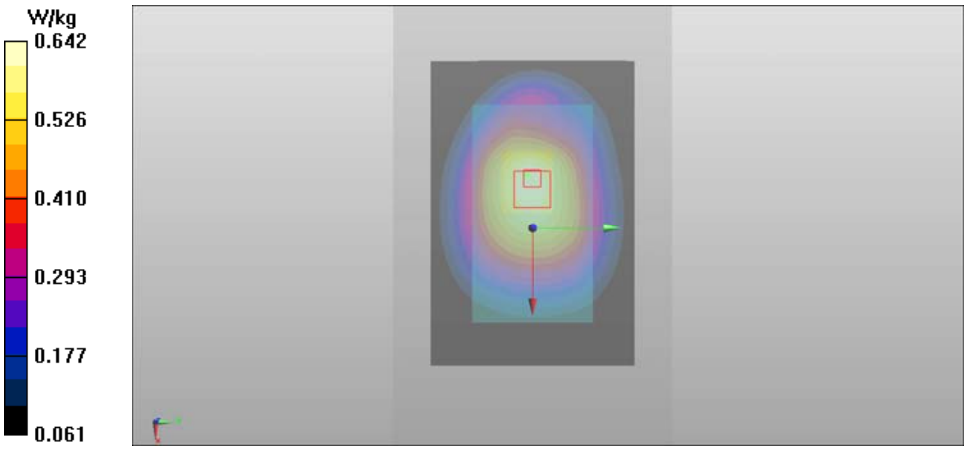
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: WCDMA850 (Band 5)
Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium: BSL850; Medium Notes: t= 21.8 C
Medium parameters used: f = 847 MHz; σ = 0.99 S/m; ε_r = 53.698; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3165
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA850 (Band 5)/Body - High - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.624 W/kg

WCDMA850 (Band 5)/Body - High - Spacer 15mm - No Headset - Back Facing Phantom/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.946 V/m
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.609 W/kg
SAR(10 g) = 0.468 W/kg
Power Drift = 0.02 dB
Maximum value of SAR (measured) = 0.642 W/kg



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Plot #40

Date/Time: 2013-05-01 14:19:43

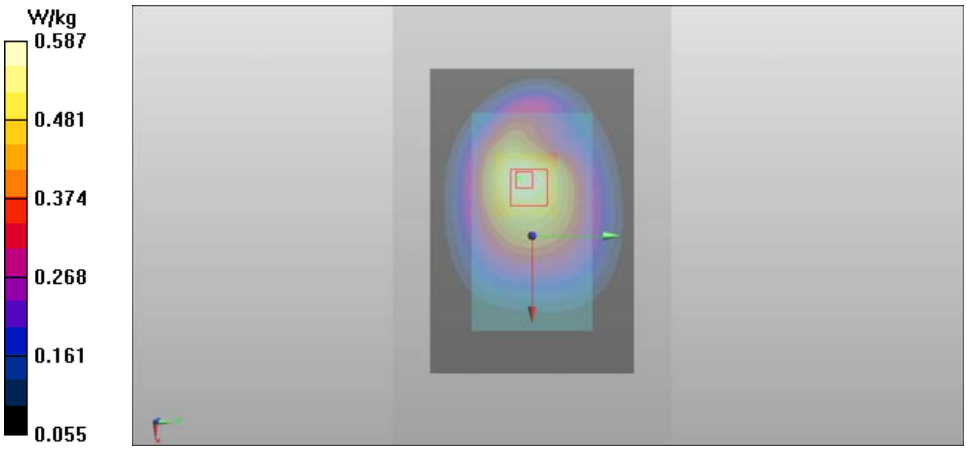
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6

Communication System: LTE850 (Band 5)
Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium Notes: T21.5
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.999 S/m; ε_r = 55.463; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.9 (7117)

LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.597 W/kg

LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 24.008 V/m
Peak SAR (extrapolated) = 0.728 W/kg
SAR(1 g) = 0.559 W/kg
SAR(10 g) = 0.416 W/kg
Power Drift = 0.04 dB
Maximum value of SAR (measured) = 0.587 W/kg



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Plot #41

Date/Time: 2013-04-26 16:54:26

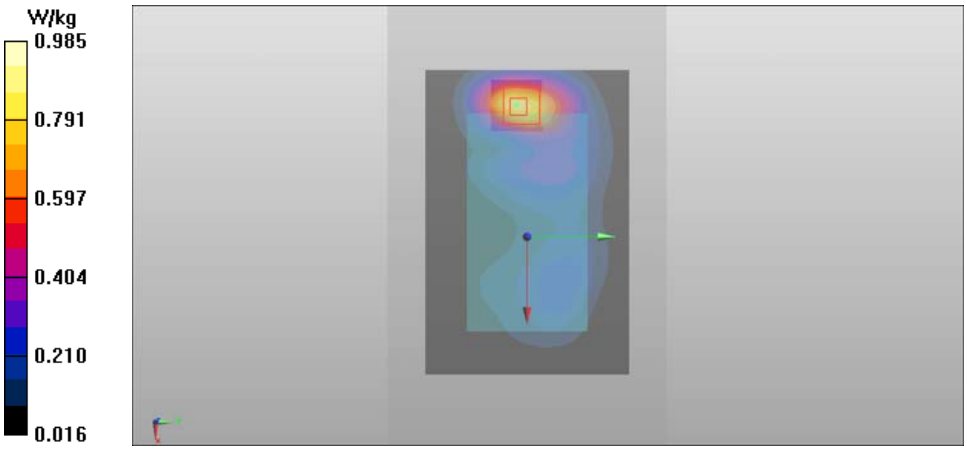
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1700/2100 (Band 4)
Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: BSL1800; Medium Notes: t= 21.5 C
Medium parameters used: f = 1753 MHz; σ = 1.466 S/m; ε_r = 52.061; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

WCDMA1700/2100 (Band 4)/Body - High - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.888 W/kg

WCDMA1700/2100 (Band 4)/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 = 8.349 V/m
Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.887 W/kg
SAR(10 g) = 0.513 W/kg
Power Drift = 0.10 dB
Maximum value of SAR (measured) = 0.985 W/kg



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Plot #42

Date/Time: 2013-05-09 18:15:24

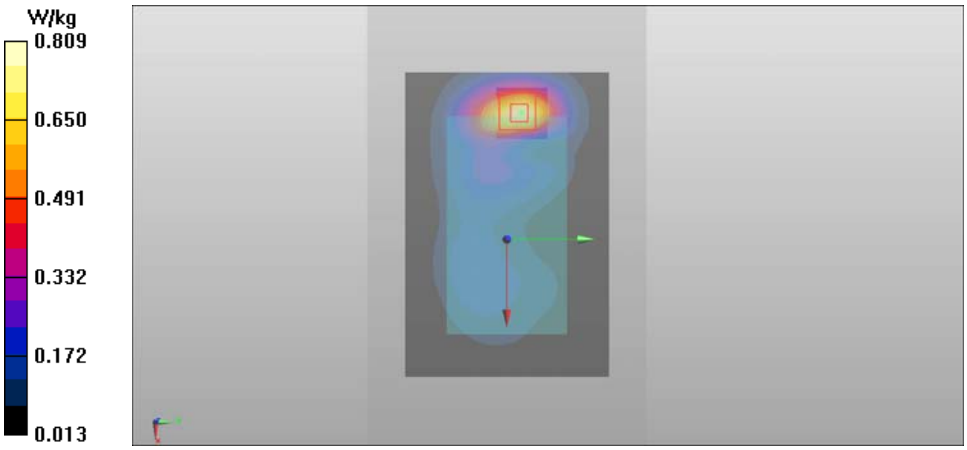
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6

Communication System: LTE1700/2100 (Band 4)
Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium: MSL1800; Medium Notes: T21.4C
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.42 S/m; ε_r = 51.988; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.802 W/kg

LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 21.169 V/m
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.732 W/kg
SAR(10 g) = 0.431 W/kg
Power Drift = -0.04 dB
Maximum value of SAR (measured) = 0.809 W/kg



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Plot #43

Date/Time: 2013-04-28 10:35:10

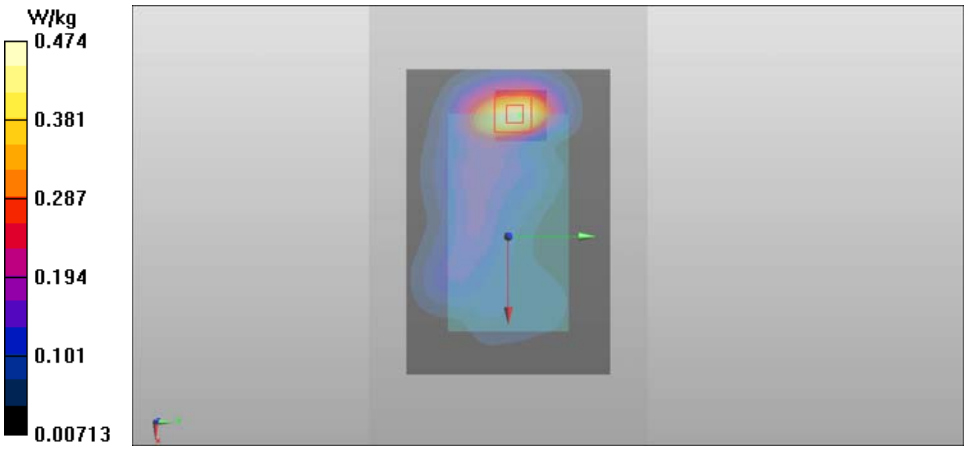
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: 2-slot GPRS1900
Frequency: 1850.2 MHz; Duty Cycle: 1:4.2
Medium: BSL1900; Medium Notes: t= 21.2 C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.484 S/m; ε_r = 51.332; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS1900/Body - Low - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (81x121x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.479 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 = 17.762 V/m
Peak SAR (extrapolated) = 0.708 W/kg
SAR(1 g) = 0.435 W/kg
SAR(10 g) = 0.257 W/kg
Power Drift = 0.03 dB
Maximum value of SAR (measured) = 0.474 W/kg



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Plot #44

Date/Time: 2013-04-28 13:03:45

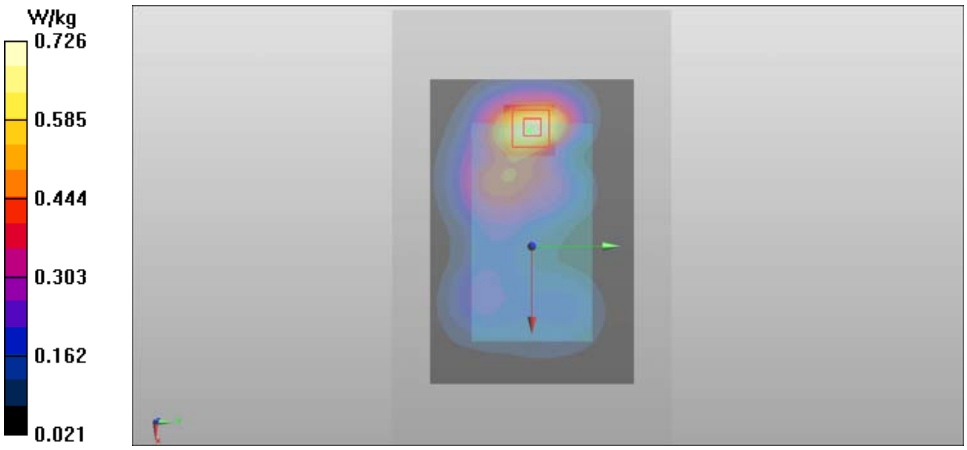
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3

Communication System: WCDMA1900 (Band 2)
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: BSL1900; Medium Notes: t= 21.2 C
Medium parameters used: f = 1908 MHz; σ = 1.542 S/m; ε_r = 51.114; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

WCDMA1900 (Band 2)/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.734 W/kg

WCDMA1900 (Band 2)/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 22.137 V/m
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.671 W/kg
SAR(10 g) = 0.404 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 0.726 W/kg



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Plot #45

Date/Time: 2013-05-01 14:56:29

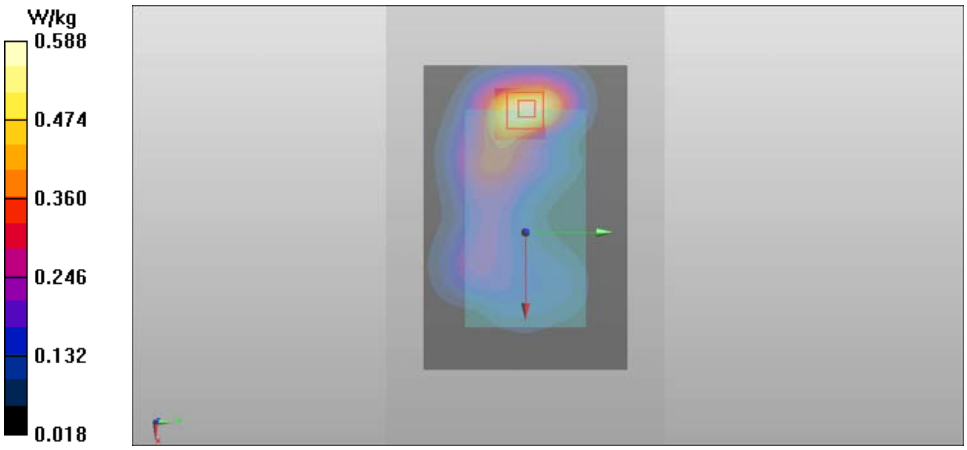
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9

Communication System: LTE1900 (Band 2)
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium Notes: T=21.5 C
Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.924; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.585 W/kg

LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.379 V/m
Peak SAR (extrapolated) = 0.866 W/kg
SAR(1 g) = 0.551 W/kg
SAR(10 g) = 0.335 W/kg
Power Drift = 0.03 dB
Maximum value of SAR (measured) = 0.588 W/kg



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Plot #46

Date/Time: 2013-04-21 10:25:51

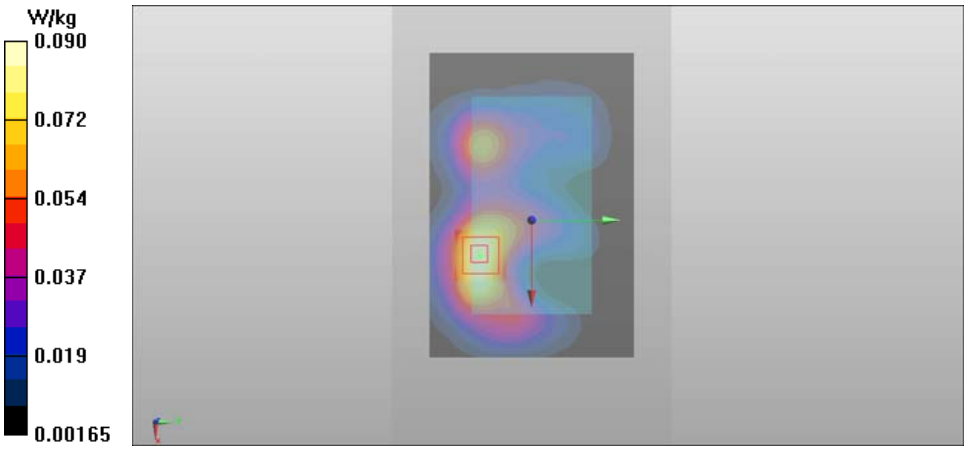
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5

Communication System: WLAN2450 b-mode
Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: BSL2450; Medium Notes: t= 21.2 C
Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan (121x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0914 W/kg

WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.968 V/m
Peak SAR (extrapolated) = 0.149 W/kg
SAR(1 g) = 0.083 W/kg
SAR(10 g) = 0.048 W/kg
Power Drift = 0.04 dB
Maximum value of SAR (measured) = 0.0897 W/kg



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Plot #47

Date/Time: 2013-04-26 09:57:19

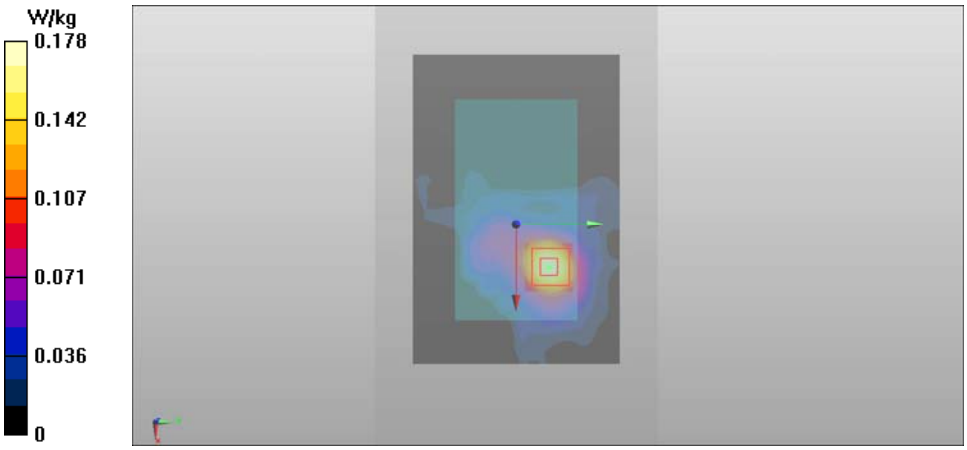
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3

Communication System: WLAN5000 a-mode
Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: BSL5000; Medium Notes: t= 21.5
Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
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 (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;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan (121x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.172 W/kg

WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.901 V/m
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.106 W/kg
SAR(10 g) = 0.043 W/kg
Power Drift = -0.22 dB
Maximum value of SAR (measured) = 0.178 W/kg



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Plot #48

Date/Time: 2013-04-21 10:25:51

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

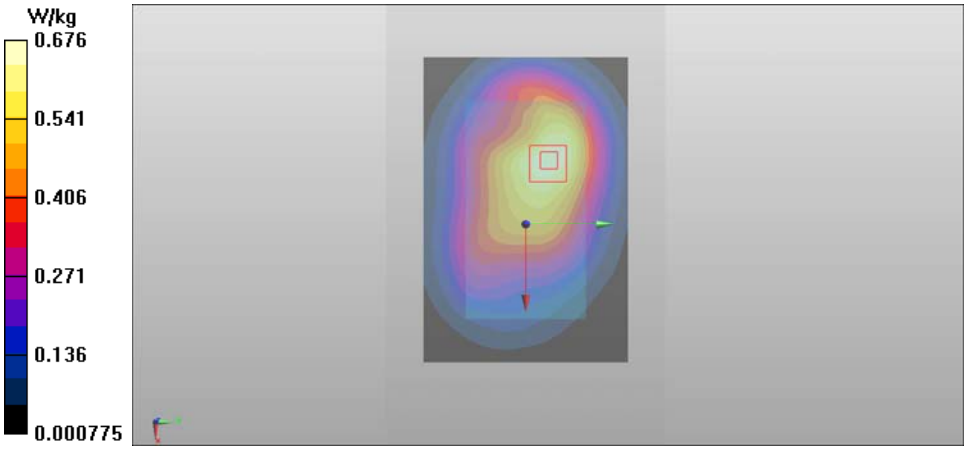
Date/Time: 2013-05-01 16:01:42

DASY Configuration for LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6
Communication System: LTE700 (Band 17); Frequency: 710 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL750 Medium parameters used: f = 710 MHz; σ = 0.939 S/m; ε_r = 55.501; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.449 W/kg
Maximum value of SAR (interpolated) = 0.676 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE700 (Band 17) with factor 1.12, before combining in SEMCAD SW.



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Plot #49

Date/Time: 2013-04-21 10:25:51

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

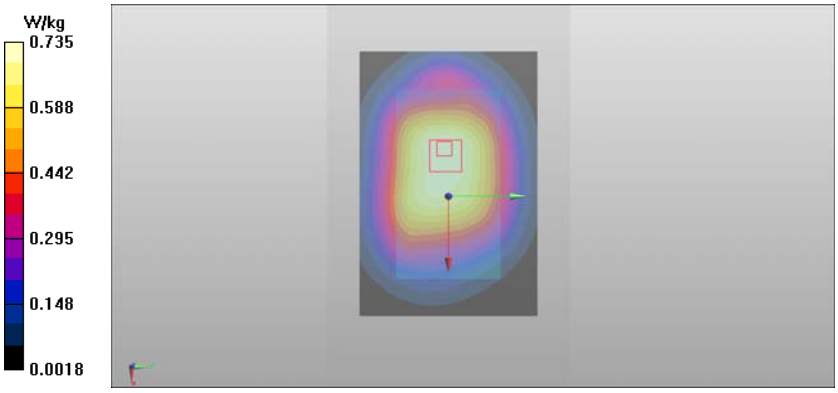
Date/Time: 2013-04-30 07:54:12

DASY Configuration for 2-slot GPRS850/Body - Middle - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: BSL850 Medium parameters used: f = 837 MHz; σ = 0.974 S/m; ε_r = 52.975; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3892; ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.694 W/kg; SAR(10 g) = 0.497 W/kg
Maximum value of SAR (interpolated) = 0.735 W/kg

WLAN2450 b-mode was scaled with factor 1.46, 2-slot GPRS850 with factor 1.12, before combining in SEMCAD SW.



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Plot #50

Date/Time: 2013-04-21 10:25:51

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

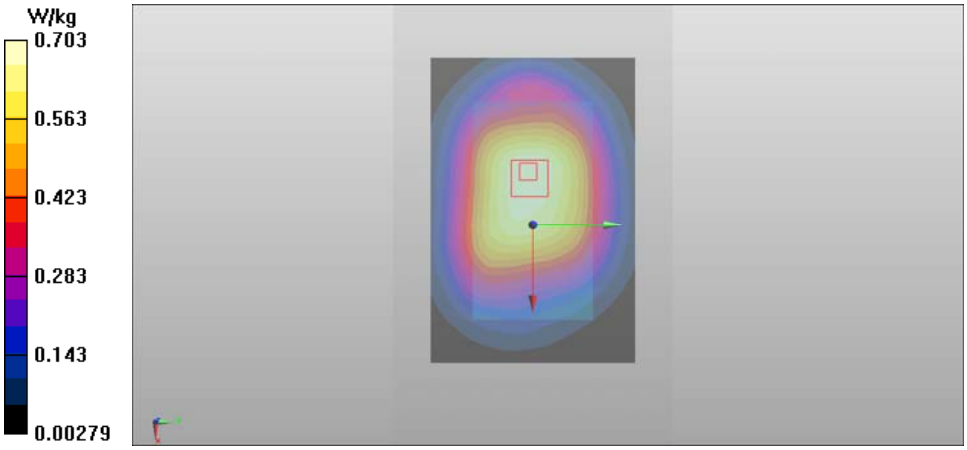
Date/Time: 2013-05-07 07:34:32

DASY Configuration for WCDMA850 (Band 5)/Body - Middle - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: WCDMA850 (Band 5); Frequency: 835 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL850 Medium parameters used: f = 835 MHz; σ = 0.982 S/m; ε_r = 53.777; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3165; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 0.665 W/kg; SAR(10 g) = 0.476 W/kg
Maximum value of SAR (interpolated) = 0.703 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #51

Date/Time: 2013-04-21 10:25:51

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

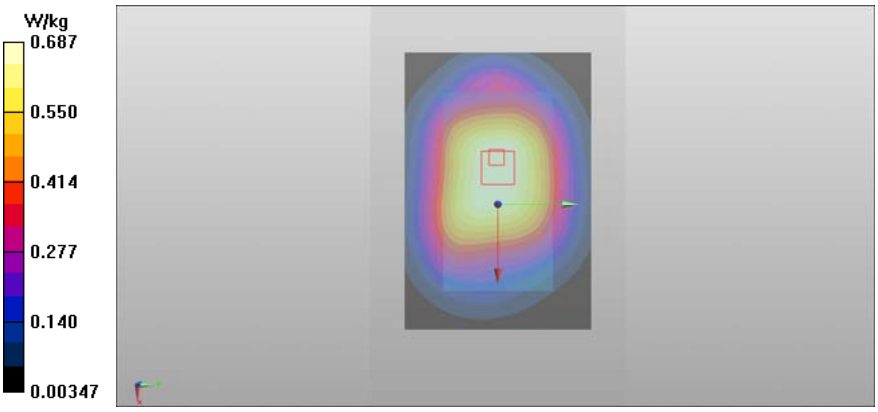
Date/Time: 2013-05-01 18:45:27

DASY Configuration for LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6
Communication System: LTE850 (Band 5); Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL835 Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.999 S/m; ε_r = 55.463; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.650 W/kg; SAR(10 g) = 0.470 W/kg
Maximum value of SAR (interpolated) = 0.687 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #52

Date/Time: 2013-04-21 10:56:22

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-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

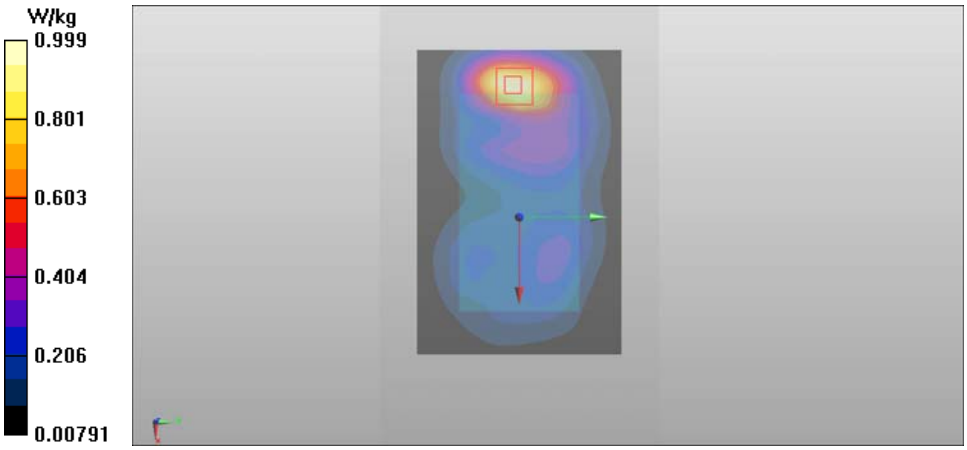
Date/Time: 2013-04-26 16:54:26

DASY Configuration for WCDMA1700/2100 (Band 4)/Body - High - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1800 Medium parameters used: f = 1753 MHz; σ = 1.466 S/m; ε_r = 52.061; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.906 W/kg; SAR(10 g) = 0.535 W/kg
Maximum value of SAR (interpolated) = 0.999 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #53

Date/Time: 2013-04-21 09:49:53

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - WH-208- Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

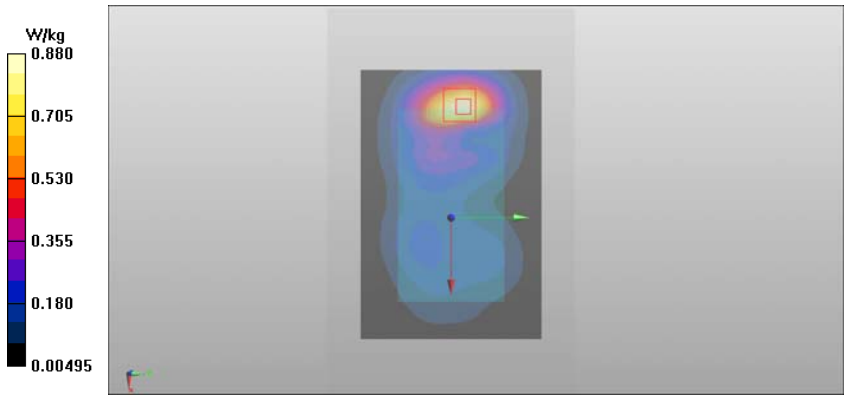
Date/Time: 2013-05-09 18:15:24

DASY Configuration for LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6
Communication System: LTE1700/2100 (Band 4); Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1800 Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.42 S/m; ε_r = 51.988; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.461 W/kg
Maximum value of SAR (interpolated) = 0.880 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #54

Date/Time: 2013-04-21 09:10:14

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

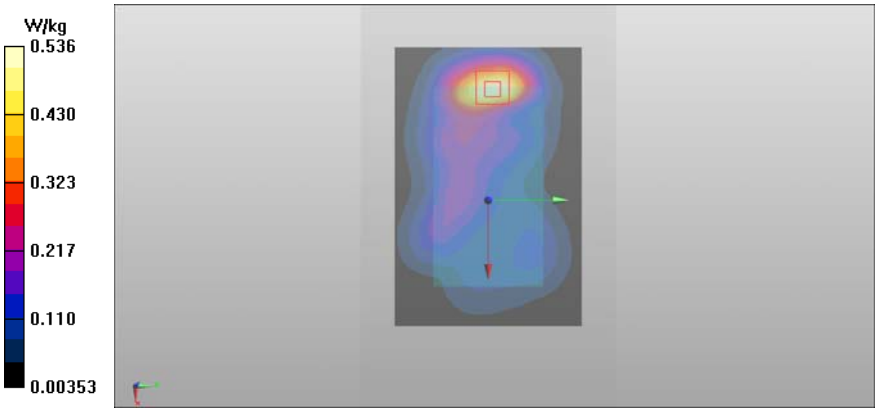
Date/Time: 2013-04-28 10:35:10

DASY Configuration for 2-slot GPRS1900/Body - Low - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: 2-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: BSL1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.484 S/m; ε_r = 51.332; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.279 W/kg
Maximum value of SAR (interpolated) = 0.536 W/kg

WLAN2450 b-mode was scaled with factor 1.46, 2-slot GPRS1900 with factor 1.12, before combining in SEMCAD SW.



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Plot #55

Date/Time: 2013-04-21 09:49:53

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 15mm - WH-208- Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

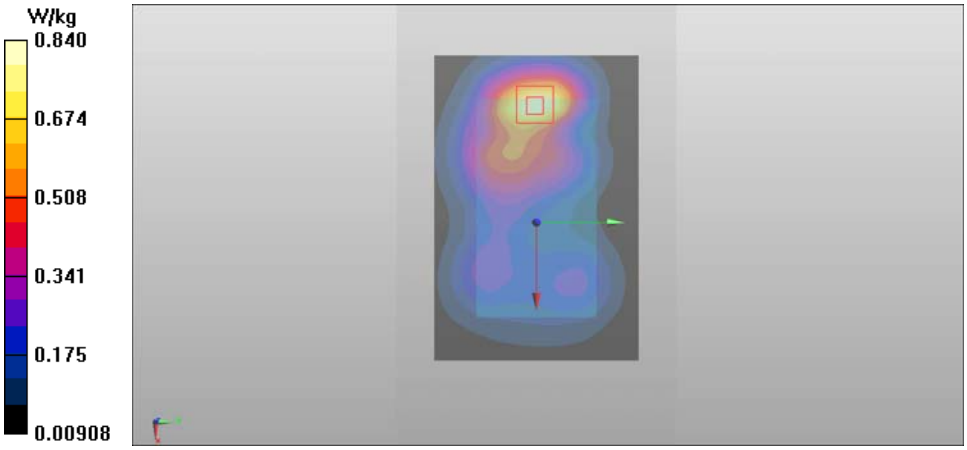
Date/Time: 2013-04-28 13:03:45

DASY Configuration for WCDMA1900 (Band 2)/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1900 Medium parameters used: f = 1908 MHz; σ = 1.542 S/m; ε_r = 51.114; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.763 W/kg; SAR(10 g) = 0.443 W/kg
Maximum value of SAR (interpolated) = 0.840 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #56

Date/Time: 2013-04-21 10:56:22

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-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.93 S/m; ε_r = 51.313; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

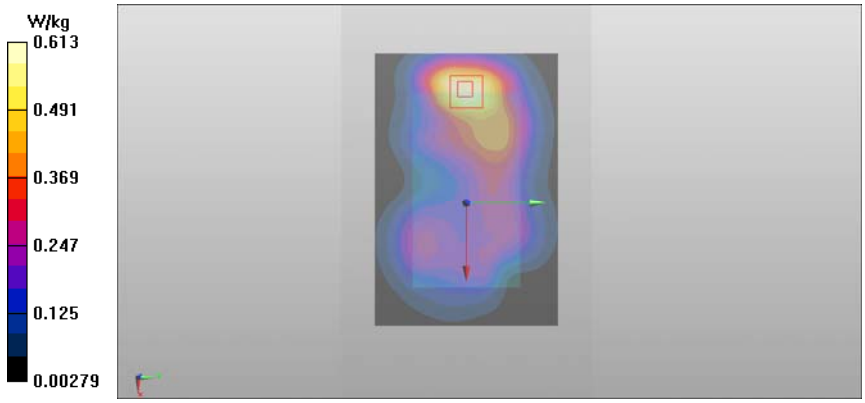
Date/Time: 2013-05-01 17:52:26

DASY Configuration for LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9
Communication System: LTE1900 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1900 Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.924; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.567 W/kg; SAR(10 g) = 0.343 W/kg
Maximum value of SAR (interpolated) = 0.613 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #57

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

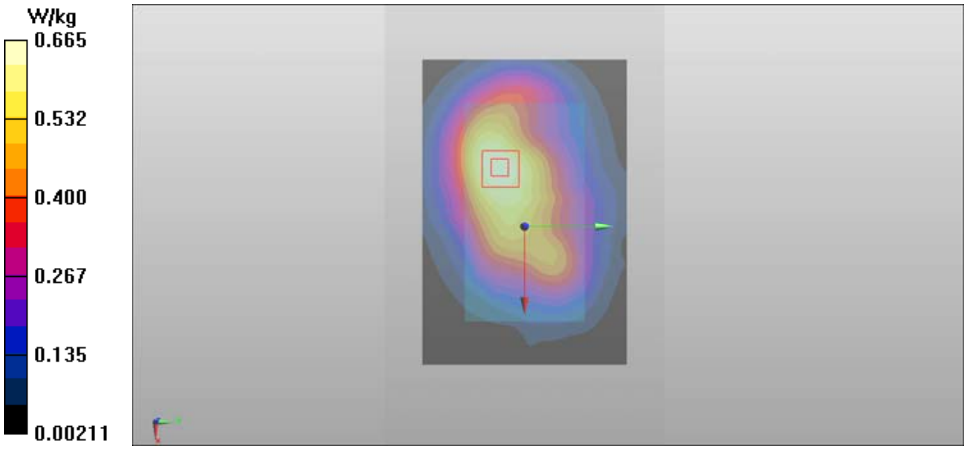
Date/Time: 2013-05-01 14:52:30

DASY Configuration for LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6
Communication System: LTE700 (Band 17); Frequency: 710 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL750 Medium parameters used: f = 710 MHz; σ = 0.939 S/m; ε_r = 55.501; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.627 W/kg; SAR(10 g) = 0.447 W/kg
Maximum value of SAR (interpolated) = 0.665 W/kg

WLAN5000 a-mode was scaled with factor 1.33, LTE700 (Band 17) with factor 1.12, before combining in SEMCAD SW.



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Plot #58

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

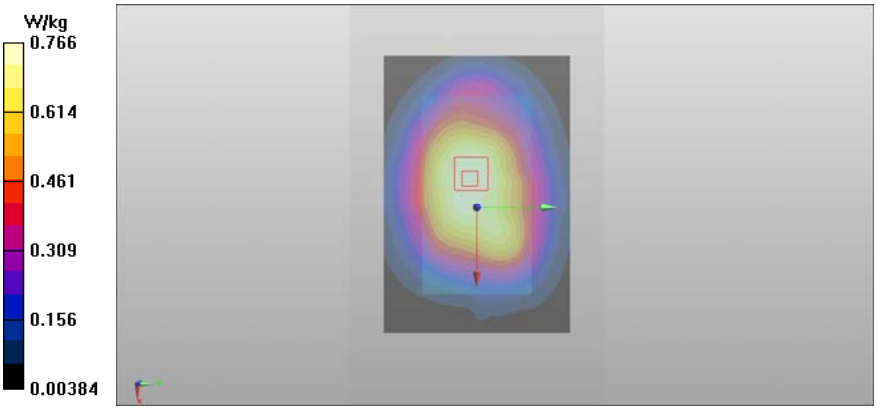
Date/Time: 2013-04-30 07:18:03

DASY Configuration for 2-slot GPRS850/Body - Middle - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: BSL850 Medium parameters used: f = 837 MHz; σ = 0.974 S/m; ε_r = 52.975; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3892; ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.715 W/kg; SAR(10 g) = 0.514 W/kg
Maximum value of SAR (interpolated) = 0.766 W/kg

WLAN5000 a-mode was scaled with factor 1.33, 2-slot GPRS850 with factor 1.12, before combining in SEMCAD SW.



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Plot #59

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

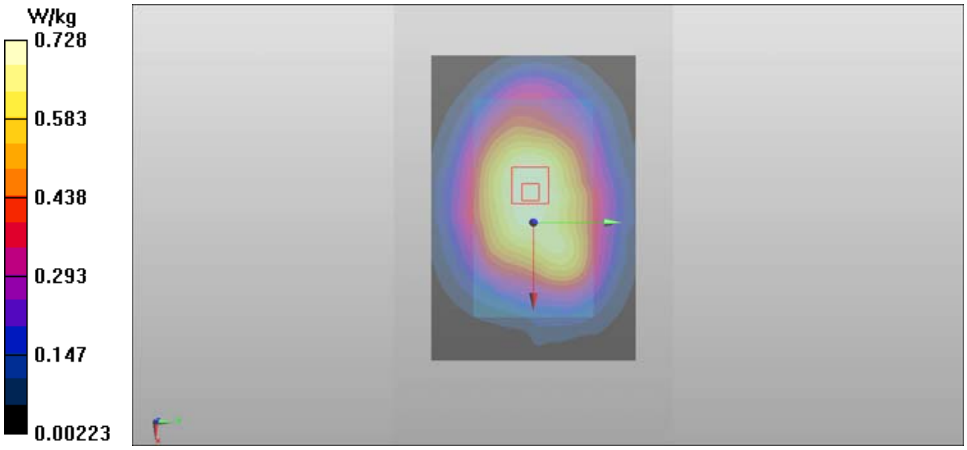
Date/Time: 2013-05-07 08:13:56

DASY Configuration for WCDMA850 (Band 5)/Body - High - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: WCDMA850 (Band 5); Frequency: 846.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL850 Medium parameters used: f = 847 MHz; σ = 0.99 S/m; ε_r = 53.698; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3165; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 0.676 W/kg; SAR(10 g) = 0.486 W/kg
Maximum value of SAR (interpolated) = 0.728 W/kg

WLAN5000 a-mode was scaled with factor 1.33, WCDMA850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #60

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

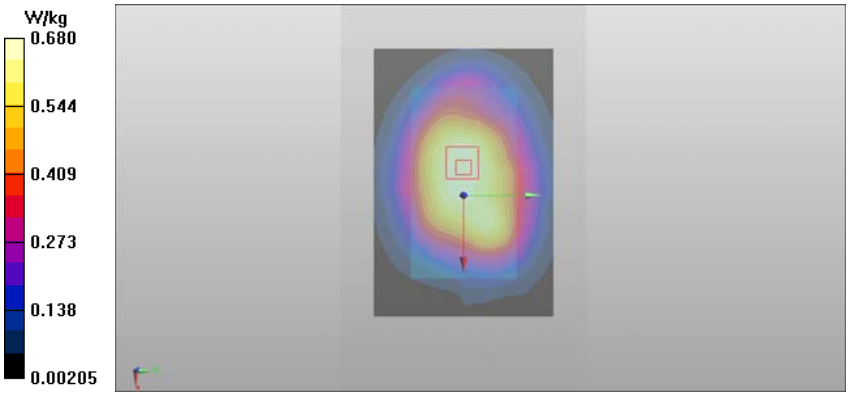
Date/Time: 2013-05-01 13:07:01

DASY Configuration for LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6
Communication System: LTE850 (Band 5); Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL835 Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.999 S/m; ε_r = 55.463; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.631 W/kg; SAR(10 g) = 0.453 W/kg
Maximum value of SAR (interpolated) = 0.680 W/kg

WLAN5000 a-mode was scaled with factor 1.33, LTE850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #61

Date/Time: 2013-04-26 21:51:58

DASY Configuration for WLAN5000 a-mode/Body - Channel 64 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5320 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5320 MHz; σ = 5.618 S/m; ε_r = 47.884; ρ = 1000 kg/m^3
Phantom section: Center Section

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))
Electronics: DAE4 Sn1309; Calibrated: 2013-01-11
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

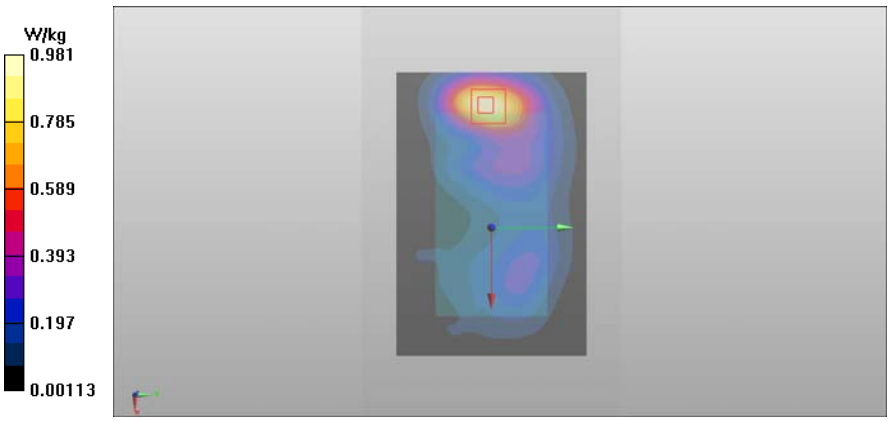
Date/Time: 2013-04-26 16:54:26

DASY Configuration for WCDMA1700/2100 (Band 4)/Body - High - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1800 Medium parameters used: f = 1753 MHz; σ = 1.466 S/m; ε_r = 52.061; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.891 W/kg; SAR(10 g) = 0.522 W/kg
Maximum value of SAR (interpolated) = 0.981 W/kg

WLAN5000 a-mode was scaled with factor 1.28, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #62

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

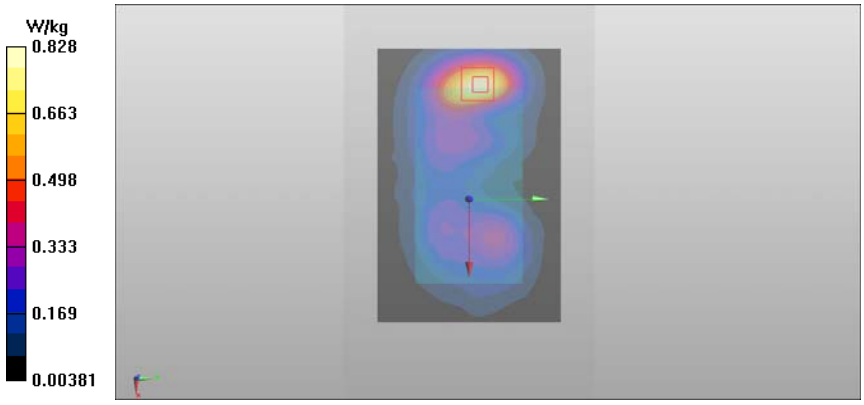
Date/Time: 2013-05-09 16:40:52

DASY Configuration for LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000365/6
Communication System: LTE1700/2100 (Band 4); Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1800 Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.42 S/m; ε_r = 51.988; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.750 W/kg; SAR(10 g) = 0.435 W/kg
Maximum value of SAR (interpolated) = 0.828 W/kg

WLAN5000 a-mode was scaled with factor 1.33, LTE1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #63

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

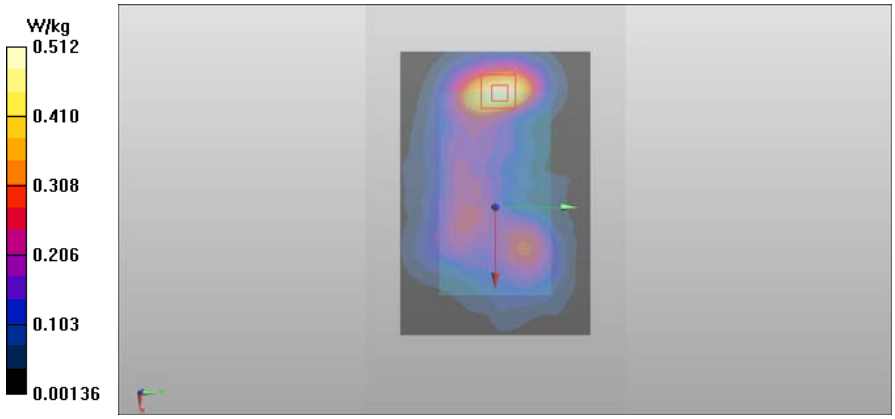
Date/Time: 2013-04-28 10:35:10

DASY Configuration for 2-slot GPRS1900/Body - Low - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: 2-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: BSL1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.484 S/m; ε_r = 51.332; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.465 W/kg; SAR(10 g) = 0.266 W/kg
Maximum value of SAR (interpolated) = 0.512 W/kg

WLAN5000 a-mode was scaled with factor 1.33, 2-slot GPRS1900 with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #64

Date/Time: 2013-04-26 15:43:41

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

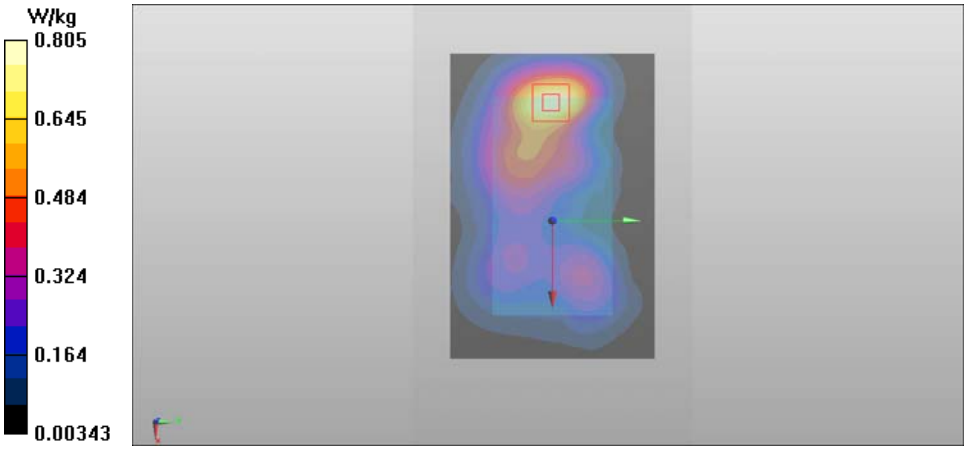
Date/Time: 2013-04-28 13:03:45

DASY Configuration for WCDMA1900 (Band 2)/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000282/3
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1900 Medium parameters used: f = 1908 MHz; σ = 1.542 S/m; ε_r = 51.114; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.736 W/kg; SAR(10 g) = 0.431 W/kg
Maximum value of SAR (interpolated) = 0.805 W/kg

WLAN5000 a-mode was scaled with factor 1.33, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



Copyright © 2013 TCC Nokia

Plot #65

Date/Time: 2013-04-26 09:57:19

DASY Configuration for WLAN5000 a-mode/Body - Channel 40 - OFDM 6 Mbps - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223426/3
Communication System: WLAN5000 a-mode; Frequency: 5200 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL5000 Medium parameters used: f = 5200 MHz; σ = 5.47 S/m; ε_r = 48.098; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3573; ConvF(4.04, 4.04, 4.04); 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;
Measurement SW: DASY52, Version 52.8 (5)

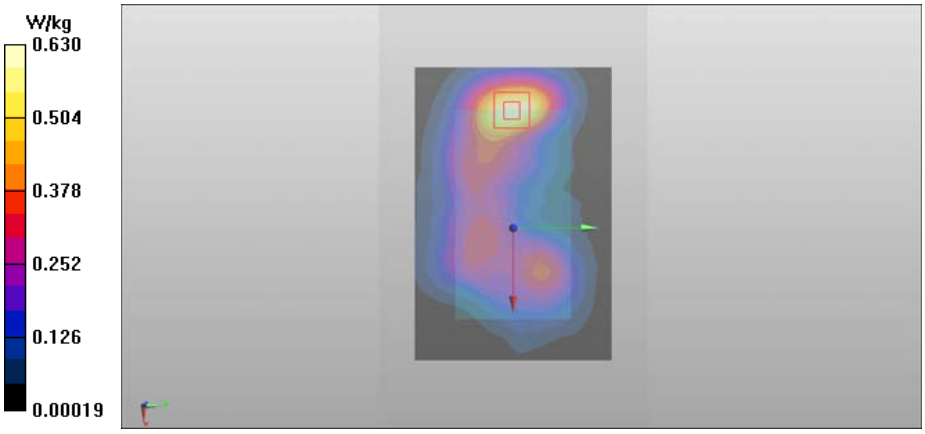
Date/Time: 2013-05-01 14:33:16

DASY Configuration for LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000397/9
Communication System: LTE1900 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1900 Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.924; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.341 W/kg
Maximum value of SAR (interpolated) = 0.630 W/kg

WLAN5000 a-mode was scaled with factor 1.33, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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APPENDIX B.3: WIRELESS ROUTER MEASUREMENT SCANS

Plot #66

Date/Time: 2013-05-02 11:26:28

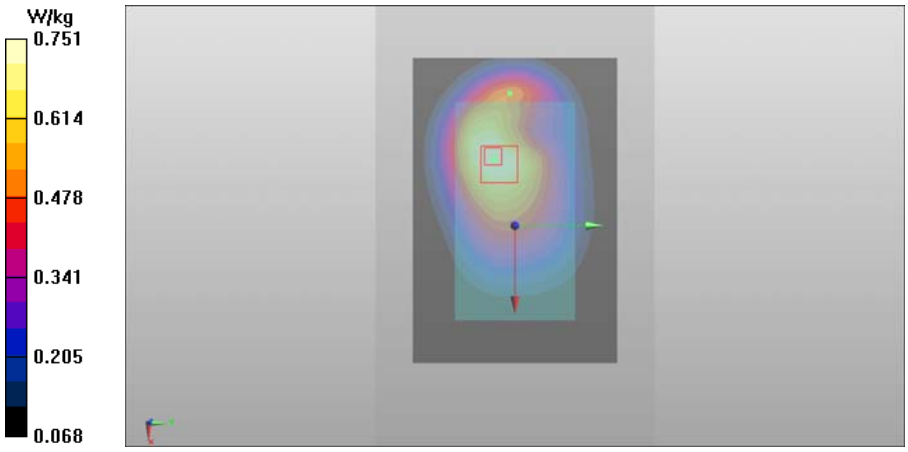
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6

Communication System: LTE700 (Band 17)
Frequency: 710 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium Notes: T21.5
Medium parameters used: f = 710 MHz; σ = 0.938 S/m; ε_r = 55.439; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.774 W/kg

LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.529 V/m
Peak SAR (extrapolated) = 0.972 W/kg
SAR(1 g) = 0.711 W/kg
SAR(10 g) = 0.513 W/kg
Power Drift = -0.03 dB
Maximum value of SAR (measured) = 0.751 W/kg



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Plot #67

Date/Time: 2013-04-30 12:28:32

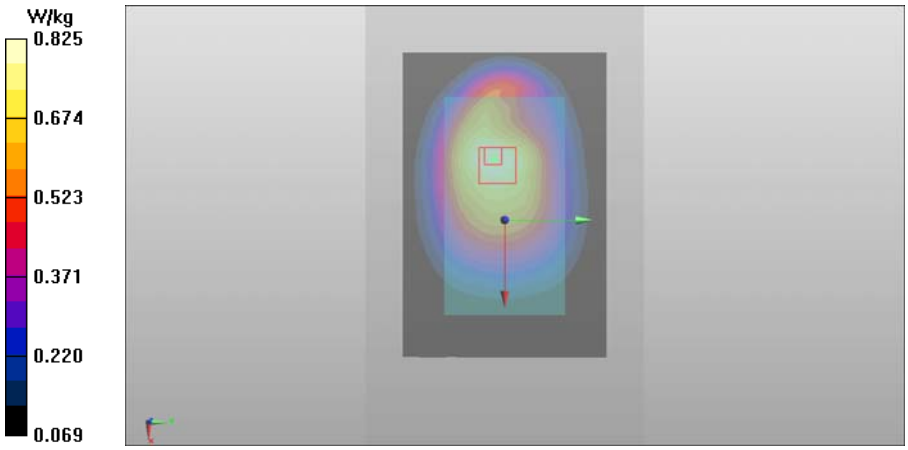
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: 2-slot GPRS850
Frequency: 824.2 MHz; Duty Cycle: 1:4.2
Medium: BSL850; Medium Notes: t= 22.2 C
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.966 S/m; ε_r = 53.063; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: EX3DV4 - SN3892
- ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2012-08-28
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS850/Body - Low - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x121x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.837 W/kg

2-slot GPRS850/Body - Low - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 24.981 V/m
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.784 W/kg
SAR(10 g) = 0.586 W/kg
Power Drift = -0.05 dB
Maximum value of SAR (measured) = 0.825 W/kg



Copyright © 2013 TCC Nokia

Plot #68

Date/Time: 2013-05-07 14:56:07

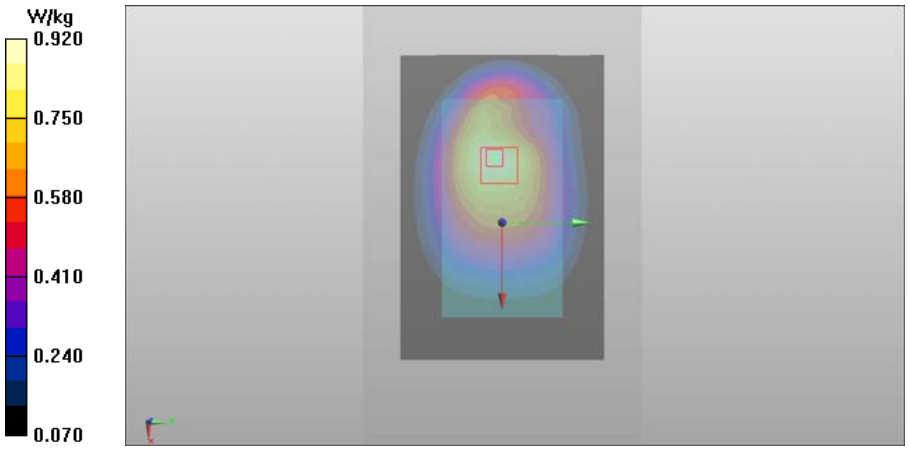
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3

Communication System: WCDMA850 (Band 5)
Frequency: 826.4 MHz; Duty Cycle: 1:1
Medium: BSL850; Medium Notes: t= 21.8 C
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.976 S/m; ε_r = 53.835; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3165
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
- Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA850 (Band 5)/Body - Low - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x121x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.911 W/kg

WCDMA850 (Band 5)/Body - Low - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.308 V/m
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.866 W/kg
SAR(10 g) = 0.638 W/kg
Power Drift = 0.01 dB
Maximum value of SAR (measured) = 0.920 W/kg



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Plot #69

Date/Time: 2013-05-02 08:50:43

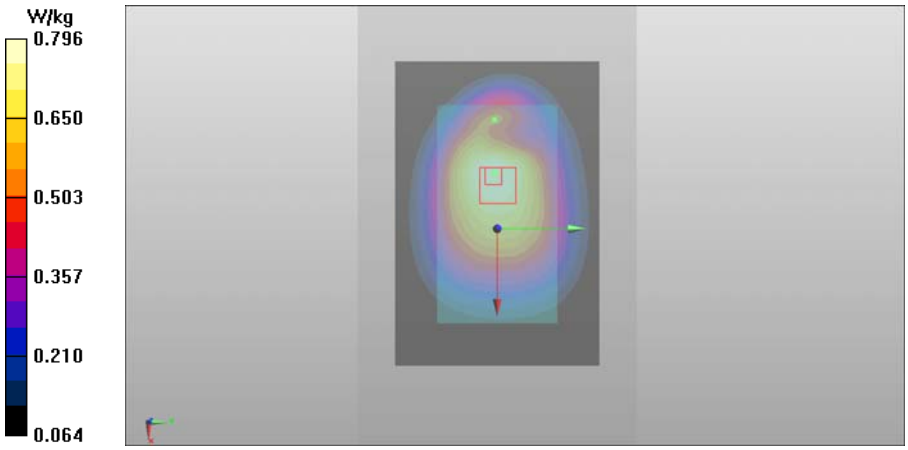
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6

Communication System: LTE850 (Band 5)
Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium Notes: T21.5
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.998 S/m; ε_r = 55.344; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3275
- ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn756; Calibrated: 2013-02-07
- Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.815 W/kg

LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.978 V/m
Peak SAR (extrapolated) = 0.964 W/kg
SAR(1 g) = 0.757 W/kg
SAR(10 g) = 0.575 W/kg
Power Drift = 0.04 dB
Maximum value of SAR (measured) = 0.796 W/kg



Copyright © 2013 TCC Nokia

Plot #70

Date/Time: 2013-05-10 16:19:11

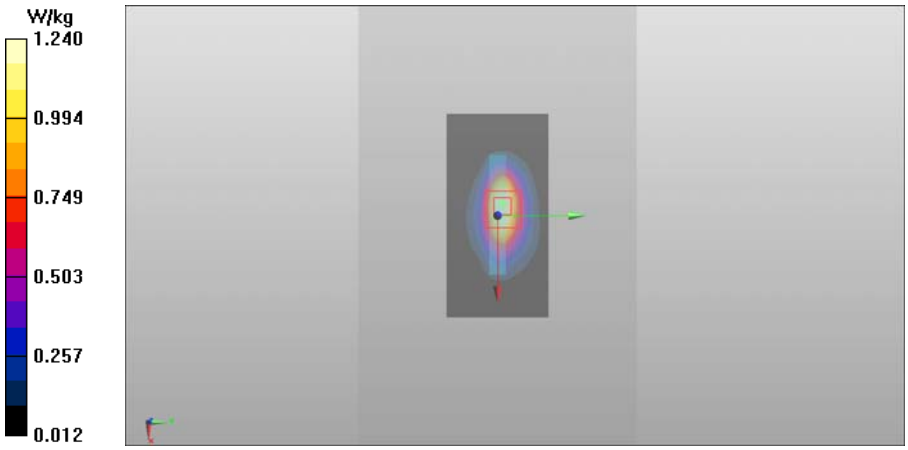
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6

Communication System: WCDMA1700/2100 (Band 4)
Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: BSL1800; Medium Notes: t= 21.5 C
Medium parameters used: f = 1753 MHz; σ = 1.47 S/m; ε_r = 51.46; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

WCDMA1700/2100 (Band 4)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.41 W/kg

WCDMA1700/2100 (Band 4)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 29.768 V/m
Peak SAR (extrapolated) = 1.94 W/kg
SAR(1 g) = 1.12 W/kg
SAR(10 g) = 0.597 W/kg
Power Drift = -0.11 dB
Maximum value of SAR (measured) = 1.24 W/kg



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Plot #71

Date/Time: 2013-05-08 22:46:35

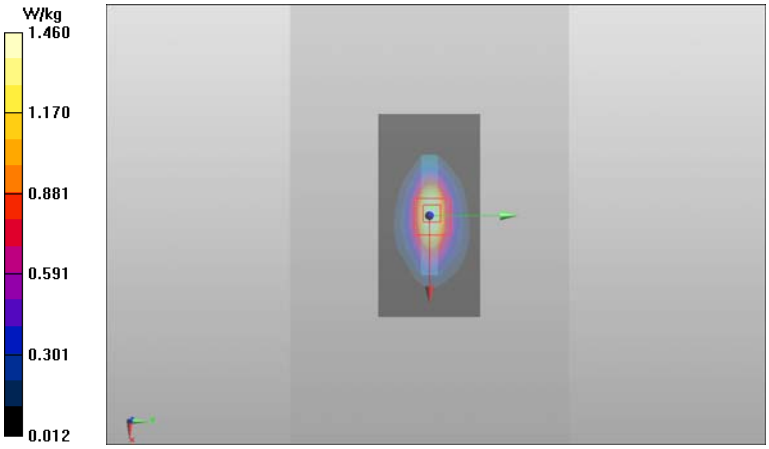
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000415/9

Communication System: LTE1700/2100 (Band 4)
Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium: MSL1800; Medium Notes: T21.4C
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.415 S/m; ε_r = 51.86; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.46 W/kg

LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.819 V/m
Peak SAR (extrapolated) = 2.21 W/kg
SAR(1 g) = 1.31 W/kg
SAR(10 g) = 0.705 W/kg
Power Drift = 0.04 dB
Maximum value of SAR (measured) = 1.46 W/kg



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Plot #72

Date/Time: 2013-05-13 15:26:28

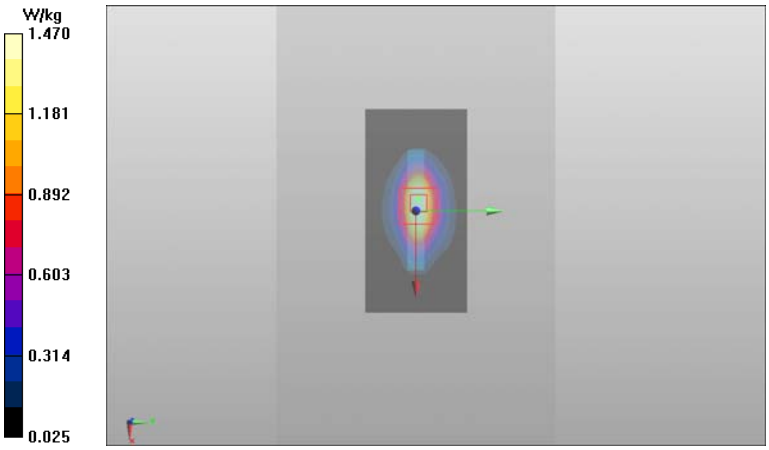
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6

Communication System: 2-slot GPRS1900
Frequency: 1850.2 MHz; Duty Cycle: 1:4.19952
Medium: BSL1900; Medium Notes: t= 22.0 C
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.44 S/m; ε_r = 51.089; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (6); SEMCAD X Version 14.6.9 (7117)

2-slot GPRS 1900/Body - Low - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.62 W/kg

2-slot GPRS 1900/Body - Low - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 32.058 V/m
Peak SAR (extrapolated) = 2.34 W/kg
SAR(1 g) = 1.34 W/kg
SAR(10 g) = 0.715 W/kg
Power Drift = -0.03 dB
Maximum value of SAR (measured) = 1.47 W/kg



Copyright © 2013 TCC Nokia

Plot #73

Date/Time: 2013-04-28 15:46:31

Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6

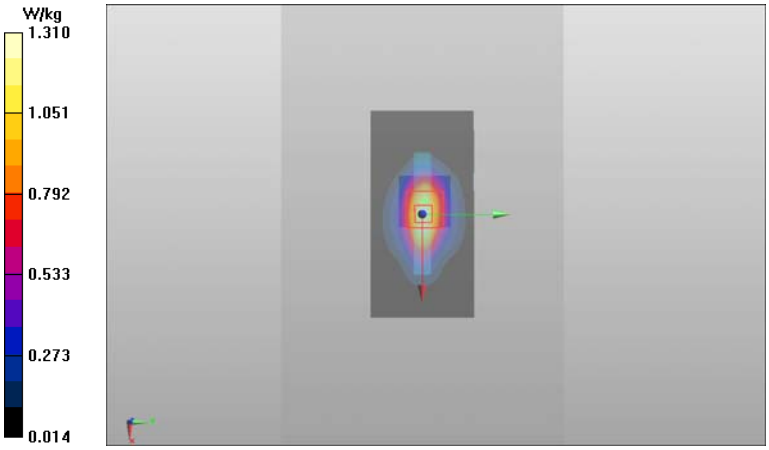
Communication System: WCDMA1900 (Band 2)
Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: BSL1900; Medium Notes: t= 21.2 C
Medium parameters used: f = 1908 MHz; σ = 1.542 S/m; ε_r = 51.114; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3194
- ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2012-08-03
- Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.9 (7117)

WCDMA1900 (Band 2)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.34 W/kg

WCDMA1900 (Band 2)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 29.077 V/m
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.16 W/kg
SAR(10 g) = 0.616 W/kg
Power Drift = 0.09 dB

Maximum value of SAR (measured) = 1.31 W/kg



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Plot #74

Date/Time: 2013-05-07 12:50:07

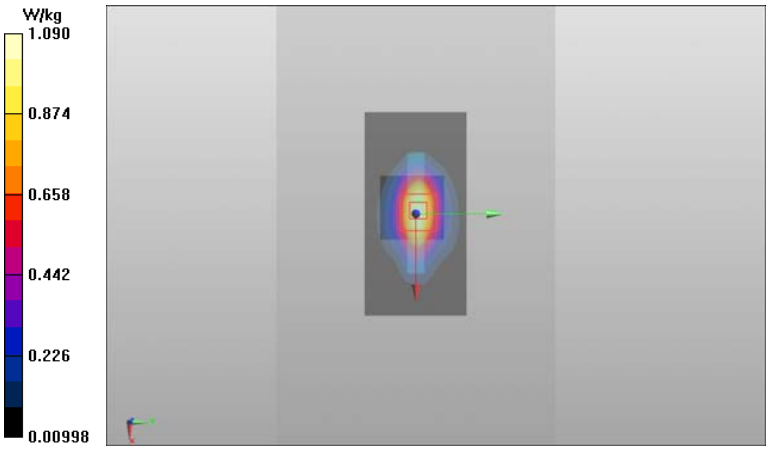
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000377/1

Communication System: LTE1900 (Band 2)
Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium Notes: T=21.48C
Medium parameters used: f = 1880 MHz; σ = 1.504 S/m; ε_r = 52.674; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3276
- ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
- Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.283 V/m
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.983 W/kg
SAR(10 g) = 0.539 W/kg
Power Drift = 0.01 dB
Maximum value of SAR (measured) = 1.09 W/kg



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Plot #75

Date/Time: 2013-04-22 12:05:39

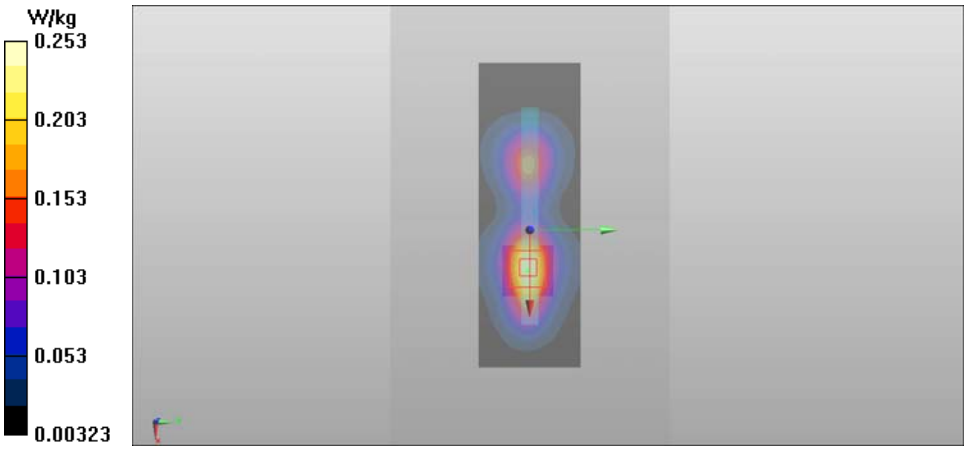
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5

Communication System: WLAN2450 b-mode
Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: BSL2450; Medium Notes: t= 21.4 C
Medium parameters used: f = 2412 MHz; σ = 1.893 S/m; ε_r = 51.302; ρ = 1000 kg/m^3
Phantom section: Center Section

DASY Configuration:
- Probe: ES3DV3 - SN3131
- ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn728; Calibrated: 2012-08-21
- Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
- Measurement SW: DASY52, Version 52.8 (5); SEMCAD X Version 14.6.9 (7117)

WLAN2450 b-mode/Body - Channel 1 - DSSS 1 Mbps - Spacer 10mm - No Headset - Right Edge Facing Phantom/Area Scan (61x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.254 W/kg

WLAN2450 b-mode/Body - Channel 1 - DSSS 1 Mbps - Spacer 10mm - No Headset - Right Edge Facing Phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.761 V/m
Peak SAR (extrapolated) = 0.431 W/kg
SAR(1 g) = 0.227 W/kg
SAR(10 g) = 0.119 W/kg
Power Drift = -0.01 dB
Maximum value of SAR (measured) = 0.253 W/kg



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Plot #76

Date/Time: 2013-04-22 07:43:21

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

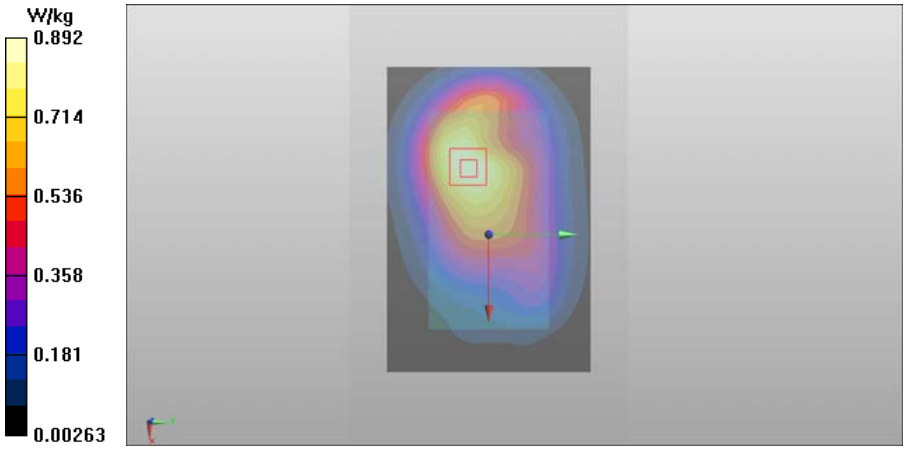
Date/Time: 2013-05-02 11:26:28

DASY Configuration for LTE700 (Band 17)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000394/6
Communication System: LTE700 (Band 17); Frequency: 710 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL750 Medium parameters used: f = 710 MHz; σ = 0.938 S/m; ε_r = 55.439; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.16, 6.16, 6.16); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.588 W/kg
Maximum value of SAR (interpolated) = 0.892 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE700 (Band 17) with factor 1.12, before combining in SEMCAD SW.



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Plot #77

Date/Time: 2013-04-22 12:05:39

DASY Configuration for WLAN2450 b-mode/Body - Channel 1 - DSSS 1 Mbps - Spacer 10mm - No Headset - Right Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2412 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2412 MHz; σ = 1.893 S/m; ε_r = 51.302; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

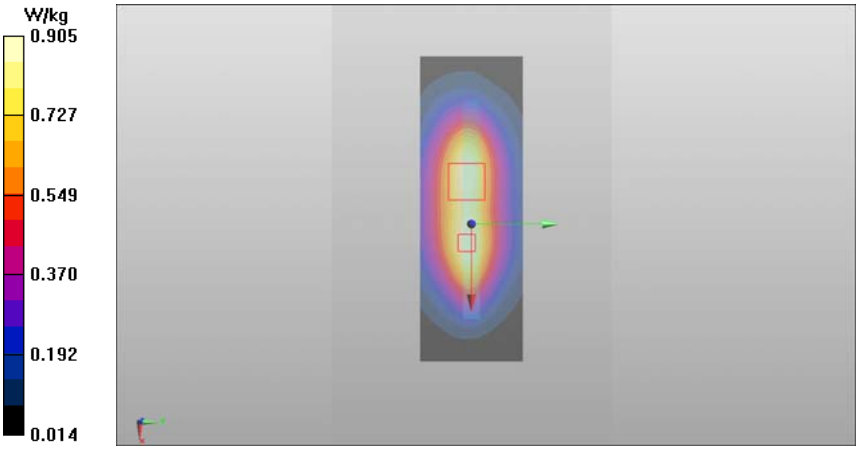
Date/Time: 2013-04-30 14:17:07

DASY Configuration for 2-slot GPRS850/Body - Middle - Spacer 10mm - No Headset - Right Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: 2-slot GPRS850; Frequency: 836.6 MHz; Duty Cycle: 1:4.2; PMF: 2.04939
Medium: BSL850 Medium parameters used: f = 837 MHz; σ = 0.974 S/m; ε_r = 52.975; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: EX3DV4 - SN3892; ConvF(9.73, 9.73, 9.73); Calibrated: 2012-11-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2012-08-28
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.545 W/kg
Maximum value of SAR (interpolated) = 0.905 W/kg

WLAN2450 b-mode was scaled with factor 1.52, 2-slot GPRS850 with factor 1.12, before combining in SEMCAD SW.



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Plot #78

Date/Time: 2013-04-22 07:43:21

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

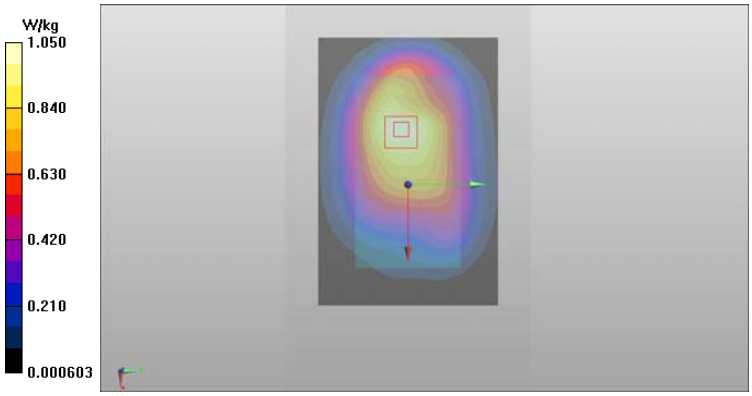
Date/Time: 2013-05-07 14:56:07

DASY Configuration for WCDMA850 (Band 5)/Body - Low - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000395/3
Communication System: WCDMA850 (Band 5); Frequency: 826.4 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL850 Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.976 S/m; ε_r = 53.835; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3165; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1355; Calibrated: 2013-01-08
Phantom: 1. Triple Flat Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 0.985 W/kg; SAR(10 g) = 0.690 W/kg
Maximum value of SAR (interpolated) = 1.05 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #79

Date/Time: 2013-04-22 07:43:21

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-892; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

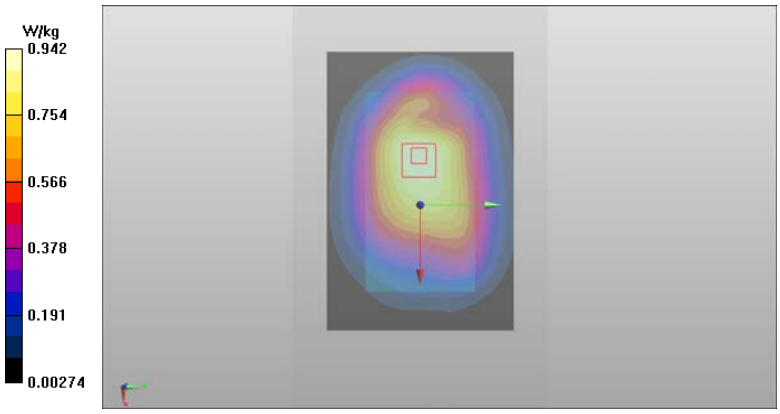
Date/Time: 2013-05-02 08:50:43

DASY Configuration for LTE850 (Band 5)/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Back Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000407/6
Communication System: LTE850 (Band 5); Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL835 Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.998 S/m; ε_r = 55.344; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3275; ConvF(6.04, 6.04, 6.04); Calibrated: 2013-01-22;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn756; Calibrated: 2013-02-07
Phantom: Triple Flat Phantom 5.1C 04/03/2013; Type: QD 000 P51 CA; Serial: 1129/2
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 0.887 W/kg; SAR(10 g) = 0.631 W/kg
Maximum value of SAR (interpolated) = 0.942 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE850 (Band 5) with factor 1.12, before combining in SEMCAD SW.



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Plot #80

Date/Time: 2013-04-22 09:52:01

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

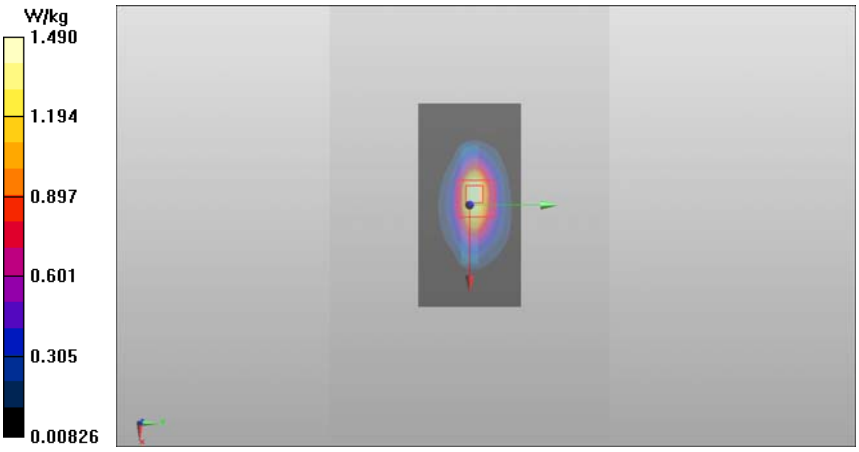
Date/Time: 2013-05-10 16:19:11

DASY Configuration for WCDMA1700/2100 (Band 4)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6
Communication System: WCDMA1700/2100 (Band 4); Frequency: 1752.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1800 Medium parameters used: f = 1753 MHz; σ = 1.47 S/m; ε_r = 51.46; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.83, 4.83, 4.83); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.659 W/kg
Maximum value of SAR (interpolated) = 1.49 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #81

Date/Time: 2013-04-22 09:52:01

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

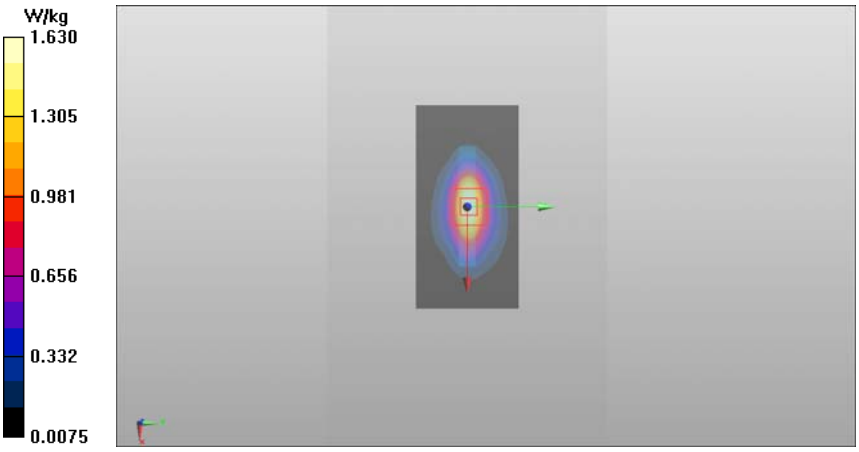
Date/Time: 2013-05-08 22:46:35

DASY Configuration for LTE1700/2100 (Band 4)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000415/9
Communication System: LTE1700/2100 (Band 4); Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1800 Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.415 S/m; ε_r = 51.86; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.91, 4.91, 4.91); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.44 W/kg; SAR(10 g) = 0.746 W/kg
Maximum value of SAR (interpolated) = 1.63 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE1700/2100 (Band 4) with factor 1.12, before combining in SEMCAD SW.



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Plot #82

Date/Time: 2013-04-22 09:52:01

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

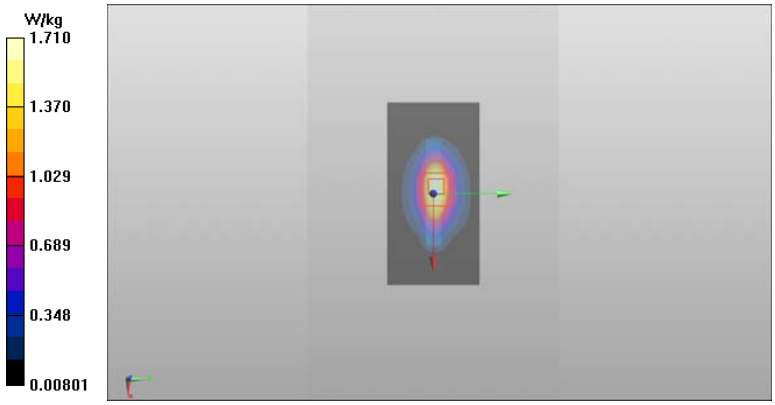
Date/Time: 2013-05-13 15:26:28

DASY Configuration for 2-slot GPRS 1900/Body - Low - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6
Communication System: 2-slot GPRS1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927
Medium: BSL1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.44 S/m; ε_r = 51.089; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (6)

Fast SAR of Combined Scans: SAR(1 g) = 1.49 W/kg; SAR(10 g) = 0.759 W/kg
Maximum value of SAR (interpolated) = 1.71 W/kg

WLAN2450 b-mode was scaled with factor 1.46, 2-slot GPRS1900 with factor 1.12, before combining in SEMCAD SW.



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Plot #83

Date/Time: 2013-04-22 09:52:01

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

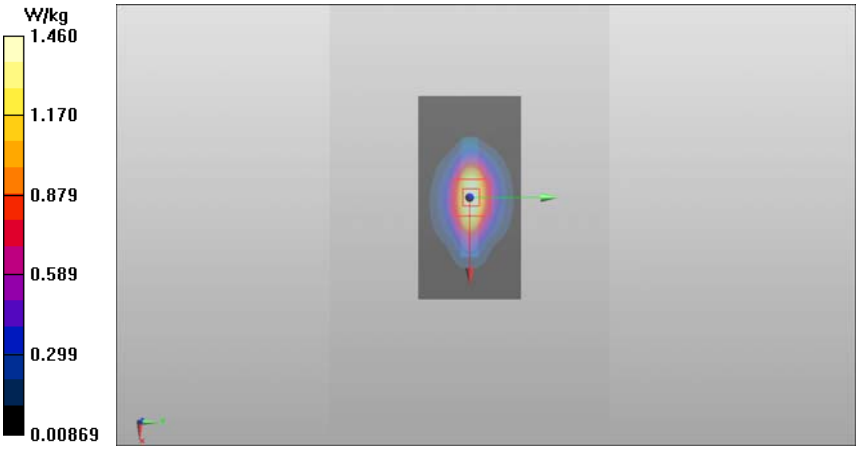
Date/Time: 2013-04-28 15:46:31

DASY Configuration for WCDMA1900 (Band 2)/Body - High - Spacer 10mm - No Headset - Bottom Edge Facing Phantom - Repeated/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000290/6
Communication System: WCDMA1900 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL1900 Medium parameters used: f = 1908 MHz; σ = 1.542 S/m; ε_r = 51.114; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3194; ConvF(4.62, 4.62, 4.62); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2012-08-03
Phantom: SAM 3 Triple Phantom 5.1C; Type: QD 000 P51 CA;
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.669 W/kg
Maximum value of SAR (interpolated) = 1.46 W/kg

WLAN2450 b-mode was scaled with factor 1.46, WCDMA1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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Plot #84

Date/Time: 2013-04-22 09:52:01

DASY Configuration for WLAN2450 b-mode/Body - Channel 6 - DSSS 1 Mbps - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 004402/47/223449/5
Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1
Medium: BSL2450 Medium parameters used: f = 2437 MHz; σ = 1.926 S/m; ε_r = 51.208; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3131; ConvF(4.11, 4.11, 4.11); Calibrated: 2012-08-27;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn728; Calibrated: 2012-08-21
Phantom: #2 Triple, SAR4; Type: QD 000 P51 CA;
Measurement SW: DASY52, Version 52.8 (5)

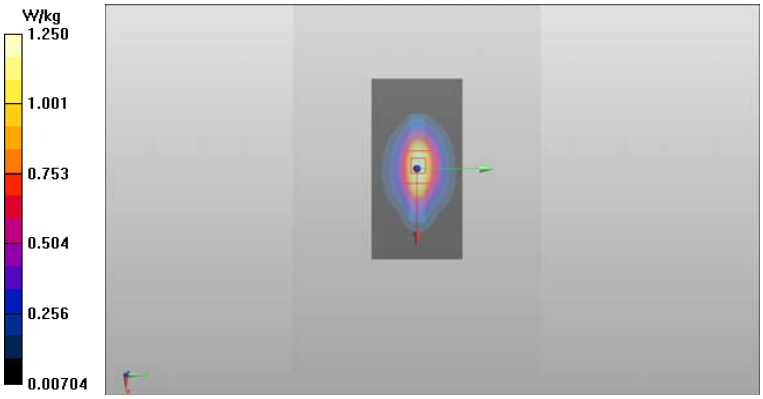
Date/Time: 2013-05-07 12:50:07

DASY Configuration for LTE1900 (Band 2)/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Headset - Bottom Edge Facing Phantom/Area Scan:
Test Laboratory: TCC Nokia
Type: RM-893; Serial: 355519/05/000377/1
Communication System: LTE1900 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL1900 Medium parameters used: f = 1880 MHz; σ = 1.504 S/m; ε_r = 52.674; ρ = 1000 kg/m^3
Phantom section: Center Section

Probe: ES3DV3 - SN3276; ConvF(4.69, 4.69, 4.69); Calibrated: 2013-03-15;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1332; Calibrated: 2012-07-26
Phantom: TF Phamptom 04_30_2013; Type: QD 000 P51 CA; Serial: 04/30/2013
Measurement SW: DASY52, Version 52.8 (5)

Fast SAR of Combined Scans: SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.574 W/kg
Maximum value of SAR (interpolated) = 1.25 W/kg

WLAN2450 b-mode was scaled with factor 1.46, LTE1900 (Band 2) with factor 1.12, before combining in SEMCAD SW.



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APPENDIX C: DIELECTRIC PARAMETERS OF THE TISSUE SIMULANTS

Head tissue simulant dielectric parameters used in the measurements:

F (MHz)	Date	Dielectric Parameters					
		Ch 23780 709.0 MHz		Ch 23790 710.0 MHz		Ch 23800 711.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
710	2013-04-26	41.5	0.88	41.5	0.88	41.5	0.88
	2013-04-29	41.6	0.88	41.6	0.88	41.6	0.88
	2013-04-30	41.4	0.88	41.4	0.88	41.4	0.88
F (MHz)	Date	Dielectric Parameters					
		Ch 4132 826.4 MHz		Ch 4175 835.0 MHz		Ch 4233 846.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
835	2013-04-24	40.9	0.90	40.8	0.91	40.7	0.92
	2013-04-25	40.9	0.91	40.8	0.92	40.8	0.92
F (MHz)	Date	Dielectric Parameters					
		Ch 20450 829.0 MHz		Ch 20525 836.5 MHz		Ch 20600 844.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
836	2013-04-26	41.9	0.90	41.8	0.90	41.8	0.91
	2013-04-29	42.0	0.90	42.0	0.90	42.0	0.91
F (MHz)	Date	Dielectric Parameters					
		Ch 128 824.2 MHz		Ch 190 836.6 MHz		Ch 251 848.8 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
836	2013-04-23	40.1	0.90	40.0	0.90	39.9	0.91
F (MHz)	Date	Dielectric Parameters					
		Ch 20050 1720.0 MHz		Ch 20175 1732.5 MHz		Ch 20300 1745.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1732	2013-05-10	39.8	1.34	39.7	1.35	39.7	1.36

(Head tissue simulant table continues)

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(Head tissue simulant table continues)

F (MHz)	Date	Dielectric Parameters					
		Ch 1312 1712.4 MHz		Ch 1412 1732.4 MHz		Ch 1513 1752.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1732	2013-04-25	38.3	1.31	38.3	1.33	38.2	1.34
	2013-05-10	39.2	1.30	39.1	1.32	39.1	1.34
	2013-05-13	39.0	1.30	38.9	1.32	38.8	1.35
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 512 1850.2 MHz		Ch 661 1880.0 MHz		Ch 810 1909.8 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-04-23	39.4	1.34	39.3	1.37	39.2	1.40
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 9262 1852.4 MHz		Ch 9400 1880.0 MHz		Ch 9538 1907.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-04-22	38.7	1.33	38.6	1.36	38.5	1.39
	2013-05-14	38.8	1.34	38.7	1.37	38.6	1.39
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 18700 1860.0 MHz		Ch 18900 1880.0 MHz		Ch 19100 1900.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-04-24	39.9	1.38	39.8	1.40	39.7	1.41
	2013-04-29	39.4	1.37	39.3	1.39	39.2	1.41
	2013-05-13	39.4	1.35	39.3	1.37	39.3	1.39
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 1 2412.0 MHz		Ch 6 2437.0 MHz		Ch 11 2462.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
2437	2013-04-18	37.9	1.76	37.8	1.78	37.7	1.81
	2013-04-19	38.1	1.76	38.0	1.78	37.9	1.82
	2013-04-29	38.4	1.75	38.3	1.78	38.1	1.80

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

f (MHz)	Date	Dielectric Parameters									
		Ch 40 5200.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5210	2013-04-20	35.6	4.47	35.6	4.48	35.5	4.50	-	-	-	-
	2013-04-22	35.4	4.46	35.4	4.47	35.3	4.50	-	-	-	-
f (MHz)	Date	Dielectric Parameters									
		Ch 56 5280.0 MHz		5290.0 MHz		Ch 64 5320.0 MHz		-		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5290	2013-04-20	35.5	4.55	35.5	4.56	35.5	4.59	-	-	-	-
	2013-04-21	35.4	4.55	35.4	4.56	35.4	4.60	-	-	-	-
	2013-04-22	35.3	4.54	35.3	4.55	35.3	4.58	-	-	-	-
	2013-04-23	36.1	4.66	36.1	4.66	36.0	4.69	-	-	-	-
f (MHz)	Date	Dielectric Parameters									
		5520.0 MHz		Ch 108 5540.0 MHz		Ch 120 5600.0 MHz		Ch 128 5640.0 MHz		Ch 136 5680.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5520	2013-04-23	35.7	4.91	35.7	4.92	35.5	4.97	35.5	5.04	35.5	5.06
	2013-04-24	35.5	4.84	35.5	4.86	35.3	4.92	35.3	4.97	35.2	5.00
f (MHz)	Date	Dielectric Parameters									
		Ch 149 5745.0 MHz		5760.0 MHz		Ch 153 5765.0 MHz		Ch 161 5805.0 MHz		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5760	2013-04-24	35.1	5.08	35.1	5.10	35.1	5.11	35.1	5.14	-	
	2013-04-25	35.2	5.10	35.2	5.12	35.2	5.12	35.1	5.16	-	-

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Body tissue simulant dielectric parameters used in the measurements:

f (MHz)	Date	Dielectric Parameters					
		Ch 23780 709.0 MHz		Ch 23790 710.0 MHz		Ch 23800 711.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
710	2013-05-01	55.5	0.94	55.5	0.94	55.5	0.94
	2013-05-02	55.4	0.94	55.4	0.94	55.4	0.94
F (MHz)	**Date**	**Dielectric Parameters**					
		Ch 4132 826.4 MHz		Ch 4175 835.0 MHz		Ch 4233 846.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
835	2013-05-07	53.8	0.98	53.8	0.98	53.7	0.99
	2013-05-08	53.4	0.98	53.3	0.99	53.3	1.00
	2013-05-10	53.6	0.98	53.5	0.98	53.5	0.99
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 20450 829.0 MHz		Ch 20525 836.5 MHz		Ch 20600 844.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
836	2013-05-01	55.5	0.99	55.5	1.00	55.4	1.00
	2013-05-02	55.4	0.99	55.3	1.00	55.3	1.00
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 128 824.2 MHz		Ch 190 836.6 MHz		Ch 251 848.8 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
836	2013-04-30	53.1	0.97	53.0	0.97	52.9	0.98
	2013-05-08	53.4	0.98	53.3	0.99	53.2	1.00
F (MHz)	**Date**	**Dielectric Parameters**					
		Ch 20050 1720.0 MHz		Ch 20175 1732.5 MHz		Ch 20300 1745.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1732	2013-05-08	51.9	1.40	51.9	1.42	51.8	1.43
	2013-05-09	52.0	1.41	52.0	1.42	52.0	1.43
	2013-05-10	52.3	1.41	52.3	1.42	52.2	1.43
	2013-05-15	52.2	1.40	52.1	1.42	52.1	1.43

(Body tissue simulant table continues)

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(Body tissue simulant table continues)

F (MHz)	Date	Dielectric Parameters					
		Ch 1312 1712.4 MHz		Ch 1412 1732.4 MHz		Ch 1513 1752.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1732	2013-04-26	52.2	1.43	52.1	1.45	52.1	1.47
	2013-05-10	51.6	1.43	51.5	1.44	51.5	1.47
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 512 1850.2 MHz		Ch 661 1880.0 MHz		Ch 810 1909.8 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-04-28	51.3	1.48	51.2	1.51	51.1	1.54
	2013-05-13	51.1	1.44	51.0	1.46	51.0	1.48
	2013-05-14	51.7	1.50	51.6	1.53	51.5	1.55
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 9262 1852.4 MHz		Ch 9400 1880.0 MHz		Ch 9538 1907.6 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-04-28	51.3	1.48	51.2	1.51	51.1	1.54
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 18700 1860.0 MHz		Ch 18900 1880.0 MHz		Ch 19100 1900.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
1880	2013-05-01	53.0	1.48	52.9	1.50	52.9	1.52
	2013-05-07	52.8	1.48	52.7	1.50	52.6	1.52
	2013-05-08	52.6	1.48	52.5	1.50	52.5	1.52
f (MHz)	**Date**	**Dielectric Parameters**					
		Ch 1 2412.0 MHz		Ch 6 2437.0 MHz		Ch 11 2462.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
2437	2013-04-21	51.4	1.89	51.3	1.93	51.2	1.96
	2013-04-22	51.3	1.89	51.2	1.92	51.1	1.96

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

f (MHz)	Date	Dielectric Parameters									
		Ch 40 5200.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5210	2013-04-26	48.1	5.47	48.1	5.48	48.0	5.53	-	-	-	-
f (MHz)	Date	Dielectric Parameters									
		Ch 56 5280.0 MHz		5290.0 MHz		Ch 64 5320.0 MHz		-		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5290	2013-04-26	48.1	5.59	48.0	5.59	47.9	5.61	-	-	-	-
f (MHz)	Date	Dielectric Parameters									
		5520.0 MHz		Ch 108 5540.0 MHz		Ch 120 5600.0 MHz		Ch 128 5640.0 MHz		Ch 136 5680.0 MHz	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5520	2013-04-27	47.0	5.83	47.0	5.86	46.9	5.94	46.8	6.00	46.7	6.05
f (MHz)	Date	Dielectric Parameters									
		Ch 149 5745.0 MHz		5760.0 MHz		Ch 153 5765.0 MHz		Ch 161 5805.0 MHz		-	
		εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]	εr	σ [S/m]
5760	2013-04-28	47.5	6.15	47.5	6.18	47.4	6.23	-	-	-	-

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APPENDIX D: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA

Type: RM-893; Serial:, 355519/05/000395/3, HW: 0421, SW: 3034.0000.1314.00

D.1. WCDMA850 Test results

Average power

Ch / *f*(MHz)	P [dBm]
4132	24.36
4175	24.49
4233	24.38

Note: The conducted powers used in SAR testing are above upper limit of tuning tolerance. Appendix L demonstrates that device is still working linear part of the PA and that obtained SAR results are acceptable.

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	23.33	22.20	22.31	22.88	23.39
4175	23.30	22.06	21.72	22.97	23.50
4233	23.30	22.26	22.31	22.83	23.35

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: MPR, and additional 1dB reduction to ensure PA linearity. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.0dB	3.0dB	2.0dB	3.0dB	1.0dB

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D.3. WCDMA1700/2100 Test results

Average power

Ch / *f*(MHz)	P [dBm]
1312	24.42
1412	24.44
1513	24.44

Note: The conducted powers used in SAR testing are above upper limit of tuning tolerance. Appendix L demonstrates that device is still working linear part of the PA and that obtained SAR results are acceptable.

D.4. HSUPA1700/2100 Test results

Average power

Ch / *f* (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1312	22.68	22.24	21.63	22.85	23.40
1412	22.71	22.22	21.61	22.84	23.49
1513	22.72	22.25	22.27	22.87	23.43

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR, and additional 1dB reduction to ensure PA linearity. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.0dB	3.0dB	2.0dB	3.0dB	1.0dB

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D.5. WCDMA1900 Test results

Average power

Ch / *f*(MHz)	P [dBm]
9262	24.21
9400	24.35
9538	24.49

Note: The conducted powers used in SAR testing are above upper limit of tuning tolerance. Appendix L demonstrates that device is still working linear part of the PA and that obtained SAR results are acceptable.

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	22.53	22.12	22.10	22.76	23.10
9400	23.32	22.32	21.51	22.69	23.40
9538	23.06	22.52	22.19	23.03	23.59

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR, and additional 1dB reduction to ensure PA linearity. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.0dB	3.0dB	2.0dB	3.0dB	1.0dB

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APPENDIX E: RELEVANT PAGES FROM PROBE CALIBRATION REPORTS

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Accreditation No.: SCS 108

Client Nokia Salo TCC

Certificate No: ES3-3165_Jan13

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3165
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	January 21, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

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

Issued: January 21, 2013

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3165

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.46	6.46	6.46	0.23	2.34	± 12.0 %
835	41.5	0.90	6.20	6.20	6.20	0.33	1.65	± 12.0 %
1750	40.1	1.37	5.19	5.19	5.19	0.67	1.25	± 12.0 %
1900	40.0	1.40	5.02	5.02	5.02	0.43	1.47	± 12.0 %
2450	39.2	1.80	4.45	4.45	4.45	0.60	1.41	± 12.0 %
2600	39.0	1.96	4.28	4.28	4.28	0.70	1.34	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3165

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.10	6.10	6.10	0.31	1.92	± 12.0 %
835	55.2	0.97	6.04	6.04	6.04	0.71	1.22	± 12.0 %
1750	53.4	1.49	4.86	4.86	4.86	0.54	1.49	± 12.0 %
1900	53.3	1.52	4.60	4.60	4.60	0.46	1.72	± 12.0 %
2450	52.7	1.95	4.18	4.18	4.18	0.64	1.17	± 12.0 %
2600	52.5	2.16	3.98	3.98	3.98	0.80	1.00	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: **SCS 108**

Client **Nokia Salo TCC**

Certificate No: **ES3-3194_Aug12**

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3194
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	August 27, 2012

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

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

Issued: August 27, 2012

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3194

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.35	6.35	6.35	0.29	2.00	± 12.0 %
835	41.5	0.90	6.09	6.09	6.09	0.38	1.54	± 12.0 %
1750	40.1	1.37	5.17	5.17	5.17	0.45	1.52	± 12.0 %
1900	40.0	1.40	4.97	4.97	4.97	0.80	1.16	± 12.0 %
2450	39.2	1.80	4.37	4.37	4.37	0.70	1.40	± 12.0 %
2600	39.0	1.96	4.27	4.27	4.27	0.80	1.29	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3194

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.18	6.18	6.18	0.43	1.60	± 12.0 %
835	55.2	0.97	6.03	6.03	6.03	0.28	2.04	± 12.0 %
1750	53.4	1.49	4.83	4.83	4.83	0.73	1.33	± 12.0 %
1900	53.3	1.52	4.62	4.62	4.62	0.76	1.31	± 12.0 %
2450	52.7	1.95	4.20	4.20	4.20	0.73	1.08	± 12.0 %
2600	52.5	2.16	4.07	4.07	4.07	0.66	0.98	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client Nokia SD

Certificate No: ES3-3275_Jan13

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3275
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	January 22, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

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

Issued: January 28, 2013

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DASY/EASY - Parameters of Probe: ES3DV3 - SN:3275

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.50	6.50	6.50	0.53	1.47	± 12.0 %
835	41.5	0.90	6.22	6.22	6.22	0.34	1.74	± 12.0 %
1750	40.1	1.37	5.27	5.27	5.27	0.80	1.11	± 12.0 %
1900	40.0	1.40	5.03	5.03	5.03	0.70	1.27	± 12.0 %
2450	39.2	1.80	4.43	4.43	4.43	0.74	1.28	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3275

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.16	6.16	6.16	0.80	1.20	± 12.0 %
835	55.2	0.97	6.04	6.04	6.04	0.60	1.38	± 12.0 %
1750	53.4	1.49	4.96	4.96	4.96	0.65	1.43	± 12.0 %
1900	53.3	1.52	4.71	4.71	4.71	0.68	1.37	± 12.0 %
2450	52.7	1.95	4.28	4.28	4.28	0.74	1.15	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client Nokia SD

Certificate No: ES3-3276_Mar13

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3276
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	March 15, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	31-Jan-13 (No. DAE4-660_Jan13)	Jan-14
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Israe El-Naouq	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 18, 2013

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DASY/EASY - Parameters of Probe: ES3DV3 - SN:3276

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.50	6.50	6.50	0.23	2.22	± 12.0 %
835	41.5	0.90	6.26	6.26	6.26	0.22	2.23	± 12.0 %
1750	40.1	1.37	5.51	5.51	5.51	0.45	1.57	± 12.0 %
1900	40.0	1.40	5.21	5.21	5.21	0.80	1.16	± 12.0 %
2450	39.2	1.80	4.65	4.65	4.65	0.66	1.42	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3276

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.31	6.31	6.31	0.71	1.21	± 12.0 %
835	55.2	0.97	6.20	6.20	6.20	0.39	1.71	± 12.0 %
1750	53.4	1.49	4.91	4.91	4.91	0.47	1.63	± 12.0 %
1900	53.3	1.52	4.69	4.69	4.69	0.53	1.55	± 12.0 %
2450	52.7	1.95	4.26	4.26	4.26	0.73	1.08	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client **Nokia Salo TCC**

Certificate No: ES3-3131_Aug12

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3131
Calibration procedure(s)	QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	August 27, 2012

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

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

Issued: August 28, 2012

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3131

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	6.20	6.20	6.20	0.25	2.11	± 12.0 %
835	41.5	0.90	5.96	5.96	5.96	0.26	2.04	± 12.0 %
1750	40.1	1.37	5.09	5.09	5.09	0.76	1.16	± 12.0 %
1900	40.0	1.40	4.92	4.92	4.92	0.61	1.32	± 12.0 %
2450	39.2	1.80	4.34	4.34	4.34	0.65	1.35	± 12.0 %
2600	39.0	1.96	4.15	4.15	4.15	0.79	1.28	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3131

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	5.99	5.99	5.99	0.34	1.76	± 12.0 %
835	55.2	0.97	5.95	5.95	5.95	0.45	1.53	± 12.0 %
1750	53.4	1.49	4.74	4.74	4.74	0.80	1.19	± 12.0 %
1900	53.3	1.52	4.51	4.51	4.51	0.56	1.49	± 12.0 %
2450	52.7	1.95	4.11	4.11	4.11	0.64	0.99	± 12.0 %
2600	52.5	2.16	3.94	3.94	3.94	0.61	0.94	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client **Nokia Salo TCC**

Certificate No: EX3-3892_Nov12

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3892
Calibration procedure(s)	QA CAL-01.v8, QA CAL-14.v3, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	November 21, 2012

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

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

Issued: November 22, 2012

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3892

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	10.29	10.29	10.29	0.35	0.87	± 12.0 %
835	41.5	0.90	9.75	9.75	9.75	0.15	1.46	± 12.0 %
1750	40.1	1.37	9.08	9.08	9.08	0.32	0.98	± 12.0 %
1900	40.0	1.40	8.79	8.79	8.79	0.75	0.63	± 12.0 %
2450	39.2	1.80	7.85	7.85	7.85	0.33	1.00	± 12.0 %
2600	39.0	1.96	7.55	7.55	7.55	0.48	0.82	± 12.0 %
5200	36.0	4.66	5.18	5.18	5.18	0.38	1.80	± 13.1 %
5300	35.9	4.76	4.86	4.86	4.86	0.38	1.80	± 13.1 %
5500	35.6	4.96	4.69	4.69	4.69	0.39	1.80	± 13.1 %
5600	35.5	5.07	4.45	4.45	4.45	0.39	1.80	± 13.1 %
5800	35.3	5.27	4.72	4.72	4.72	0.40	1.80	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3892

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	9.94	9.94	9.94	0.23	1.24	± 12.0 %
835	55.2	0.97	9.73	9.73	9.73	0.30	1.03	± 12.0 %
1750	53.4	1.49	8.00	8.00	8.00	0.24	1.09	± 12.0 %
1900	53.3	1.52	7.61	7.61	7.61	0.42	0.81	± 12.0 %
2450	52.7	1.95	7.35	7.35	7.35	0.73	0.58	± 12.0 %
2600	52.5	2.16	7.12	7.12	7.12	0.80	0.50	± 12.0 %
5200	49.0	5.30	4.36	4.36	4.36	0.51	1.90	± 13.1 %
5300	48.9	5.42	4.23	4.23	4.23	0.45	1.90	± 13.1 %
5500	48.6	5.65	3.98	3.98	3.98	0.49	1.90	± 13.1 %
5600	48.5	5.77	4.04	4.04	4.04	0.38	1.90	± 13.1 %
5800	48.2	6.00	4.10	4.10	4.10	0.48	1.90	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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Accreditation No.: SCS 108

Client Nokia Salo TCC

Certificate No: EX3-3573_Jan13

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3573
Calibration procedure(s)	QA CAL-01.v8, QA CAL-14.v3, QA CAL-23.v4, QA CAL-25.v4 Calibration procedure for dosimetric E-field probes
Calibration date:	January 23, 2013

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	20-Jun-12 (No. DAE4-660_Jun12)	Jun-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

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

Issued: January 26, 2013

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:3573

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	8.84	8.84	8.84	0.19	1.36	± 12.0 %
835	41.5	0.90	8.48	8.48	8.48	0.31	0.95	± 12.0 %
1750	40.1	1.37	7.33	7.33	7.33	0.58	0.69	± 12.0 %
1900	40.0	1.40	7.08	7.08	7.08	0.63	0.67	± 12.0 %
2450	39.2	1.80	6.47	6.47	6.47	0.36	0.85	± 12.0 %
2600	39.0	1.96	6.30	6.30	6.30	0.47	0.80	± 12.0 %
5200	36.0	4.66	4.51	4.51	4.51	0.45	1.80	± 13.1 %
5300	35.9	4.76	4.29	4.29	4.29	0.45	1.80	± 13.1 %
5500	35.6	4.96	4.17	4.17	4.17	0.45	1.80	± 13.1 %
5600	35.5	5.07	4.10	4.10	4.10	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.08	4.08	4.08	0.45	1.80	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3573

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	8.63	8.63	8.63	0.37	0.99	± 12.0 %
835	55.2	0.97	8.52	8.52	8.52	0.27	1.23	± 12.0 %
1750	53.4	1.49	7.10	7.10	7.10	0.54	0.74	± 12.0 %
1900	53.3	1.52	6.80	6.80	6.80	0.28	1.05	± 12.0 %
2450	52.7	1.95	6.50	6.50	6.50	0.80	0.50	± 12.0 %
2600	52.5	2.16	6.22	6.22	6.22	0.80	0.50	± 12.0 %
5200	49.0	5.30	4.04	4.04	4.04	0.50	1.90	± 13.1 %
5300	48.9	5.42	3.85	3.85	3.85	0.50	1.90	± 13.1 %
5500	48.6	5.65	3.56	3.56	3.56	0.55	1.90	± 13.1 %
5600	48.5	5.77	3.38	3.38	3.38	0.55	1.90	± 13.1 %
5800	48.2	6.00	3.60	3.60	3.60	0.60	1.90	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
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