

SAR Compliance Test Report

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Testing laboratory:	TCC Nokia Salo Laboratory P.O.Box 86 Joensuunkatu 7H / Kiila 1B FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 45220	Client:	Nokia Corporation P.O. Box 86 Joensuunkatu 7 FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 (0) 7180 44277
Responsible test engineer:	Janne Hirsimäki	Product contact person:	Lasse Vaattovaara
Measurements made by:	Nina Koskinen, Juha-Matti Varjonen, Teuvo Miettinen, Jani Tuomela, Janne Hirsimäki, Virpi Tuominen		
Tested device:	RM-820		
FCC ID:	PYAA	IC:	661V-A
Supplement reports:	SAR_Photo_RM-820_06		
Testing has been carried out in accordance with:	47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields RSS-102 Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields IEEE 1528 - 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique		
Documentation:	The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
Test results:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.		
Date and signatures:			
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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

Period of test	2012-06-12 to 2012-08-17
SN, HW and SW numbers of tested device	SN: 004402/13/870740/5, HW: 2003, SW: 1121.0003.8297.9657.112, DUT: 16485 SN: 004402/13/870750/4, HW: 2003, SW: 1121.0003.8297.9657.112, DUT: 16484 SN: 004402/13/870734/8, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16360 SN: 004402/13/870722/3, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16352 SN: 004402/13/870728/0, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16350 SN: 004402/13/870752/0, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16349 SN: 004402/13/870738/9, HW: 2003, SW: 1230.0035.9754.12312, DUT: 16347 SN: 004402/13/870748/8, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16356 SN: 004402/13/870751/2, HW: 2003, SW: 1123.0005.8325.9680.139, DUT: 16351
Batteries used in testing	-
Headsets used in testing	WH-208, DUT:16353, 16354, 16355
Other accessories used in testing	-
State of sample	Prototype unit
Notes	-

1.2 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration 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.

1.2.1 Head Configuration

Mode	Ch / f (MHz)	Conducted power	Position	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
LTE700	23800 / 711.0	22.58 dBm	Right, Cheek	0.226 W/kg	0.25 W/kg	1.6 W/kg	PASSED
2-slot GPRS850	251 / 848.8	31.57 dBm	Right, Cheek	0.735 W/kg	0.82 W/kg	1.6 W/kg	PASSED
WCDMA850	4132 / 826.4	23.93 dBm	Right, Cheek	0.508 W/kg	0.57 W/kg	1.6 W/kg	PASSED
LTE850	20525 / 836.5	21.02 dBm	Right, Cheek	0.341 W/kg	0.38 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100	1312 / 1712.4	23.66 dBm	Left, Cheek	0.877 W/kg	0.98 W/kg	1.6 W/kg	PASSED
LTE1700/2100	20050 / 1720.0	22.48 dBm	Left, Cheek	0.644 W/kg	0.72 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900	810 / 1909.8	28.82 dBm	Left, Cheek	0.815 W/kg	0.91 W/kg	1.6 W/kg	PASSED
WCDMA1900	9262 / 1852.4	23.44 dBm	Left, Cheek	0.939 W/kg	1.05 W/kg	1.6 W/kg	PASSED
LTE1900	18700 / 1860.0	22.76 dBm	Left, Cheek	0.772 W/kg	0.86 W/kg	1.6 W/kg	PASSED
WLAN2450	6 / 2437.0	16.55 dBm	Right, Cheek	0.134 W/kg	0.15 W/kg	1.6 W/kg	PASSED
WLAN5000	36 / 5180.0	15.22 dBm	Right, Cheek	0.332 W/kg	0.37 W/kg	1.6 W/kg	PASSED
LTE700 + WLAN2450	-	-	Right, Cheek	0.239 W/kg	0.27 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	Right, Cheek	0.736 W/kg	0.82 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	Right, Cheek	0.508 W/kg	0.57 W/kg	1.6 W/kg	PASSED
LTE850 + WLAN2450	-	-	Right, Cheek	0.351 W/kg	0.39 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN2450	-	-	Left, Cheek	0.937 W/kg	1.05 W/kg	1.6 W/kg	PASSED
LTE1700/2100 + WLAN2450	-	-	Left, Cheek	0.681 W/kg	0.76 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900 + WLAN2450	-	-	Left, Cheek	0.829 W/kg	0.93 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	Left, Cheek	0.955 W/kg	1.07 W/kg	1.6 W/kg	PASSED
LTE1900 + WLAN2450	-	-	Left, Cheek	0.800 W/kg	0.90 W/kg	1.6 W/kg	PASSED
LTE700 + WLAN5000	-	-	Right, Cheek	0.389 W/kg	0.44 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN5000	-	-	Right, Cheek	0.735 W/kg	0.82 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN5000	-	-	Right, Cheek	0.514 W/kg	0.58 W/kg	1.6 W/kg	PASSED
LTE850 + WLAN5000	-	-	Right, Cheek	0.426 W/kg	0.48 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN5000	-	-	Left, Cheek	0.961 W/kg	1.08 W/kg	1.6 W/kg	PASSED

(Table continues)

(Table continues)

LTE1700/2100 + WLAN5000	-	-	Right, Cheek	0.644 W/kg	0.72 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900 + WLAN5000	-	-	Left, Cheek	0.833 W/kg	0.93 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN5000	-	-	Left, Cheek	0.967 W/kg	1.08 W/kg	1.6 W/kg	PASSED
LTE1900 + WLAN5000	-	-	Left, Cheek	0.809 W/kg	0.91 W/kg	1.6 W/kg	PASSED

1.2.2 Body Worn Configuration

Mode	Ch / f (MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
LTE700	23800 / 711.0	22.58 dBm	1.5 cm	0.228 W/kg	0.26 W/kg	1.6 W/kg	PASSED
2-slot GPRS850	251 / 848.8	31.57 dBm	1.5 cm	0.754 W/kg	0.84 W/kg	1.6 W/kg	PASSED
WCDMA850	4132 / 826.4	23.93 dBm	1.5 cm	0.465 W/kg	0.52 W/kg	1.6 W/kg	PASSED
LTE850	20525 / 836.5	21.02 dBm	1.5 cm	0.316 W/kg	0.35 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100	1312 / 1712.5	23.66 dBm	1.5 cm	0.788 W/kg	0.88 W/kg	1.6 W/kg	PASSED
LTE1700/2100	20050 / 1720.0	22.25 dBm	1.5 cm	0.524 W/kg	0.59 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900	810 / 1909.8	28.82 dBm	1.5 cm	0.506 W/kg	0.57 W/kg	1.6 W/kg	PASSED
WCDMA1900	9262 / 1852.4	23.44 dBm	1.5 cm	0.533 W/kg	0.60 W/kg	1.6 W/kg	PASSED
LTE1900	18900 / 1880.0	22.25 dBm	1.5 cm	0.486 W/kg	0.54 W/kg	1.6 W/kg	PASSED
WLAN2450	6 / 2437.0	16.55 dBm	1.5 cm	0.019 W/kg	0.02 W/kg	1.6 W/kg	PASSED
WLAN5000	132 / 5660.0	14.32 dBm	1.5 cm	0.048 W/kg	0.05 W/kg	1.6 W/kg	PASSED
LTE700 + WLAN2450	-	-	1.5 cm	0.228 W/kg	0.26 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	1.5 cm	0.766 W/kg	0.86 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	1.5 cm	0.465 W/kg	0.52 W/kg	1.6 W/kg	PASSED
LTE850 + WLAN2450	-	-	1.5 cm	0.316 W/kg	0.35 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN2450	-	-	1.5 cm	0.806 W/kg	0.90 W/kg	1.6 W/kg	PASSED
LTE1700/2100 + WLAN2450	-	-	1.5 cm	0.529 W/kg	0.59 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900 + WLAN2450	-	-	1.5 cm	0.521 W/kg	0.58 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	1.5 cm	0.543 W/kg	0.61 W/kg	1.6 W/kg	PASSED
LTE1900 + WLAN2450	-	-	1.5 cm	0.496 W/kg	0.56 W/kg	1.6 W/kg	PASSED

(Table continues)

(Table continues)

LTE700 + WLAN5000	-	-	1.5 cm	0.250 W/kg	0.28 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN5000	-	-	1.5 cm	0.778 W/kg	0.87 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN5000	-	-	1.5 cm	0.477 W/kg	0.53 W/kg	1.6 W/kg	PASSED
LTE850 + WLAN5000	-	-	1.5 cm	0.321 W/kg	0.36 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100 + WLAN5000	-	-	1.5 cm	0.809 W/kg	0.91 W/kg	1.6 W/kg	PASSED
LTE1700/2100 + WLAN5000	-	-	1.5 cm	0.533 W/kg	0.60 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900 + WLAN5000	-	-	1.5 cm	0.523 W/kg	0.59 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN5000	-	-	1.5 cm	0.545 W/kg	0.61 W/kg	1.6 W/kg	PASSED
LTE1900 + WLAN5000	-	-	1.5 cm	0.496 W/kg	0.56 W/kg	1.6 W/kg	PASSED

1.2.3 Wireless Router Configuration

Mode	Ch / f (MHz)	Conducted power	Separation distance	Measured SAR value (1g avg)	Scaled* SAR value (1g avg)	SAR limit (1g avg)	Result
LTE700	23800 / 711.0	22.58 dBm	10.0 mm	0.293 W/kg	0.33 W/kg	1.6 W/kg	PASSED
2-slot GPRS850	251 / 848.8	31.57 dBm	10.0 mm	0.762 W/kg	0.85 W/kg	1.6 W/kg	PASSED
WCDMA850	4132 / 826.4	23.93 dBm	10.0 mm	0.497 W/kg	0.56 W/kg	1.6 W/kg	PASSED
LTE850	20525 / 836.5	21.23 dBm	10.0 mm	0.441 W/kg	0.49 W/kg	1.6 W/kg	PASSED
WCDMA1700/2100	1312 / 1712.4	23.66 dBm	10.0 mm	1.30 W/kg	1.46 W/kg	1.6 W/kg	PASSED
LTE1700/2100	20175 / 1732.5	22.23 dBm	10.0 mm	0.865 W/kg	0.97 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900	661 / 1880.0	28.85 dBm	10.0 mm	0.908 W/kg	1.02 W/kg	1.6 W/kg	PASSED
WCDMA1900	9262 / 1852.4	23.44 dBm	10.0 mm	1.09 W/kg	1.22 W/kg	1.6 W/kg	PASSED
LTE1900	18700 / 1860.0	22.67 dBm	10.0 mm	0.908 W/kg	1.02 W/kg	1.6 W/kg	PASSED
WLAN2450	6 / 2437.0	16.55 dBm	10.0 mm	0.080 W/kg	0.09 W/kg	1.6 W/kg	PASSED
LTE700 + WLAN2450	-	-	10.0 mm	0.299 W/kg	0.33 W/kg	1.6 W/kg	PASSED
2-slot GPRS850 + WLAN2450	-	-	10.0 mm	0.767 W/kg	0.86 W/kg	1.6 W/kg	PASSED
WCDMA850 + WLAN2450	-	-	10.0 mm	0.497 W/kg	0.56 W/kg	1.6 W/kg	PASSED
LTE850 + WLAN2450	-	-	10.0 mm	0.441 W/kg	0.49 W/kg	1.6 W/kg	PASSED

(Table continues)

(Table continues)

WCDMA1700/2100 + WLAN2450	-	-	10.0 mm	1.33 W/kg	1.49 W/kg	1.6 W/kg	PASSED
LTE 1700/2100 + WLAN2450	-	-	10.0 mm	0.878 W/kg	0.98 W/kg	1.6 W/kg	PASSED
2-slot GPRS1900 + WLAN2450	-	-	10.0 mm	0.947 W/kg	1.06 W/kg	1.6 W/kg	PASSED
WCDMA1900 + WLAN2450	-	-	10.0 mm	1.10 W/kg	1.23 W/kg	1.6 W/kg	PASSED
LTE1900 + WLAN2450	-	-	10.0 mm	0.912 W/kg	1.02 W/kg	1.6 W/kg	PASSED

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

1.2.4 Summary SAR data

		FCC-defined SAR values for the Grants of Equipment Authorization
Maximum Cellular/AWS/PCS Head SAR value		1.05 W/kg
Maximum WLAN Head SAR value		0.37 W/kg
{Max + Max} Simultaneous Head SAR value	1.20 W/kg	
Maximum Cellular/AWS/PCS Body SAR value		0.88 W/kg
Maximum WLAN Body SAR value		0.05 W/kg
{Max + Max} Simultaneous Body SAR value	0.93W/kg	
Maximum Product Specific (Wireless Router) SAR value		1.46 W/kg
Maximum Simultaneous SAR value		1.50 W/kg†

† From Section 7:

The highest {Max + Max} Simultaneous Head SAR value is 1.067 W/kg for 2-slot GPRS850+WLAN5000 which, when scaled up by 12%, becomes 1.20W/kg.

The highest {Max + Max} Simultaneous Body-worn SAR value is 0.830 W/kg for WCDMA1700/2100+WLAN5000 which, when scaled up by 12%, becomes 0.93W/kg.

The highest {Max + Max} Simultaneous Wireless Router SAR value is 1.340W/kg for WCDMA1700/2100+WLAN2450 which, when scaled up by 12%, becomes 1.50W/kg.

Consequently, the value quoted here is 1.50W/kg.

1.2.5 Maximum Drift

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

1.2.6 Measurement Uncertainty

Expanded Uncertainty (k=2) 95%	$\pm 26.4\%$
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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)
GSM	850 1900	GMSK	1/8	824 – 849 1850 – 1910
GPRS	850 1900	GMSK	1/8 to 2/8	824 – 849 1850 – 1910
EGPRS	850 1900	GMSK / 8PSK	1/8 to 2/8	824 – 849 1850 – 1910
WCDMA	850 (Band 5) 1700/2100 (Band 4) 1900 (Band 2)		1	826 – 847 1712 – 1753 1852 – 1908
HSUPA	850 (Band 5) 1700/2100 (Band 4) 1900 (Band 2)		1	826 – 847 1712 – 1753 1852 – 1908
LTE	700 (Band 17) 850 (Band 5) 1700/2100 (Band 4) 1900 (Band 2)	QPSK / 16QAM		704 – 716 824 – 849 1710 – 1755 1850 – 1910
BT	2450	GFSK	1	2402 – 2480
WLAN b-mode	2450	Up to 11Mbps QPSK	1	2412 – 2462
WLAN g-mode	2450	Up to 54Mbps 64QAM	1	2412 – 2462
WLAN n-mode 20MHz	2450	Up to 72.2Mbps 64QAM	1	2412 – 2462
WLAN a-mode 20MHz	5000	Up to 54Mbps 64QAM	1	5150 – 5825
WLAN n-mode 20MHz	5000	Up to 72.2Mbps 64QAM	1	5150 – 5825
WLAN n-mode 40MHz	5000	Up to 150Mbps 64QAM	1	5150 – 5825

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 capability for use at the ear. Therefore, SAR for multi slot GPRS mode was evaluated against the head profile of the phantom.

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

This is 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 power tuning target is 7dBm (5.0mW), SAR testing was deemed unnecessary.

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

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	✓	✓

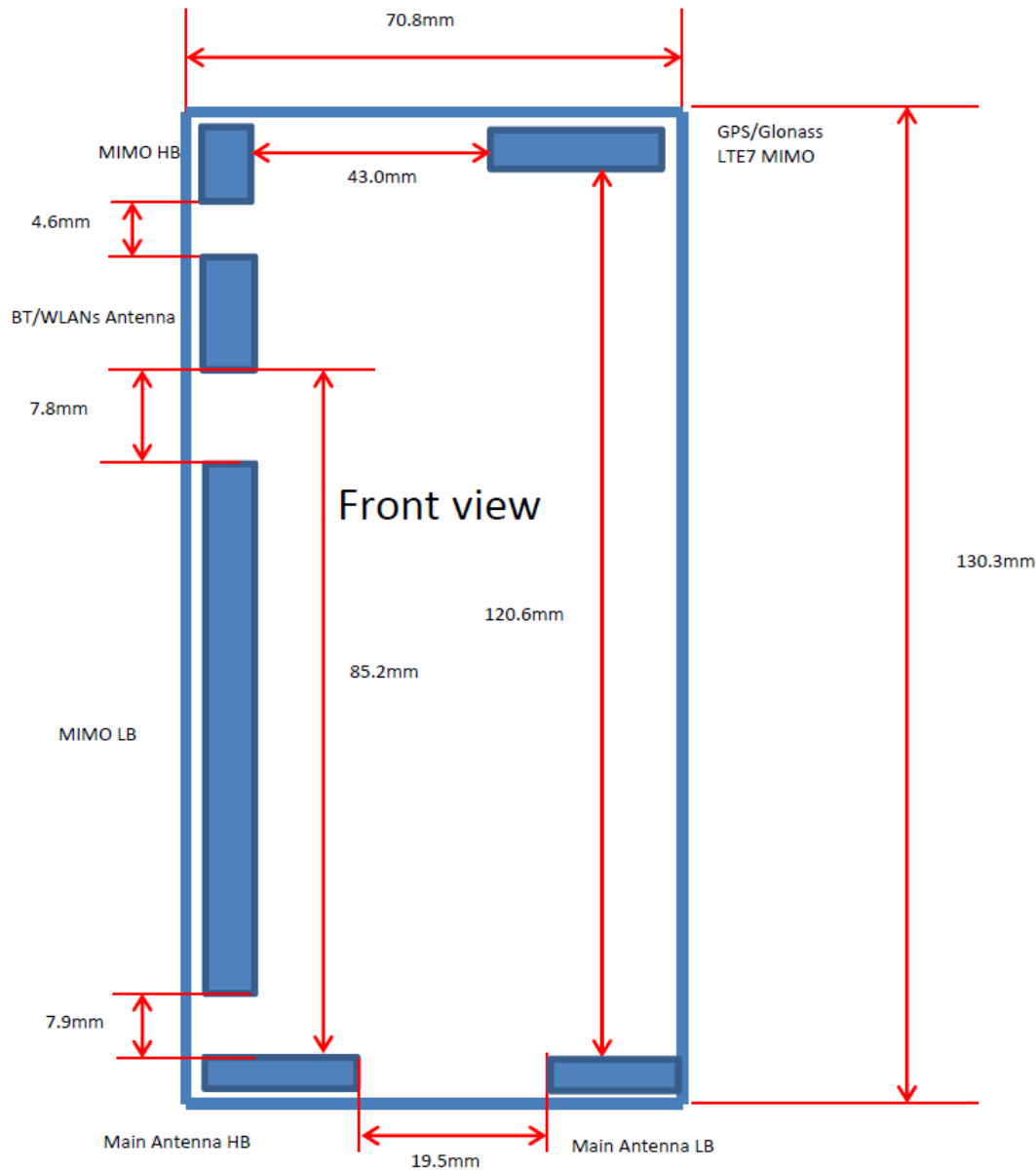
This device has Wireless Router “Hotspot” mode capability. Simultaneous transmission of any singular cellular, AWS and PCS band is possible with WLAN2450 or BT in Wireless Router mode. Wireless Router mode capability is not available with WLAN5000.

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

This device has no power reductions in any of the usage modes and does not feature any diversity antenna functionality when transmitting.

2.1 Description of the Antenna

The device has internal antennas for both cellular/AWS/PCS and WLAN/BT use. The cellular AWS/PCS antenna is located at the bottom underneath the back cover. The WLAN/BT antenna is located at the top underneath the back cover. The device dimensions, antenna locations and antenna interdistances are illustrated below.



LB = low band
HB = high band
MIMO = Rx only antenna

3. TEST CONDITIONS

3.1 Temperature and Humidity

Ambient temperature (°C):	19.0 – 25.0
Ambient humidity (RH %):	30 - 65

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester except for testing WLAN2450/WLAN 5000 where control software was used. Communication between the device and the call tester was established by air link.

A CMW500 call tester was used to configure the test device for transmitting all the LTE bands; in each band, the Uplink Power Control was set to 'Max Power'. Additional Spectrum Emission was set to 'NS_01' to disable A-MPR.

A CMU200 call tester was used for all the GSM/GPRS/EGPRS and WCDMA bands; in the case of GSM/GPRS/EGPRS the MS signal was always set to maximum power, whereas for WCDMA the UE uplink signal was configured to 12.2kbps RMC with all TPC bit set to 1.

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.

All WCDMA testing has been carried out in accordance with FCC KDB 941225: SAR Measurement Procedures for 3G Devices.

LTE bands have been tested according to the guidance given in KDB941225 D05 SAR for LTE Devices v01. MPR values as stipulated in Table 6.2.3_1 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.

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

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

The transmission mode of the device in all WLAN b-mode tests was DSSS QPSK 5.5Mbps. The transmission mode of the device in all WLAN n-mode 5GHz tests was MCS 2: OFDM 19.5/21.7 Mbps. These modes have the highest time-averaged output power of all the WLAN a, b, g and n modulation modes in this device as illustrated in table in Appendix G. All WLAN testing has been carried out in accordance with FCC KDB 248227: SAR Measurement Procedures for 802.11 a/b/g Transmitters.

LTE SAR testing has been carried out in accordance with KDB941225 D05 SAR for LTE Devices v01. In addition to the requirements of KDB941225, the following test modulations have voluntarily been measured in both LTE bands:

QPSK, 1RB allocation, 50% offset
QPSK, 100% RB allocation
16QAM, 1RB allocation, 50% offset
16QAM, 100% RB allocation

3.3 Test Cases and Test Minimisation

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

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

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

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

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

In the results tables in Section 7, the maximum SAR value for the 'basic' tests (i.e. left cheek, left tilt, right cheek and right tilt in Head SAR testing; with and without headset with the back &/or display side facing the flat phantom in Body SAR testing) is bolded for each band. In some cases, after full testing of the basic SAR test configurations has been completed, additional checking SAR tests are made. These checking tests are always based on the bolded result from the 'basic' testing. When the SAR value of a checking test exceeds the maximum value from the basic tests, it is also bolded and used as the basis for any further checking tests that might be needed.

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

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

The measurements were performed using an automated 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	2011-09	2012-09
DAE4	538	2011-09	2012-09
DAE4	1213	2012-02	2013-02
DAE4	1309	2012-01	2013-01
E-field Probe ES3DV3	3131	2011-09	2012-09
E-field Probe ES3DV3	3165	2012-02	2013-02
E-field Probe EX3DV4	3573	2012-02	2013-02
E-field Probe EX3DV4	3834	2012-02	2013-02
Dipole Validation Kit, D750V2	1034	2011-07	2013-07
Dipole Validation Kit, D835V2	462	2011-09	2013-09
Dipole Validation Kit, D1800V2	2d065	2011-09	2013-09
Dipole Validation Kit, D1900V2	5d030	2012-02	2014-02
Dipole Validation Kit, D2450V2	729	2011-09	2013-09
Dipole Validation Kit, D5GHzV2	1032	2012-02	2014-02
DASY4 software	Version 4.7	-	-
DASY5 software	Version 52.6	-	-
DASY5 software	Version 52.8	-	-

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration date	Calibration expiry
Signal Generator	E4438C	MY42080610	2011-11	2013-11
Signal Generator	SML03	101264	2011-08	2012-08
Signal Generator	SMB100A	105735	2011-12	2012-12
Signal Generator	E4436B	US39260114	2011-08	2012-08
Amplifier	5S1G4M3	302338	-	-
Amplifier	ZHL-42-SMA	N072095-5	-	-
Amplifier	5S4G11	312661	-	-
Amplifier	5S1G4	25583	-	-
Power Meter	NRVS	838624/032	2011-08	2012-08
Power Meter	NRVD	840023/028	2011-08	2012-08
Power Meter	NRVS	849305/028	2011-08	2012-08
Power Meter	NRVZ	849305/029	2012-02	2013-02
Power Sensor	NRV-Z32	100067	2011-08	2012-08
Power Sensor	URV5-Z2	839080/023	2011-08	2012-08
Power Sensor	NRV-Z32	100069	2011-07	2012-08
Power Sensor	NRV-Z32	825600/002	2012-02	2013-02
Call Tester	CMU 200	103293	-	-
Call Tester	CMU 200	101111	-	-
Call Tester	CMU 200	104983	-	-
Call Tester	CMU 200	103294	-	-
Call Tester	MT8820C	6200883095	-	-
Call Tester	CMW 500	110565	-	-
Call Tester	CMW 500	104687	-	-
Network Analyzer	ENA E5071C	MY46213166	2012-01	2013-01
Dielectric Probe Kit	DAK-3.5	1042	-	-

4.1.1 Isotropic E-field Probe Type ES3DV3

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

4.1.2 Isotropic E-field Probe Type EX3DV4

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

4.2 Phantoms

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

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

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

4.3 Tissue Simulants

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

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

4.3.1 Tissue Simulant Recipes

The following 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

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.

4.3.2 System Checking

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

System checking, head tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
750	Reference result	2.12	41.7	0.91	
	± 10% window	1.91 – 2.33			
	IEEE1528 / IEC62209 Standard targets		41.9	0.89	
	2012-06-21	2.09	41.0	0.91	21.0
	2012-06-22	2.11	40.6	0.91	21.0
	2012-06-26	2.13	40.3	0.92	21.0
	2012-06-28	2.07	41.7	0.89	21.0
835	Reference result	2.33	41.1	0.89	
	± 10% window	2.10 – 2.56			
	IEEE1528 / IEC62209 Standard targets		41.5	0.90	
	2012-06-14	2.52	40.5	0.92	21.0
	2012-06-19	2.49	40.6	0.91	21.0
	2012-06-20	2.45	40.7	0.92	21.0
	2012-06-21	2.41	40.1	0.90	21.0
1800	Reference result	9.43	39.7	1.37	
	± 10% window	8.49 – 10.37			
	IEEE1528 / IEC62209 Standard targets		40.0	1.40	
	2012-06-13	8.85	39.0	1.38	21.0
	2012-06-14	8.74	38.9	1.39	21.0
	2012-06-15	8.85	38.5	1.38	21.0
	2012-08-15	9.02	38.9	1.39	21.0
1900	Reference result	9.79	40.4	1.40	
	± 10% window	8.81 - 10.77			
	IEEE1528 / IEC62209 Standard targets		40.0	1.40	
	2012-06-12	10.2	39.3	1.43	21.0
	2012-06-13	10.0	39.6	1.40	21.0
	2012-06-15	9.92	38.9	1.40	21.0
	2012-06-16	9.96	39.0	1.38	21.0
	2012-06-18	9.95	39.3	1.40	21.0
	2012-06-19	9.91	39.2	1.40	21.0

(Table continues)

(Table continues)

2450	Reference result	13.9	38.3	1.85	
	± 10% window	12.5 – 15.3			
	IEEE1528 / IEC62209 Standard targets		39.2	1.80	
	2012-06-21	13.4	38.1	1.77	21.0
	2012-06-22	13.9	38.7	1.85	21.0
5200	Reference result	7.98	35.3	4.60	
	± 10% window	7.18 – 8.78			
	IEEE1528 / IEC62209 Standard targets*		36.0	4.66	
	2012-06-21	7.83	34.6	4.47	21.0
	2012-06-22	8.14	35.3	4.56	21.0
5500	Reference result	8.65	34.9	4.89	
	± 10% window	7.78 – 9.52			
	IEEE1528 / IEC62209 Standard targets*		35.6	4.96	
	2012-06-22	8.61	36.2	5.00	21.0
	2012-06-23	8.18	34.2	4.80	21.0
5800	Reference result	7.92	34.4	5.19	
	± 10% window	7.13 - 8.71			
	IEEE1528 / IEC62209 Standard targets*		35.3	5.27	
	2012-06-24	8.47	33.7	5.09	21.0
	2012-06-25	8.71	35.3	5.28	21.0

* Dielectric parameter data taken from IEC62209-2.

System checking, body tissue simulant

f [MHz]	Description	SAR [W/kg], 1g	Dielectric Parameters		Temp [°C]
			ϵ_r	σ [S/m]	
750	Reference result	2.20	55.2	0.96	
	± 10% window	1.98 – 2.42			
	IEEE1528 / IEC62209 Standard targets		55.5	0.96	
	2012-06-24	2.14	54.6	0.96	21.0
	2012-06-25	2.16	54.2	0.99	21.0
	2012-06-26	2.20	54.1	1.00	21.0
835	Reference result	2.45	53.5	1.00	
	± 10% window	2.20 – 2.70			
	IEEE1528 / IEC62209 Standard targets		55.2	0.97	
	2012-06-14	2.51	53.8	1.00	21.0
	2012-06-16	2.46	53.6	0.99	21.0
	2012-06-22	2.49	54.2	0.99	21.0
	2012-06-24	2.47	54.1	0.99	21.0
	2012-06-25	2.48	53.3	1.00	21.0
1800	Reference result	9.86	54.3	1.52	
	± 10% window	8.87 – 10.85			
	IEEE1528 / IEC62209 Standard targets		53.3	1.52	
	2012-06-16	9.69	52.6	1.49	21.0
	2012-06-17	9.79	52.2	1.49	21.0
	2012-06-18	9.63	52.5	1.49	21.0
	2012-08-16	9.91	52.4	1.52	21.0
1900	Reference result	9.87	53.0	1.56	
	± 10% window	8.88 – 10.86			
	IEEE1528 / IEC62209 Standard targets		53.3	1.52	
	2012-06-13	10.7	52.5	1.52	21.0
	2012-06-17	10.8	51.8	1.51	21.0
	2012-06-20	10.4	52.4	1.51	21.0
	2012-06-21	10.8	52.3	1.53	21.0
	2012-06-22	10.8	52.5	1.53	21.0

(Table continues)

(Table continues)

2450	Reference result	13.3	51.7	2.04	
	± 10% window	12.0 – 14.6			
	IEEE1528 / IEC62209 Standard targets		52.7	1.95	
	2012-06-23	13.8	50.3	1.97	21.0
	2012-06-24	13.9	50.2	1.97	21.0
	2012-06-25	13.5	50.6	1.94	21.0
5200	Reference result	7.23	48.6	5.48	
	± 10% window	6.51 – 7.95			
	FCC OET65 Supplement C targets		49.0	5.30	
	2012-06-25	7.82	49.0	5.46	21.0
	2012-06-26	7.54	48.9	5.36	21.0
	2012-06-27	7.81	49.0	5.45	21.0
	2012-06-28	7.67	49.1	5.36	21.0
5500	Reference result	7.78	48.1	5.87	
	± 10% window	7.00 – 8.56			
	FCC OET65 Supplement C targets		48.6	5.65	
	2012-06-28	7.99	48.2	5.81	21.0
5800	Reference result	7.21	48.2	6.28	
	± 10% window	6.49 – 7.93			
	FCC OET65 Supplement C targets		48.2	6.00	
	2012-06-28	6.96	47.7	6.23	21.0
	2012-06-30	7.35	47.3	6.20	21.0
	2012-07-02	7.36	47.3	6.25	21.0

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

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
710	Recommended value	42.1	0.89	
	$\pm 5\%$ window	40.0 – 44.2	0.85 – 0.93	
	2012-06-21	41.2	0.89	21.0
	2012-06-22	40.9	0.88	21.0
	2012-06-26	40.6	0.89	21.0
	2012-06-28	41.9	0.88	21.0
835	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2012-06-21	40.1	0.90	21.0
836	Recommended value	41.5	0.90	
	$\pm 5\%$ window	39.4 – 43.6	0.86 – 0.95	
	2012-06-14	40.5	0.92	21.0
	2012-06-19	40.6	0.91	21.0
	2012-06-20	40.7	0.92	21.0
	2012-06-21	40.1	0.90	21.0
	2012-06-23	40.4	0.93	21.0
1732	Recommended value	40.1	1.36	
	$\pm 5\%$ window	38.1 – 42.1	1.29 – 1.43	
	2012-06-13	39.3	1.32	21.0
	2012-06-14	39.1	1.32	21.0
	2012-06-15	38.7	1.31	21.0
	2012-08-15	39.1	1.33	21.0
1880	Recommended value	40.0	1.40	
	$\pm 5\%$ window	38.0 – 42.0	1.33 – 1.47	
	2012-06-12	39.4	1.41	21.0
	2012-06-13	39.6	1.38	21.0
	2012-06-15	39.0	1.39	21.0
	2012-06-16	39.1	1.37	21.0
	2012-06-18	39.3	1.38	21.0
	2012-06-19	39.3	1.38	21.0

(Table continues)

(Table continues)

2437	Recommended value	39.2	1.79	
	± 5% window	37.3 – 41.2	1.70 – 1.88	
	2012-06-21	38.2	1.76	21.0
	2012-06-22	38.8	1.83	21.0
5210	Recommended value	36.1	4.67	
	± 5% window	34.3 – 37.9	4.44 – 4.90	
	2012-06-21	34.5	4.48	21.0
	2012-06-22	35.3	4.56	21.0
5290	Recommended value	36.0	4.75	
	± 5% window	34.2 – 37.8	4.51 – 4.99	
	2012-06-21	34.4	4.55	21.0
	2012-06-22	35.2	4.64	21.0
5600	Recommended value	35.6	5.07	
	± 5% window	33.8 – 37.4	4.82 – 5.32	
	2012-06-22	36.0	5.12	21.0
	2012-06-23	34.0	4.90	21.0
5785	Recommended value	35.4	5.25	
	± 5% window	33.6 – 37.2	4.99 – 5.51	
	2012-06-24	33.8	5.08	21.0
	2012-06-25	35.3	5.26	21.0

Body tissue simulant measurements

f [MHz]	Description	Dielectric Parameters		Temp [°C]
		ϵ_r	σ [S/m]	
710	Recommended value	55.7	0.96	
	± 5% window	52.9 – 58.5	0.91 – 1.01	
	2012-06-24	54.7	0.94	21.0
	2012-06-25	54.4	0.97	21.0
	2012-06-26	54.2	0.98	21.0
835	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
	2012-06-22	54.2	0.99	21.0

(Table continues)

(Table continues)

836	Recommended value	55.2	0.97	
	± 5% window	52.4 – 58.0	0.92 – 1.02	
	2012-06-14	53.8	1.00	21.0
	2012-06-16	53.5	0.99	21.0
	2012-06-22	54.1	0.99	21.0
	2012-06-24	54.1	0.99	21.0
	2012-06-25	53.3	1.00	21.0
1732	Recommended value	53.5	1.48	
	± 5% window	50.8 – 56.2	1.40 – 1.55	
	2012-06-16	52.8	1.42	21.0
	2012-06-17	52.5	1.44	21.0
	2012-06-18	52.6	1.42	21.0
	2012-08-16	52.5	1.44	21.0
1880	Recommended value	53.3	1.52	
	± 5% window	50.6 – 56.0	1.44 – 1.60	
	2012-06-13	52.5	1.49	21.0
	2012-06-17	51.9	1.49	21.0
	2012-06-20	52.5	1.50	21.0
	2012-06-21	52.3	1.51	21.0
	2012-06-22	52.6	1.51	21.0
2437	Recommended value	52.7	1.94	
	± 5% window	50.1 – 55.3	1.85 – 2.04	
	2012-06-23	50.4	1.95	21.0
	2012-06-24	50.2	1.95	21.0
	2012-06-25	50.7	1.93	21.0
5210	Recommended value	49.0	5.31	
	± 5% window	46.6 – 51.5	5.04 – 5.58	
	2012-06-25	49.0	5.46	21.0
	2012-06-26	48.9	5.37	21.0
	2012-06-27	49.0	5.46	21.0
	2012-06-28	49.1	5.37	21.0

(Table continues)

(Table continues)

5290	Recommended value	48.9	5.40	
	$\pm 5\%$ window	46.4 – 51.3	5.13 – 5.67	
	2012-06-25	48.8	5.56	21.0
	2012-06-26	48.8	5.47	21.0
	2012-06-28	49.0	5.46	21.0
5600	Recommended value	48.5	5.77	
	$\pm 5\%$ window	46.0 – 50.9	5.48 – 6.06	
	2012-06-28	48.0	5.95	21.0
5785	Recommended value	48.2	5.98	
	$\pm 5\%$ window	45.8 – 50.6	5.68 – 6.28	
	2012-06-28	47.7	6.20	21.0
	2012-06-30	47.3	6.17	21.0
	2012-07-02	47.4	6.20	21.0

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

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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



Device holder supplied by SPEAG

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



Nokia spacer

5.2 Test Positions

5.2.1 Against Phantom Head

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

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

5.2.2 Body Worn Configuration

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

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

5.2.3 Wireless Router Configuration

The device was placed in the SPEAG holder using the Nokia spacer and positioned 10.0mm away from the flat phantom. The spacer was removed before the start of the measurements. The device was oriented all six sides of the device facing the phantom.

5.3 Scan Procedures

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

5.4 SAR Averaging Methods

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

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

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

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

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

Uncertainty Component	Section in IEEE 1528	Tol. (%)	Prob Dist	Div	C_i	$C_i \cdot U_i$ (%)	V_i
Measurement System							
Probe Calibration	E2.1	± 6.55	N	1	1	± 6.55	∞
Axial Isotropy	E2.2	± 4.7	R	$\sqrt{3}$	$(1 - c_p)^{1/2}$	± 1.9	∞
Hemispherical Isotropy	E2.2	± 9.6	R	$\sqrt{3}$	$(c_p)^{1/2}$	± 3.9	∞
Boundary Effect	E2.3	± 1.0	R	$\sqrt{3}$	1	± 0.6	∞
Linearity	E2.4	± 4.7	R	$\sqrt{3}$	1	± 2.7	∞
System Detection Limits	E2.5	± 1.0	R	$\sqrt{3}$	1	± 0.6	∞
Readout Electronics	E2.6	± 1.0	N	1	1	± 1.0	∞
Response Time	E2.7	± 0.8	R	$\sqrt{3}$	1	± 0.5	∞
Integration Time	E2.8	± 2.6	R	$\sqrt{3}$	1	± 1.5	∞
RF Ambient Conditions - Noise	E6.1	± 3.0	R	$\sqrt{3}$	1	± 1.7	∞
RF Ambient Conditions - Reflections	E6.1	± 3.0	R	$\sqrt{3}$	1	± 1.7	∞
Probe Positioner Mechanical Tolerance	E6.2	± 0.4	R	$\sqrt{3}$	1	± 0.2	∞
Probe Positioning with respect to Phantom Shell	E6.3	± 2.9	R	$\sqrt{3}$	1	± 1.7	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E5	± 3.9	R	$\sqrt{3}$	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	$\sqrt{3}$	1	± 0.0	∞
Phantom and Tissue Parameters							
Phantom Uncertainty (shape and thickness tolerances)	E3.1	± 4.0	R	$\sqrt{3}$	1	± 2.3	∞
Conductivity Target - tolerance	E3.2	± 5.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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	

7. RESULTS

7.1 The measured Head SAR values for the test device

LTE700 (Band17) Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz
QPSK	Conducted Average Power		-	21.02 dBm	-
10MHz Ch BW 100% RB	Left	Cheek	-	0.052	-
		Tilt	-	0.036	-
	Right	Cheek	-	0.106	-
		Tilt	-	0.064	-
QPSK	Conducted Average Power		-	21.25 dBm	-
10MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.057	-
		Tilt	-	0.039	-
	Right	Cheek	-	0.117	-
		Tilt	-	0.071	-
QPSK	Conducted Average Power		-	21.97 dBm	-
10MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.069	-
		Tilt	-	0.062	-
	Right	Cheek	-	0.143	-
		Tilt	-	0.086	-
QPSK	Conducted Average Power		22.33 dBm	22.08 dBm	22.58 dBm
10MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.089	-
		Tilt	-	0.075	-
	Right	Cheek	0.136	0.167	0.226
		Tilt	-	0.085	-
QPSK	Conducted Average Power		-	21.80 dBm	-
10MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.072	-
		Tilt	-	0.037	-
	Right	Cheek	-	0.097	-
		Tilt	-	0.048	-
16QAM	Conducted Average Power		-	19.92 dBm	-
10MHz Ch BW 100% RB	Left	Cheek	-	0.057	-
		Tilt	-	0.031	-
	Right	Cheek	-	0.087	-
		Tilt	-	0.050	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.12 dBm	-
10MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.063	-
		Tilt	-	0.034	-
	Right	Cheek	-	0.096	-
		Tilt	-	0.056	-
16QAM	Conducted Average Power		-	21.05 dBm	-
10MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.074	-
		Tilt	-	0.039	-
	Right	Cheek	-	0.114	-
		Tilt	-	0.062	-
16QAM	Conducted Average Power		-	21.61 dBm	-
10MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.087	-
		Tilt	-	0.058	-
	Right	Cheek	-	0.135	-
		Tilt	-	0.076	-
16QAM	Conducted Average Power		-	21.17 dBm	-
10MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.049	-
		Tilt	-	0.028	-
	Right	Cheek	-	0.077	-
		Tilt	-	0.044	-

5MHz Channel Bandwidth has a maximum time-averaged output power < 0.5dB above the maximum time-averaged output power in 10MHz Channel Bandwidth. Therefore, according to KDB 941225 D05 SAR for LTE Devices v01, no SAR testing was required for the 5MHz Channel Bandwidth as no SAR value for 10MHz Channel Bandwidth exceeded 1.45W/kg.

850MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
GSM	Conducted Average Power		-	31.60 dBm	-
	Left	Cheek	-	0.358	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Conducted Average Power		31.32 dBm	31.34 dBm	31.57 dBm
	Left	Cheek	-	0.602	-
		Tilt	-	0.398	-
	Right	Cheek	0.662	0.684	0.735
		Tilt	-	0.433	-
2-slot 8PSK EGPRS	Conducted Average Power		-	-	26.03 dBm
	Left	Cheek	-	-	-
		Tilt	-	-	-
	Right	Cheek	-	-	0.197
		Tilt	-	-	-
Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Maximum Output Power		23.93 dBm	23.48 dBm	23.94 dBm
	Left	Cheek	-	0.333	-
		Tilt	-	0.203	-
	Right	Cheek	0.508	0.371	0.417
		Tilt	-	0.244	-

LTE850 (Band5) Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz
QPSK	Conducted Average Power		-	20.56 dBm	-
10MHz Ch BW 100% RB	Left	Cheek	-	0.192	-
		Tilt	-	0.119	-
	Right	Cheek	-	0.222	-
		Tilt	-	0.126	-
QPSK	Conducted Average Power		-	20.40 dBm	-
10MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.189	-
		Tilt	-	0.116	-
	Right	Cheek	-	0.214	-
		Tilt	-	0.121	-
QPSK	Conducted Average Power		-	21.23 dBm	-
10MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.243	-
		Tilt	-	0.148	-
	Right	Cheek	-	0.272	-
		Tilt	-	0.153	-
QPSK	Conducted Average Power		21.04 dBm	21.02 dBm	20.92 dBm
10MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.307	-
		Tilt	-	0.184	-
	Right	Cheek	0.210	0.341	0.230
		Tilt	-	0.198	-
QPSK	Conducted Average Power		-	20.73 dBm	-
10MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.196	-
		Tilt	-	0.125	-
	Right	Cheek	-	0.230	-
		Tilt	-	0.149	-
16QAM	Conducted Average Power		-	19.50 dBm	-
10MHz Ch BW 100% RB	Left	Cheek	-	0.150	-
		Tilt	-	0.096	-
	Right	Cheek	-	0.176	-
		Tilt	-	0.101	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	19.29 dBm	-
10MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.147	-
		Tilt	-	0.095	-
	Right	Cheek	-	0.172	-
		Tilt	-	0.100	-
16QAM	Conducted Average Power		-	20.61 dBm	-
10MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.177	-
		Tilt	-	0.114	-
	Right	Cheek	-	0.201	-
		Tilt	-	0.118	-
16QAM	Conducted Average Power		-	20.43 dBm	-
10MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.233	-
		Tilt	-	0.144	-
	Right	Cheek	-	0.257	-
		Tilt	-	0.151	-
16QAM	Conducted Average Power		-	19.78 dBm	-
10MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.146	-
		Tilt	-	0.097	-
	Right	Cheek	-	0.175	-
		Tilt	-	0.116	-

Each of the available smaller Channel Bandwidths (1.4, 3.0, 5.0 and 10.0 MHz) has a maximum time-averaged output power < 0.5dB above the maximum time-averaged output power in 10MHz Channel Bandwidth. Therefore, according to KDB 941225 D05 SAR for LTE Devices v01, no SAR testing was required in any of the smaller Channel Bandwidths as no SAR value for 10MHz Channel Bandwidth exceeded 1.45W/kg.

1700/2100 Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz
WCDMA	Maximum Output Power		23.66 dBm	23.47 dBm	23.57dBm
	Left	Cheek	0.877	0.841	0.749
		Tilt	-	0.403	-
	Right	Cheek	-	0.575	-
		Tilt	-	0.282	-

LTE1700/2100 (Band4) Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 20050 1720.0 MHz	Ch 20175 1732.5 MHz	Ch 20300 1745.0 MHz
QPSK	Conducted Average Power		-	21.43 dBm	-
20MHz Ch BW 100% RB	Left	Cheek	-	0.489	-
		Tilt	-	0.265	-
	Right	Cheek	-	0.327	-
		Tilt	-	0.168	-
QPSK	Conducted Average Power		-	21.48 dBm	-
20MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.497	-
		Tilt	-	0.270	-
	Right	Cheek	-	0.331	-
		Tilt	-	0.160	-
QPSK	Conducted Average Power		-	22.02 dBm	-
20MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.587	-
		Tilt	-	0.322	-
	Right	Cheek	-	0.387	-
		Tilt	-	0.186	-
QPSK	Conducted Average Power		-	21.72 dBm	-
20MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.572	-
		Tilt	-	0.281	-
	Right	Cheek	-	0.386	-
		Tilt	-	0.173	-
QPSK	Conducted Average Power		22.48 dBm	22.23 dBm	21.93 dBm
20MHz Ch BW 1 RB 0% offset	Left	Cheek	0.644	0.633	0.575
		Tilt	-	0.309	-
	Right	Cheek	-	0.404	-
		Tilt	-	0.189	-
16QAM	Conducted Average Power		-	20.44 dBm	-
20MHz Ch BW 100% RB	Left	Cheek	-	0.389	-
		Tilt	-	0.191	-
	Right	Cheek	-	0.264	-
		Tilt	-	0.136	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.392	-
		Tilt	-	0.194	-
	Right	Cheek	-	0.261	-
		Tilt	-	0.138	-
16QAM	Conducted Average Power		-	21.58 dBm	-
20MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.441	-
		Tilt	-	0.219	-
	Right	Cheek	-	0.296	-
		Tilt	-	0.154	-
16QAM	Conducted Average Power		-	21.17 dBm	-
20MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.413	-
		Tilt	-	0.210	-
	Right	Cheek	-	0.293	-
		Tilt	-	0.136	-
16QAM	Conducted Average Power		-	21.37 dBm	-
20MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.466	-
		Tilt	-	0.260	-
	Right	Cheek	-	0.303	-
		Tilt	-	0.154	-

Each of the available smaller Channel Bandwidths (1.4, 3.0, 5.0, 10.0 and 15.0MHz) has a maximum time-averaged output power < 0.5dB above the maximum time-averaged output power in 20MHz Channel Bandwidth. Therefore, according to KDB 941225 D05 SAR for LTE Devices v01, no SAR testing was required in any of the smaller Channel Bandwidths as no SAR value for 10MHz Channel Bandwidth exceeded 1.45W/kg.

1900MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
GSM	Conducted Average Power		-	28.90 dBm	-
	Left	Cheek	-	0.412	-
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
2-slot GPRS	Conducted Average Power		28.68 dBm	28.85 dBm	28.82 dBm
	Left	Cheek	0.729	0.793	0.815
		Tilt	-	0.171	-
	Right	Cheek	-	0.490	-
		Tilt	-	0.168	-
2-slot 8PSK EGPRS	Conducted Average Power		-	-	25.22 dBm
	Left	Cheek	-	-	0.396
		Tilt	-	-	-
	Right	Cheek	-	-	-
		Tilt	-	-	-
Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Maximum Output Power		23.44 dBm	23.33 dBm	23.49 dBm
	Left	Cheek	0.939	0.841	0.828
		Tilt	-	0.255	-
	Right	Cheek	-	0.596	-
		Tilt	-	0.166	-

LTE1900 (Band2) Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz
QPSK	Conducted Average Power		-	21.77 dBm	-
20MHz Ch BW 100% RB	Left	Cheek	-	0.584	-
		Tilt	-	0.143	-
	Right	Cheek	-	0.386	-
		Tilt	-	0.141	-
QPSK	Conducted Average Power		-	21.80 dBm	-
20MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.575	-
		Tilt	-	0.142	-
	Right	Cheek	-	0.378	-
		Tilt	-	0.137	-
QPSK	Conducted Average Power		-	22.32 dBm	-
20MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.661	-
		Tilt	-	0.163	-
	Right	Cheek	-	0.435	-
		Tilt	-	0.146	-
QPSK	Conducted Average Power		22.76 dBm	22.25 dBm	22.71 dBm
20MHz Ch BW 1 RB 100% offset	Left	Cheek	0.772	0.715	0.730
		Tilt	-	0.212	-
	Right	Cheek	-	0.511	-
		Tilt	-	0.188	-
QPSK	Conducted Average Power		-	22.53 dBm	-
20MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.702	-
		Tilt	-	0.170	-
	Right	Cheek	-	0.494	-
		Tilt	-	0.168	-
16QAM	Conducted Average Power		-	20.61 dBm	-
20MHz Ch BW 100% RB	Left	Cheek	-	0.452	-
		Tilt	-	0.117	-
	Right	Cheek	-	0.314	-
		Tilt	-	0.098	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Left	Cheek	-	0.451	-
		Tilt	-	0.114	-
	Right	Cheek	-	0.311	-
		Tilt	-	0.095	-
16QAM	Conducted Average Power		-	21.90 dBm	-
20MHz Ch BW 1 RB 50% offset	Left	Cheek	-	0.451	-
		Tilt	-	0.126	-
	Right	Cheek	-	0.351	-
		Tilt	-	0.106	-
16QAM	Conducted Average Power		-	21.84 dBm	-
20MHz Ch BW 1 RB 100% offset	Left	Cheek	-	0.567	-
		Tilt	-	0.169	-
	Right	Cheek	-	0.423	-
		Tilt	-	0.144	-
16QAM	Conducted Average Power		-	21.82 dBm	-
20MHz Ch BW 1 RB 0% offset	Left	Cheek	-	0.592	-
		Tilt	-	0.136	-
	Right	Cheek	-	0.396	-
		Tilt	-	0.115	-

Each of the available smaller Channel Bandwidths (1.4, 3.0, 5.0, 10.0 and 15.0MHz) has a maximum time-averaged output power < 0.5dB above the maximum time-averaged output power in 20MHz Channel Bandwidth. Therefore, according to KDB 941225 D05 SAR for LTE Devices v01, no SAR testing was required in any of the smaller Channel Bandwidths as no SAR value for 10MHz Channel Bandwidth exceeded 1.45W/kg.

2450MHz Head SAR results

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode	Maximum Output Power		15.92 dBm	16.55 dBm	15.94 dBm
5.5Mbps	Left	Cheek	-	0.052	-
		Tilt	-	0.039	-
	Right	Cheek	0.126	0.134	0.096
		Tilt	-	0.046	-

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

Mode	Test configuration		SAR, averaged over 1g (W/kg)			
			Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz
WLAN n-mode	Maximum Output Power		15.22 dBm	14.92 dBm	15.05 dBm	14.84 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Left	Cheek	0.092	0.079	0.045	0.057
		Tilt	0.054	-	-	0.036
	Right	Cheek	0.332	-	-	0.266
		Tilt	0.125	-	-	0.063

5000MHz Head SAR results
5470–5725 MHz

Mode	Test configuration		SAR, averaged over 1g (W/kg)			
			Ch 100 5500.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 132 5660.0 MHz
WLAN n-mode	Maximum Output Power		15.00 dBm	14.93 dBm	14.68 dBm	14.32 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Left	Cheek	0.040	0.046	0.045	0.074
		Tilt	-	-	-	0.035
	Right	Cheek	-	-	-	0.205
		Tilt	-	-	-	0.046

5000MHz Head SAR results
5725–5850 MHz

Mode	Test configuration		SAR, averaged over 1g (W/kg)		
			Ch 149 5745.0 MHz	Ch 157 5785.0 MHz	Ch 161 5805.0 MHz
WLAN n-mode	Maximum Output Power		14.46 dBm	14.50 dBm	14.35 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Left	Cheek	0.035	0.028	0.027
		Tilt	0.019	-	-
	Right	Cheek	0.172	-	-
		Tilt	0.038	-	-

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

Test configuration	Max. 1g SAR results										
	WLAN 2450	WLAN 5000	LTE 700	2-slot GPRS850	WCDMA 850	LTE 850	WCDMA 1700/2100	LTE 1700/2100	2-slot GPRS 1900	WCDMA 1900	LTE 1900
Head: Left, Cheek	0.052	0.092	0.089	0.602	0.333	0.307	0.877	0.644	0.815	0.939	0.772
Head: Left, Tilt	0.039	0.054	0.075	0.398	0.203	0.184	0.403	0.309	0.171	0.255	0.212
Head: Right, Cheek	0.134	0.332	0.226	0.735	0.508	0.341	0.575	0.404	0.490	0.596	0.511
Head: Right, Tilt	0.046	0.125	0.086	0.197	0.244	0.198	0.282	0.189	0.168	0.166	0.188

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
Head: Left, Cheek	0.141	0.654	0.385	0.359	0.929	0.696	0.867	0.991	0.824
Head: Left, Tilt	0.114	0.437	0.242	0.223	0.442	0.348	0.210	0.294	0.251
Head: Right, Cheek	0.360	0.869	0.642	0.475	0.709	0.538	0.624	0.730	0.645
Head: Right, Tilt	0.131	0.243	0.290	0.244	0.328	0.235	0.214	0.212	0.234
Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 5000	2-slot GPRS850 + WLAN 5000	WCDMA 850 + WLAN 5000	LTE 850 + WLAN 5000	WCDMA 1700/ 2100 + WLAN 5000	LTE 1700/ 2100 + WLAN 5000	2-slot GPRS 1900 + WLAN 5000	WCDMA 1900 + WLAN 5000	LTE 1900 + WLAN 5000
Head: Left, Cheek	0.181	0.694	0.425	0.399	0.969	0.736	0.907	1.031	0.864
Head: Left, Tilt	0.129	0.452	0.257	0.238	0.457	0.363	0.225	0.309	0.266
Head: Right, Cheek	0.558	1.067	0.840	0.673	0.907	0.736	0.822	0.928	0.843
Head: Right, Tilt	0.210	0.322	0.369	0.323	0.407	0.314	0.293	0.291	0.313

The following table gives a more accurate assessment of the SAR values for simultaneous transmission. These values have been calculated using the SPEAG Combined Multiband algorithm, which is based on area scans. It a) converts the 2D area scans into 3D volume scans by assuming frequency-dependent decay characteristics for the E-field, b) sums the SAR values for WLAN2450 or WLAN5000 and the cellular bands point-by-point and c) calculates the combined average SAR values.

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
Head: Left, Cheek	-	-	-	-	0.937	0.681	0.829	0.955	0.800
Head: Left, Tilt	-	-	-	-	-	-	-	-	-
Head: Right, Cheek	0.239	0.736	0.508	0.351	-	-	-	-	-
Head: Right, Tilt	-	-	-	-	-	-	-	-	-
Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 5000	2-slot GPRS850 + WLAN 5000	WCDMA 850 + WLAN 5000	LTE 850 + WLAN 5000	WCDMA 1700/ 2100 + WLAN 5000	LTE 1700/ 2100 + WLAN 5000	2-slot GPRS 1900 + WLAN 5000	WCDMA 1900 + WLAN 5000	LTE 1900 + WLAN 5000
Head: Left, Cheek	-	-	-	-	0.961	-	0.833	0.967	0.809
Head: Left, Tilt	-	-	-	-	-	-	-	-	-
Head: Right, Cheek	0.389	0.730	0.514	0.426	-	0.596	-	-	-
Head: Right, Tilt	-	-	-	-	-	-	-	-	-

Some of the Combined SAR values in the above table are less than the maximum SAR values for the contributing cellular band. This is due to a) minimal overlap of the SAR distributions of the cellular band with WLAN2450 or WLAN5000 and b) uncertainties associated with the different methods of calculation. In these cases, the maximum SAR values given for the combined Modes in the Summary table in Section 1.2 are those for the individual cellular band.

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

Plots of the Measurement scans are given in Appendix B1.

7.2 The measured Body SAR values for the test device

LTE700 (Band 17) Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz
QPSK	Conducted Average Power		21.10 dBm	21.02 dBm	21.13dBm
10MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.050	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		21.21 dBm	21.25 dBm	21.40 dBm
10MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.051	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		22.14 dBm	21.97 dBm	22.07 dBm
10MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.062	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		22.33 dBm	22.08 dBm	22.58 dBm
10MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.082	-
		Headset WH-208	-	0.067	-
	Display facing phantom	Without headset	0.147	0.175	0.228
		Headset WH-208	-	0.116	-
QPSK	Conducted Average Power		22.35 dBm	21.80 dBm	21.61 dBm
10MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.039	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		20.08 dBm	19.92 dBm	20.10 dBm
10MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.036	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		19.98 dBm	20.12 dBm	20.28 dBm
10MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.046	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		21.35 dBm	21.05 dBm	21.34 dBm
10MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.059	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		21.24 dBm	21.61 dBm	21.82 dBm
10MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.079	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		21.39 dBm	21.17 dBm	21.21 dBm
10MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.037	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

850MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS		Conducted Average Power	31.32 dBm	31.34 dBm	31.57 dBm
	Back facing phantom	Without headset	-	0.602	-
		Headset WH-208	-	0.401	-
	Display facing phantom	Without headset	0.646	0.615	0.754
		Headset WH-208	-	0.421	-
Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA		Maximum Output Power	23.93 dBm	23.48 dBm	23.94 dBm
	Back facing phantom	Without headset	-	0.317	-
		Headset WH-208	-	0.222	-
	Display facing phantom	Without headset	0.465	0.375	0.425
		Headset WH-208	-	0.291	-

LTE850 (Band5) Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz
QPSK		Conducted Average Power	-	20.56 dBm	-
10MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.195	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK		Conducted Average Power	-	20.40 dBm	-
10MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.192	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

(Table continues)

(Table continues)

QPSK	Conducted Average Power		-	21.23 dBm	-
10MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.251	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		21.04 dBm	21.02 dBm	20.92 dBm
10MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.300	-
		Headset WH-208	-	0.202	-
	Display facing phantom	Without headset	0.205	0.316	0.231
		Headset WH-208	-	0.195	-
QPSK	Conducted Average Power		-	20.73 dBm	-
10MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.206	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	19.50 dBm	-
10MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.167	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	19.29 dBm	-
10MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.166	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	20.61 dBm	-
10MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.194	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.43 dBm	-
10MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.234	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	19.78 dBm	-
10MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.164	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

1700/2100 Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz
WCDMA		Maximum Output Power	23.66 dBm	23.47 dBm	23.57dBm
	Back facing phantom	Without headset	-	0.707	-
		Headset WH-208	0.788	0.738	0.657
	Display facing phantom	Without headset	-	0.684	-
		Headset WH-208	-	0.701	-

LTE1700/2100 (Band4) Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 20050 1720.0 MHz	Ch 20175 1732.5 MHz	Ch 20300 1745.0 MHz
QPSK	Conducted Average Power		-	21.43 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.406	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		-	21.48 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.405	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		22.25 dBm	22.02 dBm	21.92 dBm
20MHz Ch BW 1 RB 50% offset	Back facing phantom	Without headset	-	0.491	-
		Headset WH-208	0.524	0.523	0.458
	Display facing phantom	Without headset	-	0.453	-
		Headset WH-208	-	0.489	-
QPSK	Conducted Average Power		-	21.72 dBm	-
20MHz Ch BW 1 RB 100% offset	Back facing phantom	Without headset	-	0.448	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		-	22.23 dBm	-
20MHz Ch BW 1 RB 0% offset	Back facing phantom	Without headset	-	0.485	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	20.44 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.324	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.324	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.58 dBm	-
20MHz Ch BW 1 RB 50% offset	Back facing phantom	Without headset	-	0.363	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.17 dBm	-
20MHz Ch BW 1 RB 100% offset	Back facing phantom	Without headset	-	0.352	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.37 dBm	-
20MHz Ch BW 1 RB 0% offset	Back facing phantom	Without headset	-	0.408	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

1900MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
2-slot GPRS	Conducted Average Power		28.68 dBm	28.85 dBm	28.82 dBm
	Back facing phantom	Without headset	-	0.443	-
		Headset WH-208	0.387	0.480	0.506
	Display facing phantom	Without headset	-	0.433	-
		Headset WH-208	-	0.434	-
Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Maximum Output Power		23.44 dBm	23.33 dBm	23.49 dBm
	Back facing phantom	Without headset	-	0.496	-
		Headset WH-208	0.533	0.504	0.497
	Display facing phantom	Without headset	-	0.466	-
		Headset WH-208	-	0.489	-

LTE1900 (Band2) Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz
QPSK	Conducted Average Power		-	21.77 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.343	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		-	21.80 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.336	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		-	22.32 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.395	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
QPSK	Conducted Average Power		22.76 dBm	22.25 dBm	22.71 dBm
20MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.448	-
		Headset WH-208	-	0.450	-
	Display facing phantom	Without headset	-	0.443	-
		Headset WH-208	0.451	0.486	0.424
QPSK	Conducted Average Power		-	22.53 dBm	-
20MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.443	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	20.61 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	Without headset	-	0.247	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power		-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	Without headset	-	0.246	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.90 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	Without headset	-	0.279	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.84 dBm	-
20MHz Ch BW 1RB 100% offset	Back facing phantom	Without headset	-	0.339	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-
16QAM	Conducted Average Power		-	21.82 dBm	-
20MHz Ch BW 1RB 0% offset	Back facing phantom	Without headset	-	0.339	-
		Headset WH-208	-	-	-
	Display facing phantom	Without headset	-	-	-
		Headset WH-208	-	-	-

2450MHz Body SAR results

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz
WLAN b-mode	Maximum Output Power		15.92 dBm	16.55 dBm	15.94 dBm
5.5 Mbps	Back facing phantom	Without headset	0.016	0.019	0.013
		Headset WH-208	-	0.019	-
	Display facing phantom	Without headset	-	0.011	-
		Headset WH-208	-	0.008	-

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

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)			
			Ch 36 5180.0 MHz	Ch 48 5240.0 MHz	Ch 52 5260.0 MHz	Ch 64 5320.0 MHz
WLAN n-mode	Maximum Output Power		15.00 dBm	15.22 dBm	14.92 dBm	15.05 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Back facing	Without headset	0.034	0.035	0.039	0.043
	phantom	Headset WH-208	-	0.038	-	0.042
	Display facing	Without headset	-	0.032	-	0.029
	phantom	Headset WH-208	-	0.035	-	0.030

**5000MHz Body SAR results
5470–5725 MHz**

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)			
			Ch 100 5500.0 MHz	Ch 112 5560.0 MHz	Ch 120 5600.0 MHz	Ch 132 5660.0 MHz
WLAN n-mode	Maximum Output Power		15.00 dBm	14.93 dBm	14.68 dBm	14.32 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Back facing phantom	Without headset	0.034	0.038	0.042	0.048
		Headset WH-208	-	-	-	0.041
	Display facing phantom	Without headset	-	-	-	0.022
		Headset WH-208	-	-	-	0.021

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

Mode	Device orientation	Test configuration	SAR, averaged over 1g (W/kg)		
			Ch 149 5745.0 MHz	Ch 157 5785.0 MHz	Ch 161 5805.0 MHz
WLAN n-mode	Maximum Output Power		14.46 dBm	14.50 dBm	14.35 dBm
MCS 2: OFDM 19.5 / 21.7 Mbps	Back facing phantom	Without headset	0.030	0.023	0.003
		Headset WH-208	0.030	-	-
	Display facing phantom	Without headset	0.021	-	-
		Headset WH-208	0.010	-	-

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

Test configuration	Max. 1g SAR results										
	WLAN 2450	WLAN 5000	LTE 700	2-slot GPRS850	WCDMA 850	LTE 850	WCDMA 1700/2100	LTE 1700/2100	2-slot GPRS 1900	WCDMA 1900	LTE 1900
Body: Back facing phantom, Without Headset	0.019	0.048	0.082	0.602	0.317	0.300	0.707	0.491	0.443	0.496	0.448
Body: Back facing phantom, Headset WH-902	0.019	0.042	0.067	0.402	0.222	0.202	0.788	0.524	0.506	0.533	0.450
Body: Display facing phantom, Without Headset	0.011	0.032	0.228	0.754	0.465	0.316	0.684	0.453	0.433	0.466	0.443
Body: Display facing phantom, Headset WH-902	0.008	0.035	0.116	0.421	0.291	0.195	0.701	0.489	0.434	0.489	0.486

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
Body: Back facing phantom, Without Headset	0.101	0.621	0.336	0.319	0.726	0.510	0.462	0.515	0.467
Body: Back facing phantom, Headset WH-902	0.086	0.421	0.241	0.221	0.807	0.543	0.525	0.552	0.469
Body: Display facing phantom, Without Headset	0.239	0.765	0.476	0.327	0.695	0.464	0.444	0.477	0.454
Body: Display facing phantom, Headset WH-902	0.124	0.429	0.299	0.203	0.709	0.497	0.442	0.497	0.494
Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 5000	2-slot GPRS850 + WLAN 5000	WCDMA 850 + WLAN 5000	LTE 850 + WLAN 5000	WCDMA 1700/ 2100 + WLAN 5000	LTE 1700/ 2100 + WLAN 5000	2-slot GPRS 1900 + WLAN 5000	WCDMA 1900 + WLAN 5000	LTE 1900 + WLAN 5000
Body: Back facing phantom, Without Headset	0.130	0.650	0.365	0.348	0.755	0.539	0.491	0.544	0.496
Body: Back facing phantom, Headset WH-902	0.109	0.444	0.264	0.244	0.830	0.566	0.548	0.575	0.492
Body: Display facing phantom, Without Headset	0.260	0.786	0.497	0.348	0.716	0.485	0.465	0.498	0.475
Body: Display facing phantom, Headset WH-902	0.151	0.456	0.326	0.230	0.736	0.524	0.469	0.524	0.521

The following table gives a more accurate assessment of the SAR values for simultaneous transmission. These values have been calculated using the SPEAG Combined Multiband algorithm, which is based on area scans. It a) converts the 2D area scans into 3D volume scans by assuming frequency-dependent decay characteristics for the E-field, b) sums the SAR values for WLAN2450 or WLAN5000 and the cellular bands point-by-point and c) calculates the combined average SAR values.

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
Body: Back facing phantom, Without Headset	-	-	-	-	-	-	-	-	-
Body: Back facing phantom, Headset WH-208	-	-	-	-	0.806	0.529	0.521	0.543	-
Body: Display facing phantom, Without Headset	0.225	0.766	0.463	0.310	-	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	-	-	-	-	-	-	-	0.496
Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 5000	2-slot GPRS850 + WLAN 5000	WCDMA 850 + WLAN 5000	LTE 850 + WLAN 5000	WCDMA 1700/2100 + WLAN 5000	LTE 1700/2100 + WLAN 5000	2-slot GPRS 1900 + WLAN 5000	WCDMA 1900 + WLAN 5000	LTE 1900 + WLAN 5000
Body: Back facing phantom, Without Headset	-	-	-	-	-	-	-	-	-
Body: Back facing phantom, Headset WH-208	-	-	-	-	0.809	0.533	0.523	0.545	-
Body: Display facing phantom, Without Headset	0.250	0.778	0.477	0.321	-	-	-	-	-
Body: Display facing phantom, Headset WH-208	-	-	-	-	-	-	-	-	0.496

Some of the Combined SAR values in the above table are less than the maximum SAR values for the contributing cellular band. This is due to a) minimal overlap of the SAR distributions of the cellular band with WLAN2450 or WLAN5000 and b) uncertainties associated with the different methods of calculation. In these cases, the maximum SAR values given for the combined Modes in the Summary table in Section 1.2 are those for the individual cellular band.

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

Plots of the Measurement scans are given in Appendix B2.

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

LTE700 (Band17) Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 23780 709.0 MHz	Ch 23790 710.0 MHz	Ch 23800 711.0 MHz
QPSK	Conducted Average Power	21.10 dBm	21.02 dBm	21.13dBm
10MHz Ch BW 100% RB	Back facing phantom	-	0.052	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	21.21 dBm	21.25 dBm	21.40 dBm
10MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.055	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	22.14 dBm	21.97 dBm	22.07 dBm
10MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.068	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(LTE700 table continues)

QPSK	Conducted Average Power	22.33 dbm	22.08 dBm	22.58 dBm
10MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.092	-
	Display facing phantom	0.258	0.261	0.293
	Top edge facing phantom	-	0.024	-
	Bottom edge facing phantom	-	0.096	-
	Left edge facing phantom	-	0.075	-
	Right edge facing phantom	-	0.205	-
QPSK	Conducted Average Power	22.35 dBm	21.80 dBm	21.61 dBm
10MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.043	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	20.08 dBm	19.92 dBm	20.10 dBm
10MHz Ch BW 100% RB	Back facing phantom	-	0.045	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	19.98 dBm	20.12 dBm	20.28 dBm
10MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.050	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power	21.35 dBm	21.05 dBm	21.34 dBm
10MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.060	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	21.24 dBm	21.61 dBm	21.82 dBm
10MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.080	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	21.39 dBm	21.17 dBm	21.21 dBm
10MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.036	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

850MHz Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 128 824.2 MHz	Ch 190 836.6 MHz	Ch 251 848.8 MHz
2-slot GPRS	Conducted Average Power	31.32 dBm	31.34 dBm	31.57 dBm
	Back facing phantom	0.656	0.730	0.762
	Display facing phantom	-	0.694	-
	Top edge facing phantom	-	0.046	-
	Bottom edge facing phantom	-	0.401	-
	Left edge facing phantom	-	0.407	-
	Right edge facing phantom	-	0.697	-
Mode	Device orientation	Ch 4132 826.4 MHz	Ch 4175 835.0 MHz	Ch 4233 846.6 MHz
WCDMA	Maximum Output Power	23.93 dBm	23.48 dBm	23.94 dBm
	Back facing phantom	-	0.368	-
	Display facing phantom	0.497	0.397	0.433
	Top edge facing phantom	-	0.025	-
	Bottom edge facing phantom	-	0.233	-
	Left edge facing phantom	-	0.156	-
	Right edge facing phantom	-	0.314	-

LTE850 (Band5) Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 20450 829.0 MHz	Ch 20525 836.5 MHz	Ch 20600 844.0 MHz
QPSK	Conducted Average Power	-	20.56 dBm	-
10MHz Ch BW 100% RB	Back facing phantom	-	0.229	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	-	20.40 dBm	-
10MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.224	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	21.17 dBm	21.23 dBm	20.91 dBm
10MHz Ch BW 1RB 50% offset	Back facing phantom	0.268	0.441	0.278
	Display facing phantom	-	0.299	-
	Top edge facing phantom	-	0.022	-
	Bottom edge facing phantom	-	0.159	-
	Left edge facing phantom	-	0.120	-
	Right edge facing phantom	-	0.223	-

(Table continues)

(Table continues)

QPSK	Conducted Average Power	-	21.02 dBm	-
10MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.433	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	-	20.73 dBm	-
10MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.239	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	19.50 dBm	-
10MHz Ch BW 100% RB	Back facing phantom	-	0.187	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	19.29 dBm	-
10MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.185	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power	-	20.61 dBm	-
10MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.227	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	20.43 dBm	-
10MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.269	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	19.78 dBm	-
10MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.189	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

1700/2100 Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 1312 1712.4 MHz	Ch 1412 1732.4 MHz	Ch 1513 1752.6 MHz
WCDMA	Maximum Output Power	23.66 dBm	23.47 dBm	23.57dBm
	Back facing phantom	1.30	1.21	1.05
	Display facing phantom	1.22	1.01	0.954
	Top edge facing phantom	-	0.068	-
	Bottom edge facing phantom	-	0.372	-
	Left edge facing phantom	-	0.559	-
	Right edge facing phantom	-	0.189	-

LTE1700/2100 (Band4) Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 20050 1720.0 MHz	Ch 20175 1732.5 MHz	Ch 20300 1745.0 MHz
QPSK	Conducted Average Power	-	21.43 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	-	0.658	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	-	21.48 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.670	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

QPSK	Conducted Average Power	-	22.02 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.754	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	21.97 dBm	21.72 dBm	22.00 dBm
20MHz Ch BW 1RB 100% offset	Back facing phantom	0.770	0.787	0.714
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	22.48 dBm	22.23 dBm	21.93 dBm
20MHz Ch BW 1RB 0% offset	Back facing phantom	0.823	0.865	0.802
	Display facing phantom	-	0.731	-
	Top edge facing phantom	-	0.043	-
	Bottom edge facing phantom	-	0.270	-
	Left edge facing phantom	-	0.400	-
	Right edge facing phantom	-	0.151	-
16QAM	Conducted Average Power	-	20.44 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	-	0.568	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power	-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.573	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	21.58 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.664	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	21.17 dBm	-
20MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.611	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	21.37 dBm	-
20MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.689	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

1900MHz Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 512 1850.2 MHz	Ch 661 1880.0 MHz	Ch 810 1909.8 MHz
2-slot GPRS	Conducted Average Power	28.68 dBm	28.85 dBm	28.82 dBm
	Back facing phantom	0.682	0.908	0.712
	Display facing phantom	0.657	0.792	0.709
	Top edge facing phantom	-	0.033	-
	Bottom edge facing phantom	-	0.257	-
	Left edge facing phantom	-	0.713	-
	Right edge facing phantom	-	0.155	-
Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 9262 1852.4 MHz	Ch 9400 1880.0 MHz	Ch 9538 1907.6 MHz
WCDMA	Maximum Output Power	23.44 dBm	23.33 dBm	23.49 dBm
	Back facing phantom	1.09	1.01	0.916
	Display facing phantom	0.922	0.818	0.827
	Top edge facing phantom	-	0.044	-
	Bottom edge facing phantom	-	0.300	-
	Left edge facing phantom	-	0.771	-
	Right edge facing phantom	-	0.173	-

LTE1900 (Band2) Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 18700 1860.0 MHz	Ch 18900 1880.0 MHz	Ch 19100 1900.0 MHz
QPSK	Conducted Average Power	-	21.77 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	-	0.658	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	-	21.80 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.659	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	-	22.32 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.714	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

QPSK	Conducted Average Power	22.76 dBm	22.25 dBm	22.71 dBm
20MHz Ch BW 1RB 100% offset	Back facing phantom	0.844	0.794	0.806
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
QPSK	Conducted Average Power	22.67 dBm	22.53 dBm	22.41 dBm
20MHz Ch BW 1RB 0% offset	Back facing phantom	0.908	0.800	0.897
	Display facing phantom	-	0.786	-
	Top edge facing phantom	-	0.030	-
	Bottom edge facing phantom	-	0.285	-
	Left edge facing phantom	-	0.670	-
	Right edge facing phantom	-	0.141	-
16QAM	Conducted Average Power	-	20.61 dBm	-
20MHz Ch BW 100% RB	Back facing phantom	-	0.532	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	20.63 dBm	-
20MHz Ch BW 50% RB 50% offset	Back facing phantom	-	0.522	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

(Table continues)

(Table continues)

16QAM	Conducted Average Power	-	21.90 dBm	-
20MHz Ch BW 1RB 50% offset	Back facing phantom	-	0.665	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	21.84 dBm	-
20MHz Ch BW 1RB 100% offset	Back facing phantom	-	0.737	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-
16QAM	Conducted Average Power	-	21.82 dBm	-
20MHz Ch BW 1RB 0% offset	Back facing phantom	-	0.756	-
	Display facing phantom	-	-	-
	Top edge facing phantom	-	-	-
	Bottom edge facing phantom	-	-	-
	Left edge facing phantom	-	-	-
	Right edge facing phantom	-	-	-

2450MHz Wireless Router SAR results

Mode	Device orientation	SAR, averaged over 1g (W/kg)		
		Ch 1 2412.0 MHz	Ch 6 2437.0 MHz	Ch 11 2462.0 MHz
WLAN	Maximum Output Power	15.92 dBm	16.55 dBm	15.94 dBm
5.5 Mbps	Back facing phantom	-	0.040	-
	Display facing phantom	-	0.022	-
	Top edge facing phantom	-	0.015	-
	Bottom edge facing phantom	-	0.003	-
	Left edge facing phantom	0.040	0.080	0.032
	Right edge facing phantom	-	0.005	-

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

Test configuration	Max. 1g SAR results									
	WLAN 2450	LTE 700	2-slot GPRS850	WCDMA 850	LTE 850	WCDMA 1700/ 2100	LTE 1700/ 2100	2- slot GPRS 1900	WCDMA 1900	LTE 1900
WR: Back facing phantom	0.040	0.092	0.762	0.368	0.441	1.30	0.865	0.908	1.09	0.908
WR: Display facing phantom	0.022	0.293	0.694	0.497	0.299	1.22	0.731	0.792	0.922	0.786
WR: Top edge facing phantom	0.015	0.024	0.046	0.025	0.022	0.068	0.043	0.033	0.044	0.030
WR: Bottom edge facing phantom	0.003	0.096	0.401	0.233	0.159	0.372	0.270	0.257	0.300	0.285
WR: Left edge facing phantom	0.080	0.075	0.407	0.156	0.120	0.559	0.400	0.713	0.771	0.670
WR: Right edge facing phantom	0.005	0.205	0.697	0.314	0.223	0.189	0.151	0.155	0.173	0.141

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
WR: Back facing phantom	0.132	0.802	0.408	0.481	1.340	0.905	0.948	1.130	0.948
WR: Display facing phantom	0.315	0.716	0.519	0.321	1.242	0.753	0.814	0.944	0.808
WR: Top edge facing phantom	0.039	0.061	0.040	0.037	0.083	0.058	0.048	0.059	0.045
WR: Bottom edge facing phantom	0.099	0.404	0.236	0.162	0.375	0.273	0.260	0.303	0.288
WR: Left edge facing phantom	0.155	0.487	0.236	0.200	0.639	0.480	0.793	0.851	0.750
WR: Right edge facing phantom	0.210	0.702	0.319	0.228	0.194	0.156	0.160	0.178	0.146

The following table gives a more accurate assessment of the SAR values for simultaneous transmission. These values have been calculated using the SPEAG Combined Multiband algorithm, which is based on area scans. It a) converts the 2D area scans into 3D volume scans by assuming frequency-dependent decay characteristics for the E-field, b) sums the SAR values for WLAN2450 and the cellular bands point-by-point and c) calculates the combined average SAR values.

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

Test configuration	Max. 1g SAR results								
	LTE 700 + WLAN 2450	2-slot GPRS850 + 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
WR: Back facing phantom	-	0.767	-	0.408	1.33	0.878	0.947	1.10	0.912
WR: Display facing phantom	0.299	-	0.489	-	-	-	-	-	-
WR: Top edge facing phantom	-	-	-	-	-	-	-	-	-
WR: Bottom edge facing phantom	-	-	-	-	-	-	-	-	-
WR: Left edge facing phantom	-	-	-	-	-	-	-	-	-
WR: Right edge facing phantom	-	-	-	-	-	-	-	-	-

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

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

Plots of the Measurement scans are given in Appendix B3.

APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2012-06-21 09:52:33

Test Laboratory: TCC Nokia

Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 750$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 40.97$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.23 W/kg

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

Reference Value = 50.519 V/m

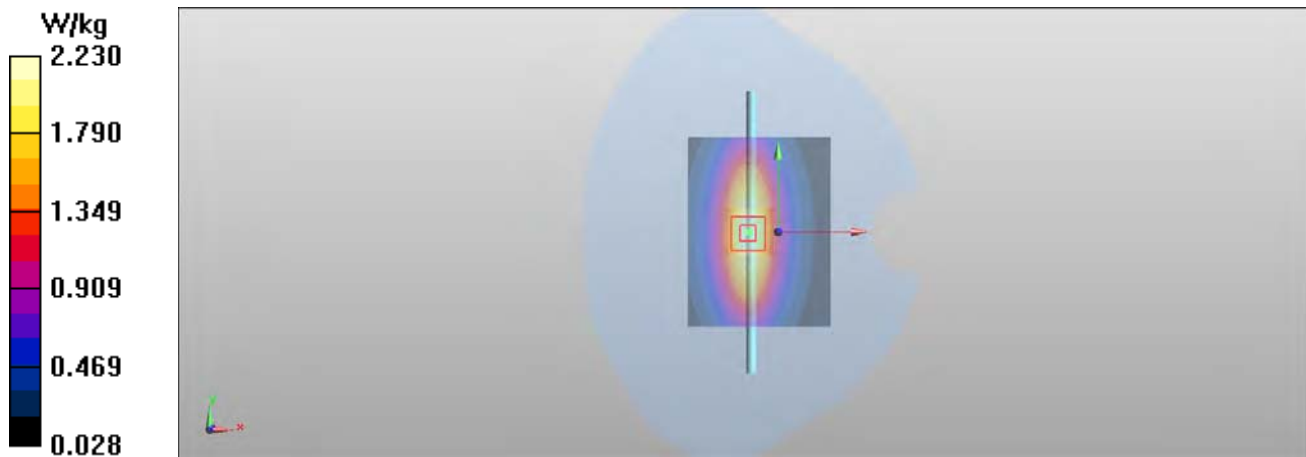
Peak SAR (extrapolated) = 3.105 mW/g

SAR(1 g) = 2.09 mW/g

SAR(10 g) = 1.37 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 2.26 W/kg



Date/Time: 2012-06-22 04:53:52

Test Laboratory: TCC Nokia

Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 750 MHz; σ = 0.909 mho/m; ϵ_r = 40.647; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.25 W/kg

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

Reference Value = 50.746 V/m

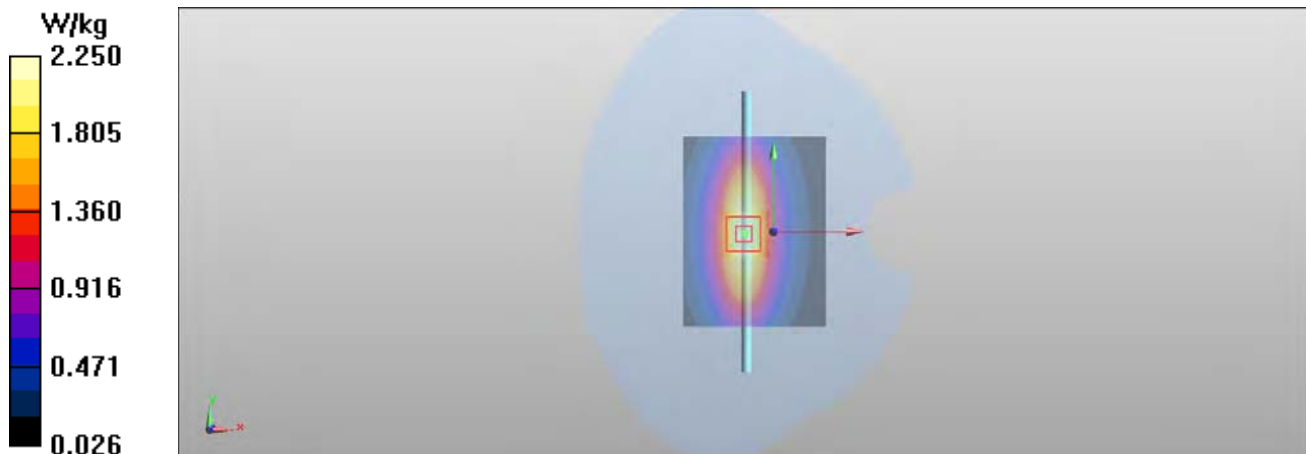
Peak SAR (extrapolated) = 3.106 mW/g

SAR(1 g) = 2.11 mW/g

SAR(10 g) = 1.39 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 2.27 W/kg



Date/Time: 2012-06-26 21:08:13

Test Laboratory: TCC Nokia

Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 750 MHz; σ = 0.915 mho/m; ϵ_r = 40.346; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.27 W/kg

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

Reference Value = 50.871 V/m

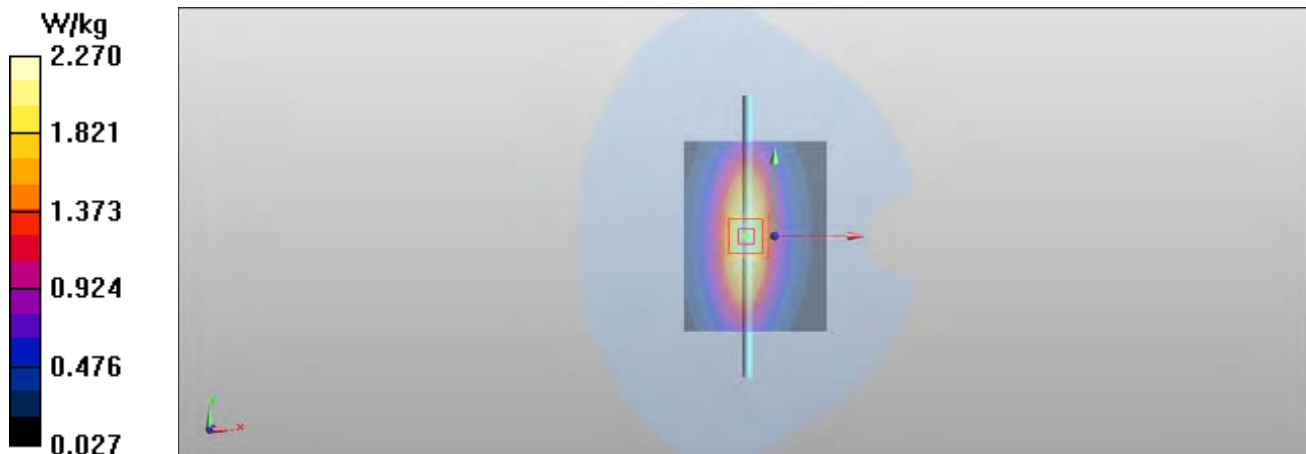
Peak SAR (extrapolated) = 3.164 mW/g

SAR(1 g) = 2.13 mW/g

SAR(10 g) = 1.39 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 2.30 W/kg



Date/Time: 2012-06-28 12:04:09

Test Laboratory: TCC Nokia

Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 750$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.728$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.20 W/kg

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

Reference Value = 50.894 V/m

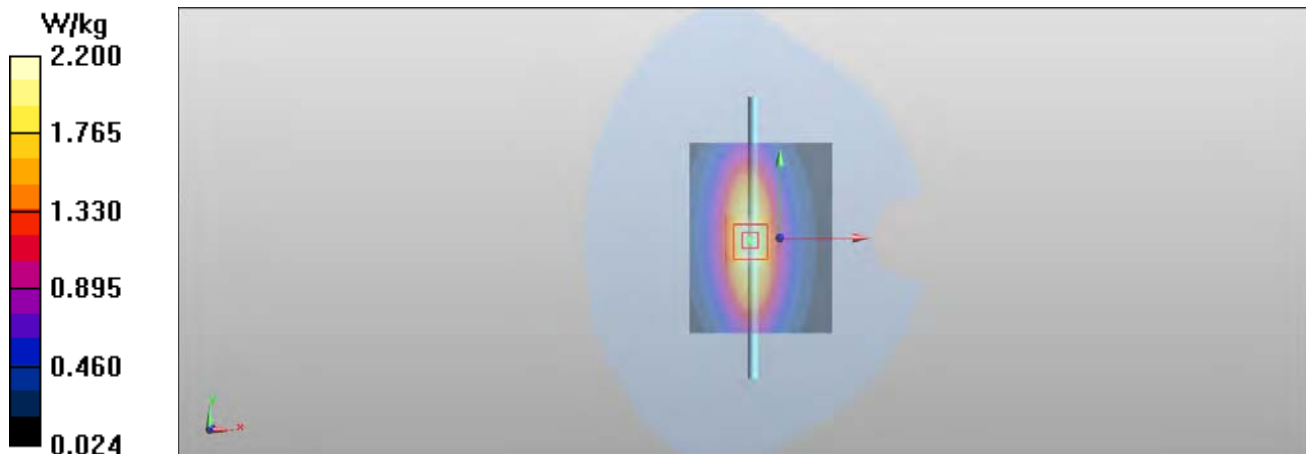
Peak SAR (extrapolated) = 3.072 mW/g

SAR(1 g) = 2.07 mW/g

SAR(10 g) = 1.35 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 2.23 W/kg



Date/Time: 2012-06-14 09:34:12

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 835 MHz; σ = 0.919 mho/m; ϵ_r = 40.485; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.71 W/kg

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

Reference Value = 55.855 V/m

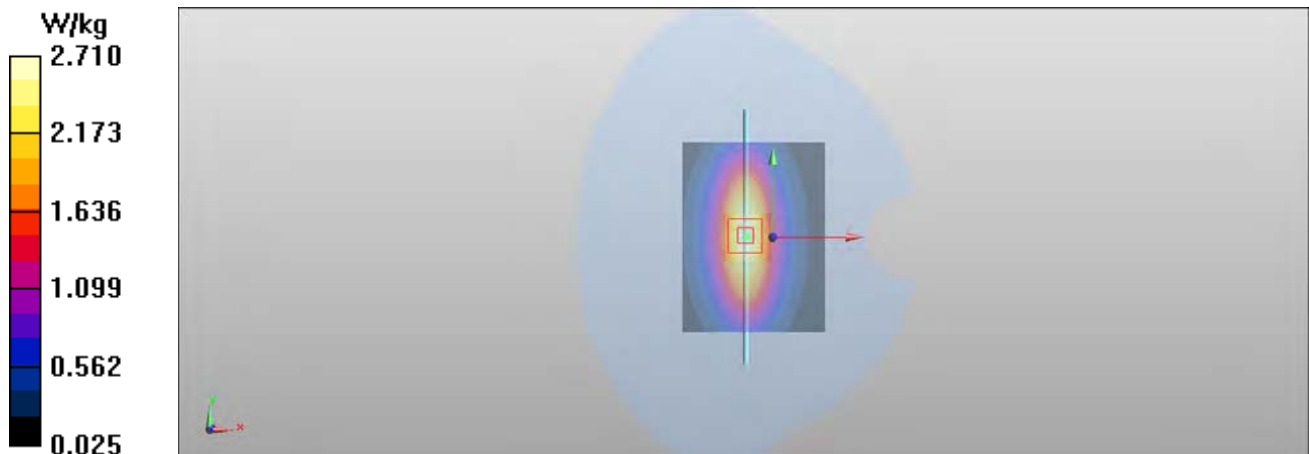
Peak SAR (extrapolated) = 3.670 mW/g

SAR(1 g) = 2.52 mW/g

SAR(10 g) = 1.65 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 2.72 W/kg



Date/Time: 2012-06-19 08:16:02

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used: $f = 835$ MHz; $\sigma = 0.914$ mho/m; $\epsilon_r = 40.628$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.74 W/kg

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

Reference Value = 55.842 V/m

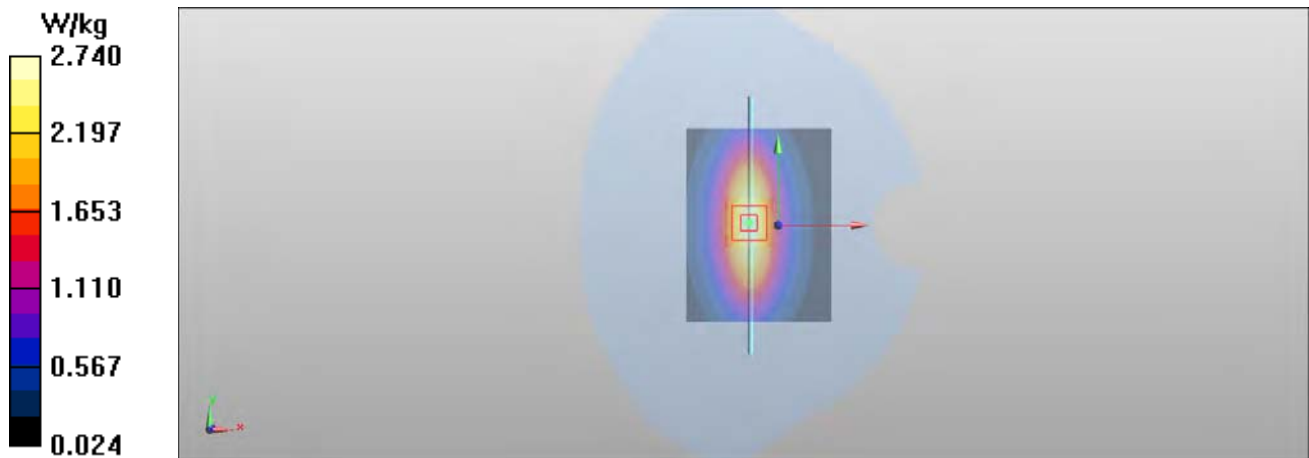
Peak SAR (extrapolated) = 3.654 mW/g

SAR(1 g) = 2.49 mW/g

SAR(10 g) = 1.64 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 2.70 W/kg



Date/Time: 2012-06-20 06:51:47

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.917 mho/m; ϵ_r = 40.709; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.61 W/kg

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

Reference Value = 54.919 V/m

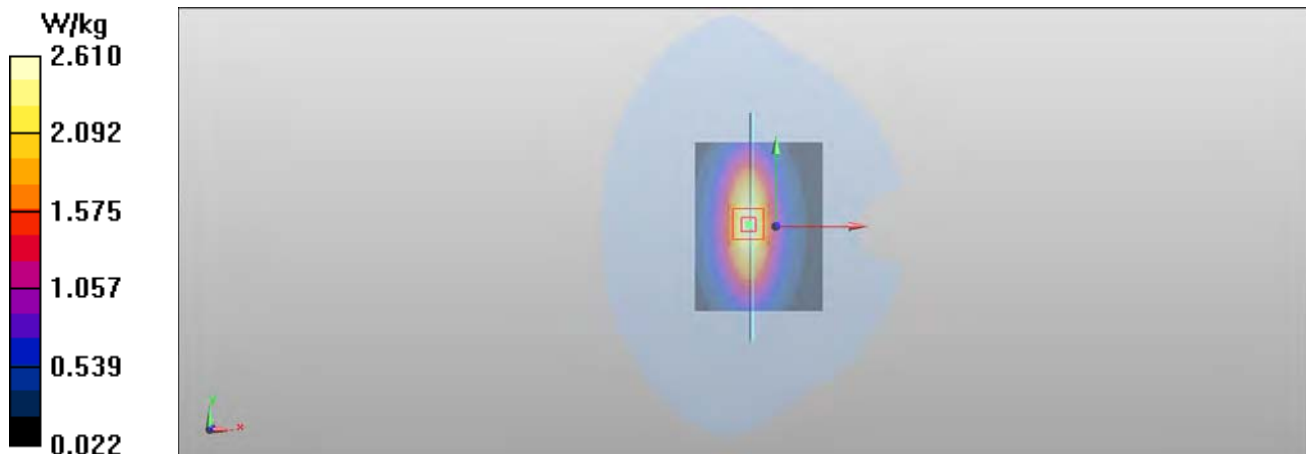
Peak SAR (extrapolated) = 3.568 mW/g

SAR(1 g) = 2.45 mW/g

SAR(10 g) = 1.61 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 2.64 W/kg



Date/Time: 2012-06-21 06:39:33

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.899 mho/m; ϵ_r = 40.072; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.60 W/kg

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

Reference Value = 55.150 V/m

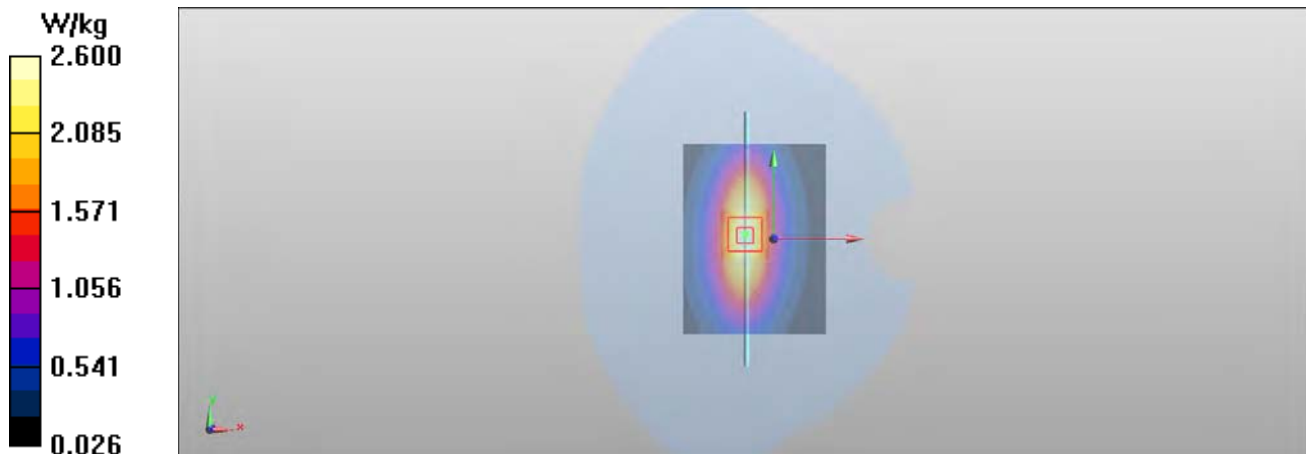
Peak SAR (extrapolated) = 3.527 mW/g

SAR(1 g) = 2.41 mW/g

SAR(10 g) = 1.58 mW/g

Power Drift = -0.09 dB

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



Date/Time: 2012-06-23 10:53:02

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used: f = 835 MHz; σ = 0.929 mho/m; ϵ_r = 40.432; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.70 W/kg

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

Reference Value = 55.262 V/m

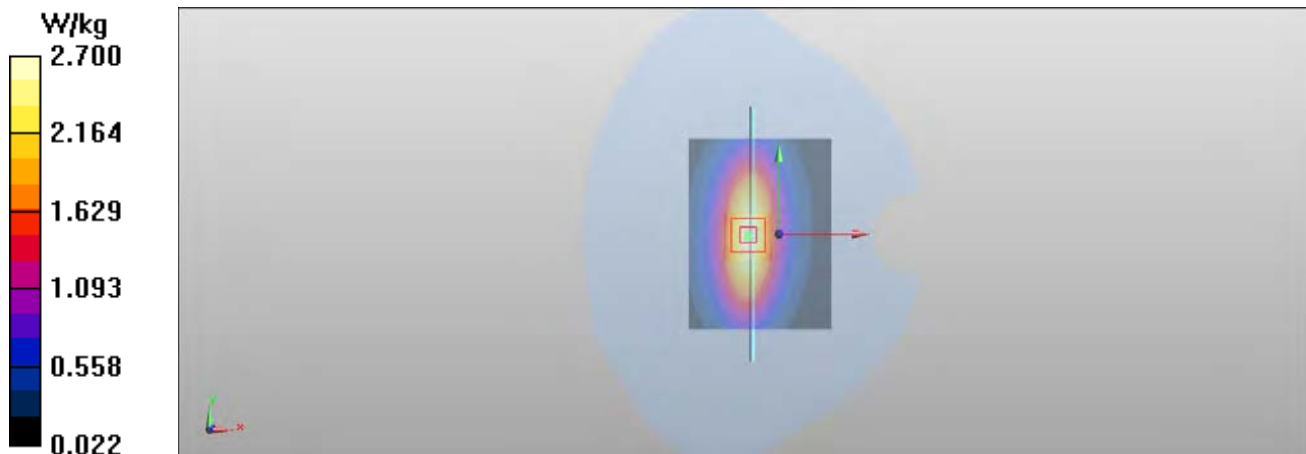
Peak SAR (extrapolated) = 3.679 mW/g

SAR(1 g) = 2.52 mW/g

SAR(10 g) = 1.65 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 2.72 W/kg



Date/Time: 2012-06-13 07:22:43

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used: f = 1800 MHz; σ = 1.382 mho/m; ϵ_r = 38.986; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 10.6 W/kg

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

Reference Value = 84.549 V/m

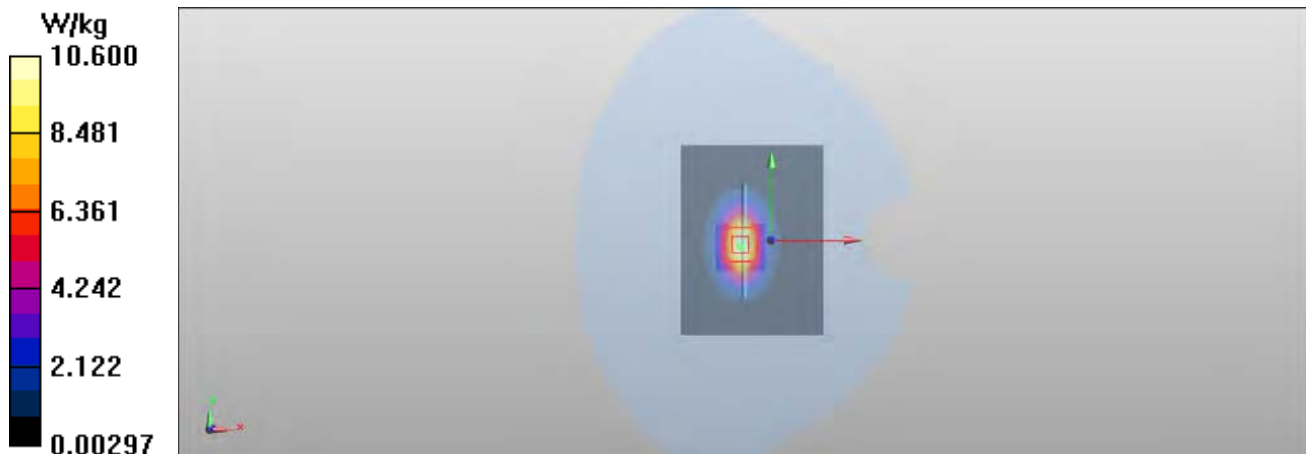
Peak SAR (extrapolated) = 16.309 mW/g

SAR(1 g) = 8.85 mW/g

SAR(10 g) = 4.64 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 9.92 W/kg



Date/Time: 2012-06-14 06:34:58

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used: f = 1800 MHz; σ = 1.385 mho/m; ϵ_r = 38.903; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

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

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

Reference Value = 83.648 V/m

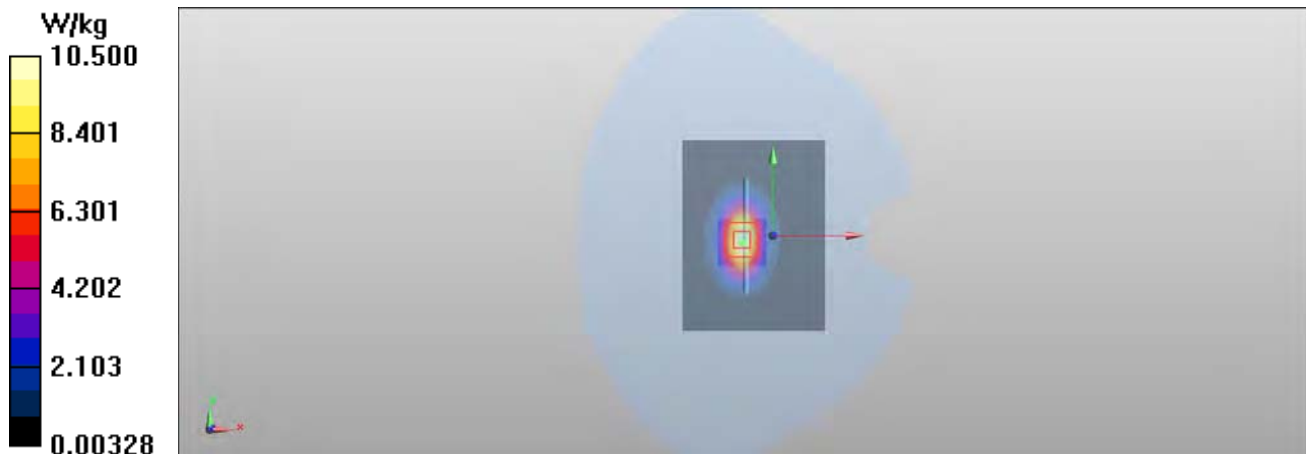
Peak SAR (extrapolated) = 16.117 mW/g

SAR(1 g) = 8.74 mW/g

SAR(10 g) = 4.57 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 9.84 W/kg



Date/Time: 2012-06-15 07:29:26

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used: f = 1800 MHz; σ = 1.378 mho/m; ϵ_r = 38.47; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 10.4 W/kg

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

Reference Value = 85.639 V/m

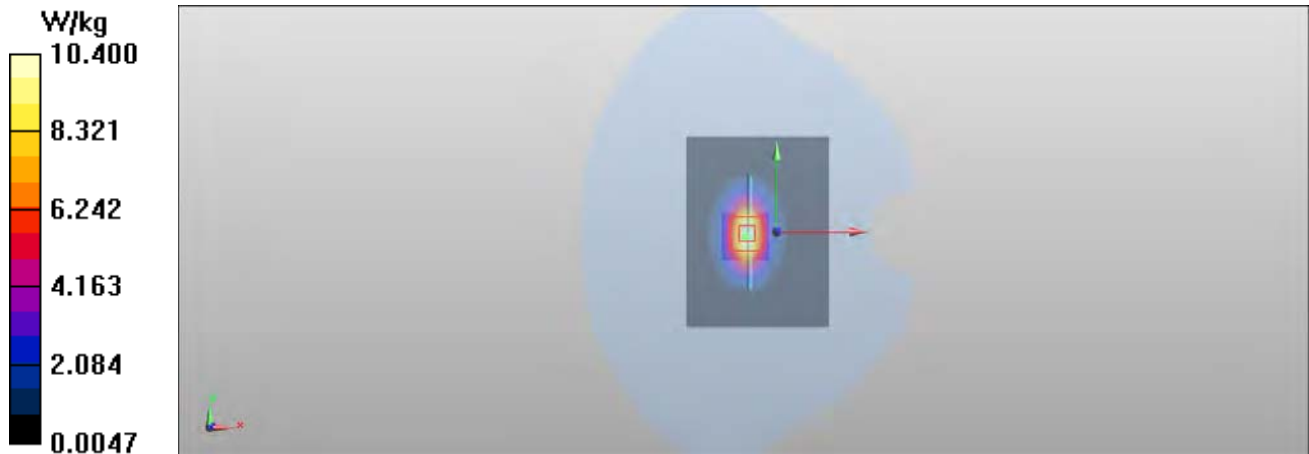
Peak SAR (extrapolated) = 16.330 mW/g

SAR(1 g) = 8.85 mW/g

SAR(10 g) = 4.61 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 9.93 W/kg



Date/Time: 2012-08-15 08:29:53

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used: f = 1800 MHz; $\sigma = 1.395$ mho/m; $\epsilon_r = 38.871$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 10.7 W/kg

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

Reference Value = 83.376 V/m

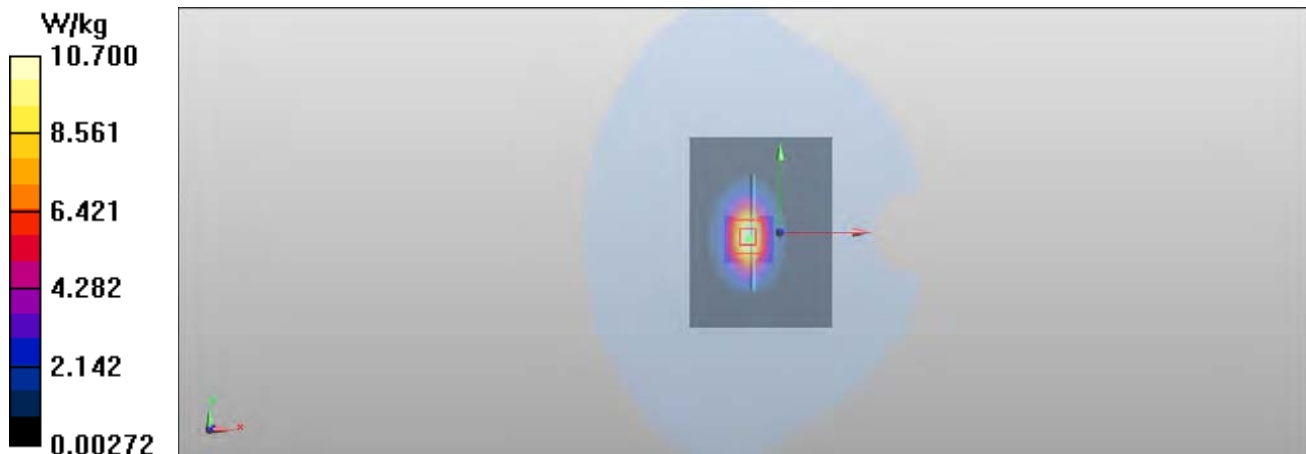
Peak SAR (extrapolated) = 16.702 mW/g

SAR(1 g) = 9.02 mW/g

SAR(10 g) = 4.71 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 10.1 W/kg



Date/Time: 2012-06-12 14:21:56

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.426$ mho/m; $\epsilon_r = 39.309$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 12.1 W/kg

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

Reference Value = 88.610 V/m

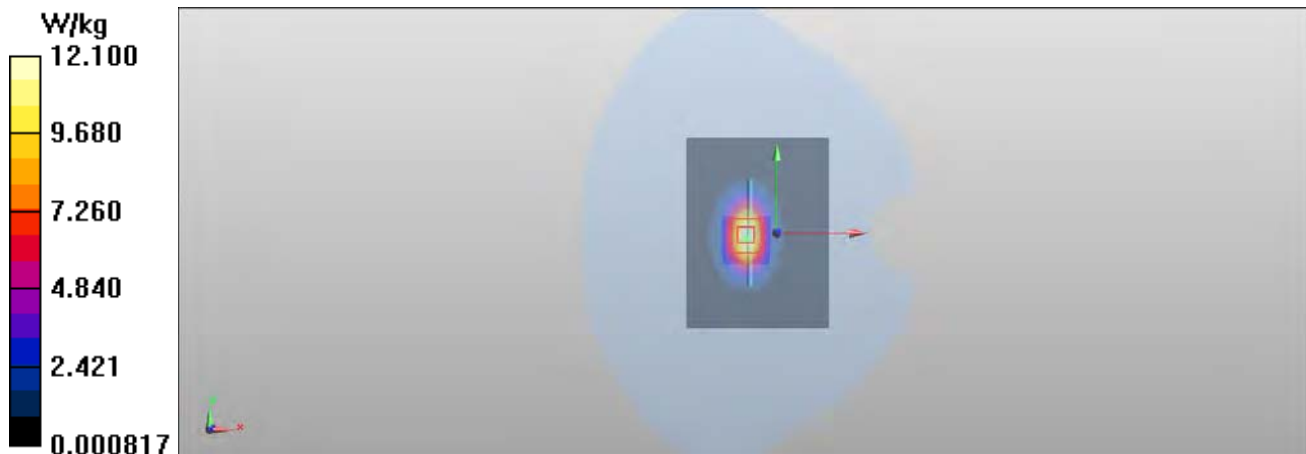
Peak SAR (extrapolated) = 19.024 mW/g

SAR(1 g) = 10.2 mW/g

SAR(10 g) = 5.3 mW/g

Power Drift = -0.07 dB

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



Date/Time: 2012-06-13 07:35:05

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.404$ mho/m; $\epsilon_r = 39.584$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 11.9 W/kg

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

Reference Value = 88.218 V/m

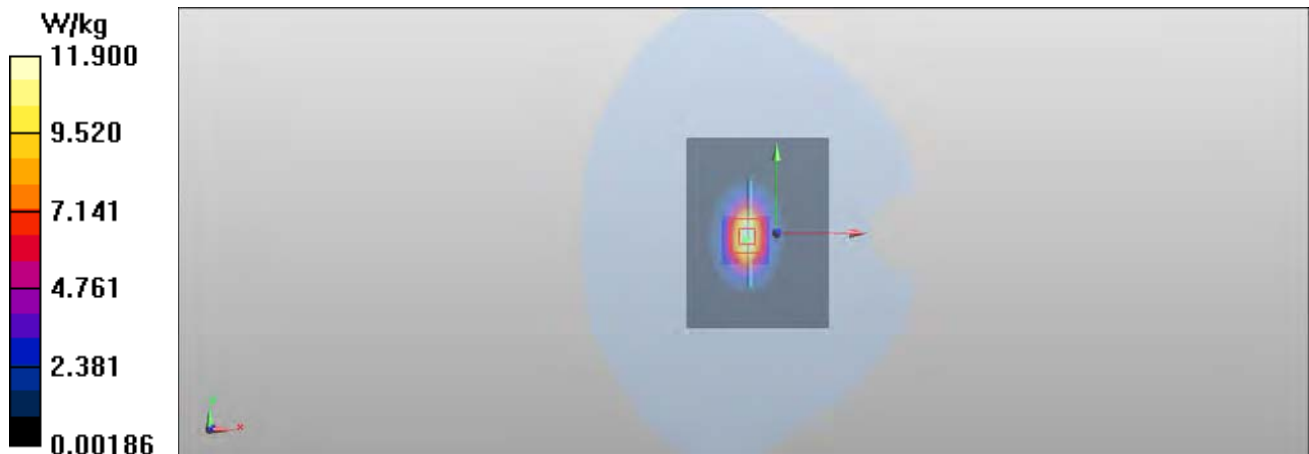
Peak SAR (extrapolated) = 18.695 mW/g

SAR(1 g) = 10 mW/g

SAR(10 g) = 5.21 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 11.2 W/kg



Date/Time: 2012-06-15 09:16:27

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.405$ mho/m; $\epsilon_r = 38.909$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 11.4 W/kg

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

Reference Value = 79.437 V/m

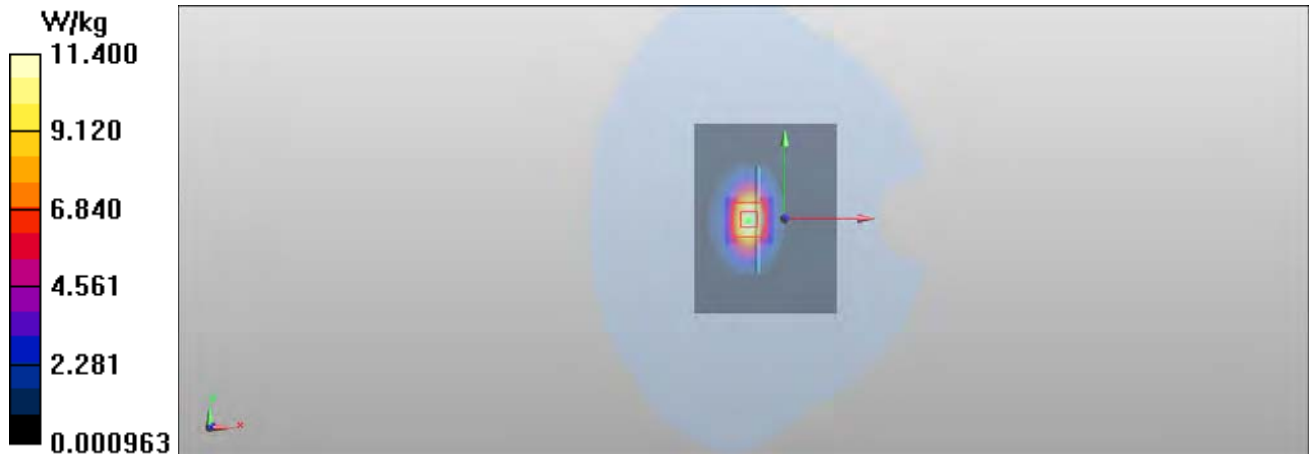
Peak SAR (extrapolated) = 18.451 mW/g

SAR(1 g) = 9.92 mW/g

SAR(10 g) = 5.17 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 11.2 W/kg



Date/Time: 2012-06-16 07:12:41

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 = 1.387 mho/m; ϵ_r = 39.01; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Reference Value = 86.328 V/m

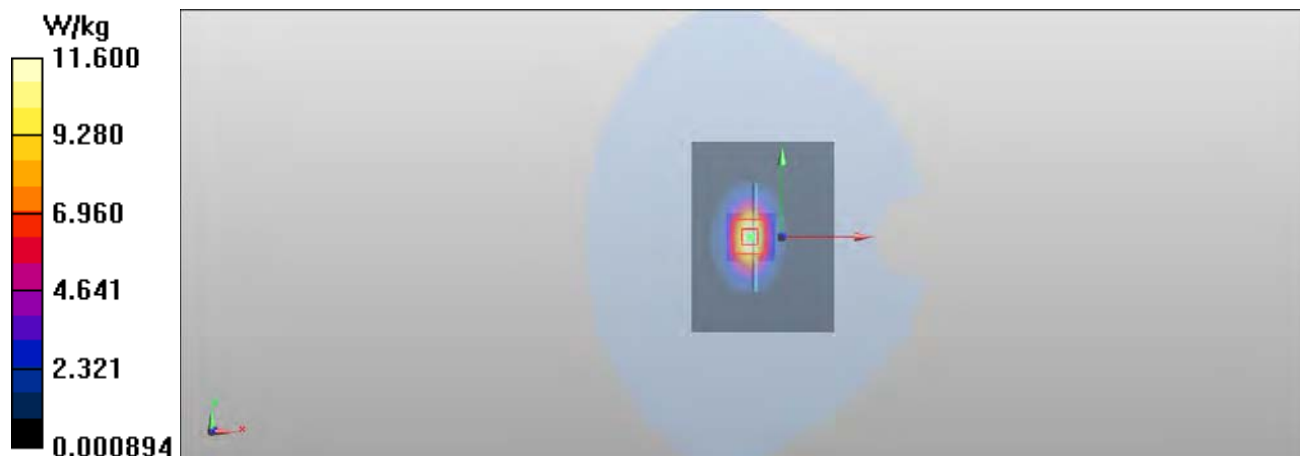
Peak SAR (extrapolated) = 18.516 mW/g

SAR(1 g) = 9.96 mW/g

SAR(10 g) = 5.2 mW/g

Power Drift = 0.03 dB

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



Date/Time: 2012-06-18 08:38:31

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.404$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 11.4 W/kg

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

Reference Value = 80.331 V/m

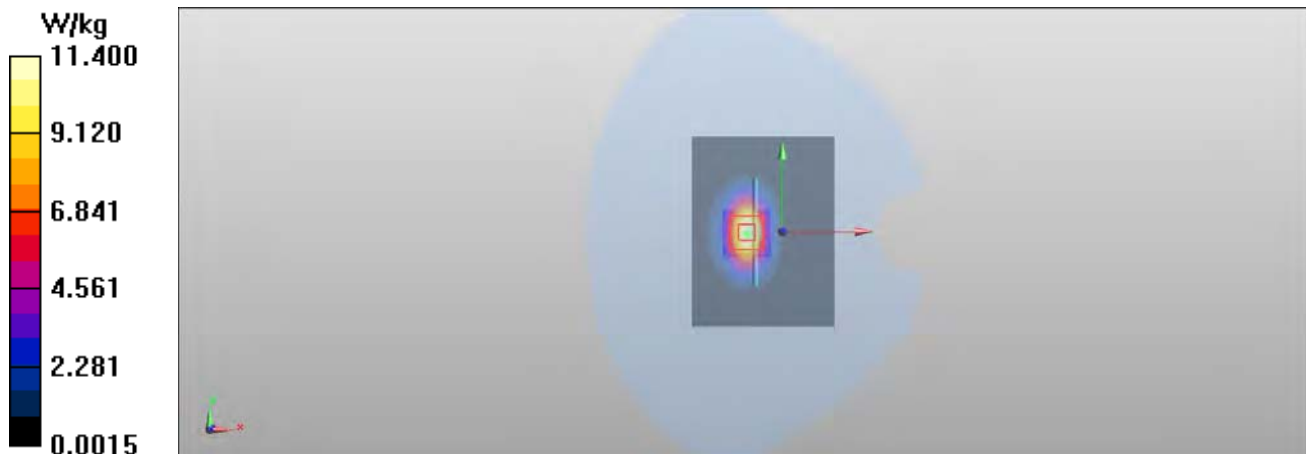
Peak SAR (extrapolated) = 18.568 mW/g

SAR(1 g) = 9.95 mW/g

SAR(10 g) = 5.2 mW/g

Power Drift = 0.10 dB

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



Date/Time: 2012-06-19 06:29:59

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= 21.3 C

Medium parameters used: f = 1900 MHz; σ = 1.399 mho/m; ϵ_r = 39.202; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Reference Value = 81.830 V/m

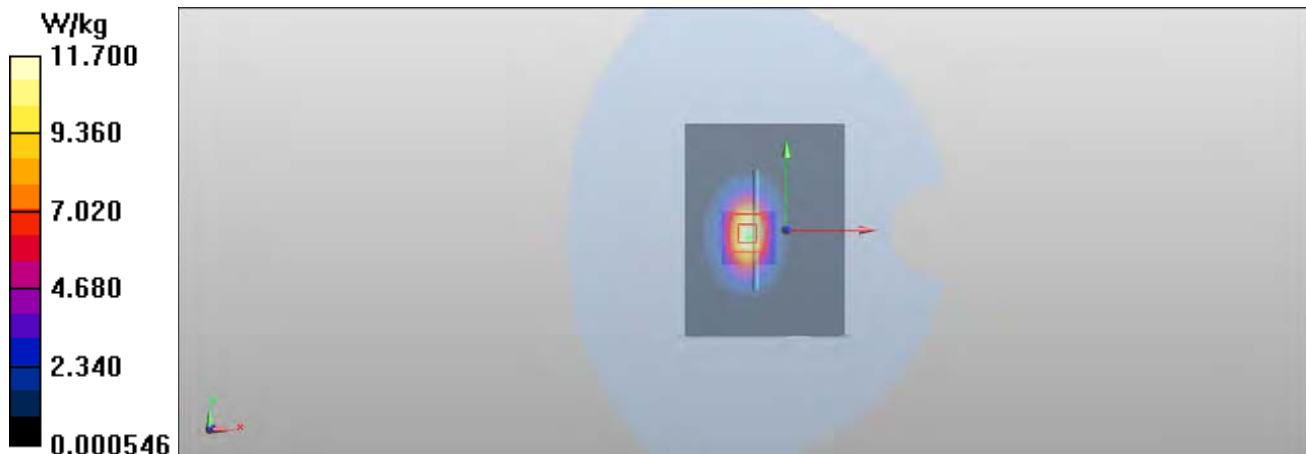
Peak SAR (extrapolated) = 18.363 mW/g

SAR(1 g) = 9.91 mW/g

SAR(10 g) = 5.18 mW/g

Power Drift = 0.09 dB

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



Date/Time: 2012-06-21 15:32:53

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= 20.5 C

Medium parameters used: f = 2450 MHz; $\sigma = 1.769$ mho/m; $\epsilon_r = 38.142$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 109.9 V/m

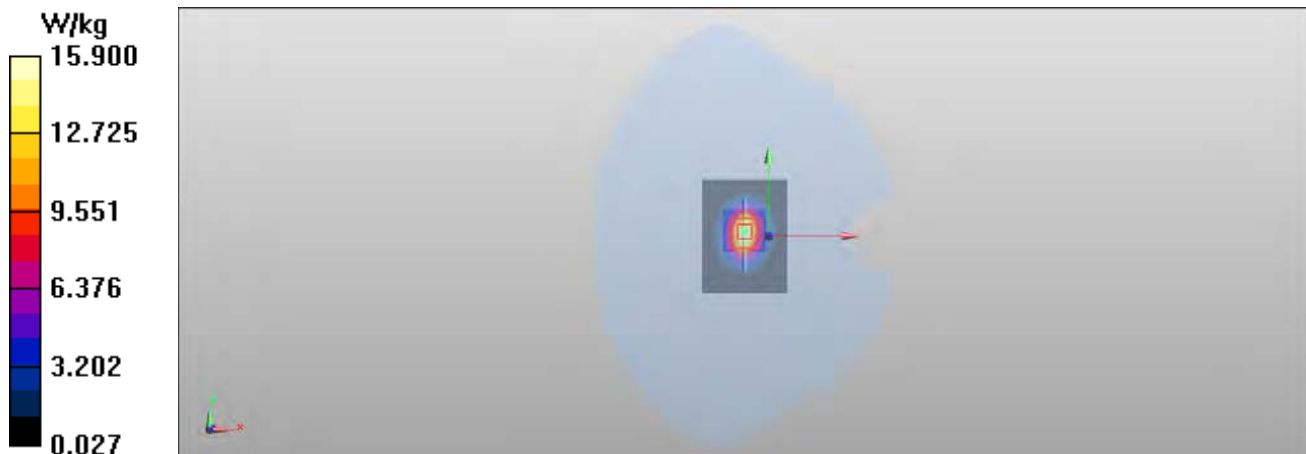
Peak SAR (extrapolated) = 28.338 mW/g

SAR(1 g) = 13.4 mW/g

SAR(10 g) = 6.17 mW/g

Power Drift = -0.18 dB

Maximum value of SAR (measured) = 15.4 W/kg



Date/Time: 2012-06-22 03:48:10

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:729

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.696$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 109.4 V/m

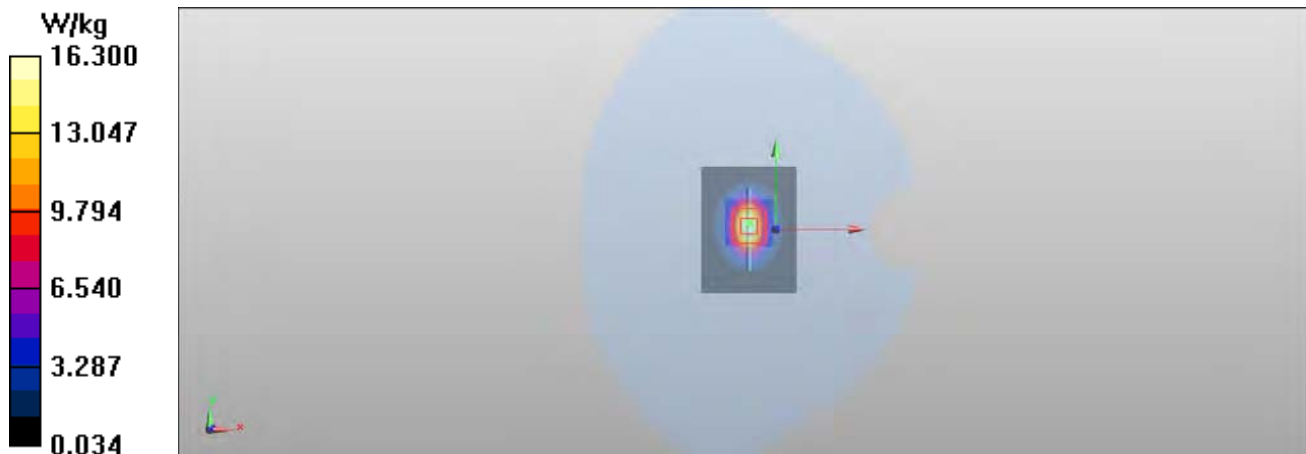
Peak SAR (extrapolated) = 29.321 mW/g

SAR(1 g) = 13.9 mW/g

SAR(10 g) = 6.4 mW/g

Power Drift = -0.08 dB

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



Date/Time: 2012-06-21 07:44:18

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.468$ mho/m; $\epsilon_r = 34.557$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, 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=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.815 V/m

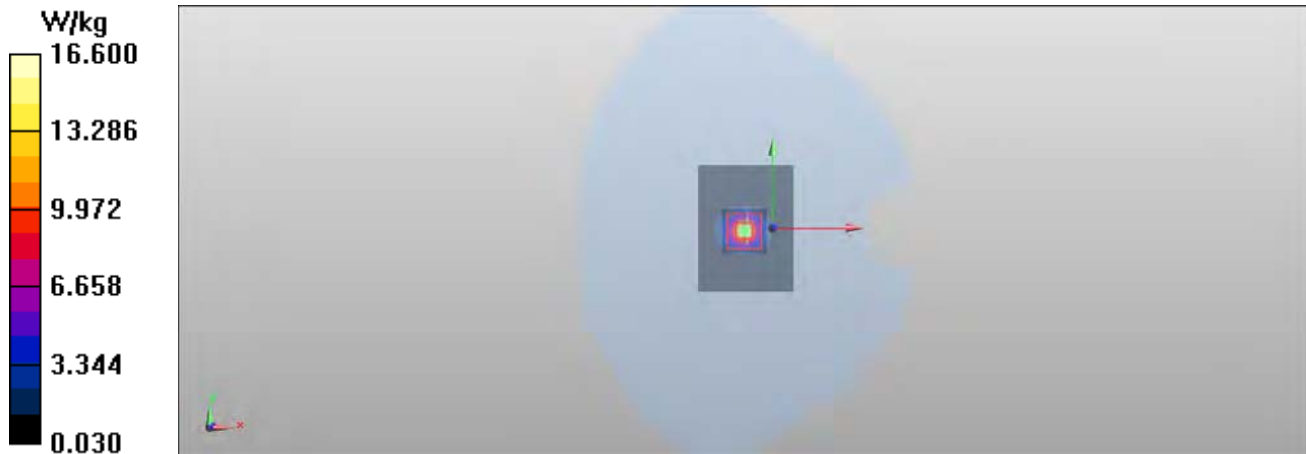
Peak SAR (extrapolated) = 30.476 mW/g

SAR(1 g) = 7.83 mW/g

SAR(10 g) = 2.23 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 14.9 W/kg



Date/Time: 2012-06-22 05:35:53

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.559$ mho/m; $\epsilon_r = 35.296$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 65.977 V/m

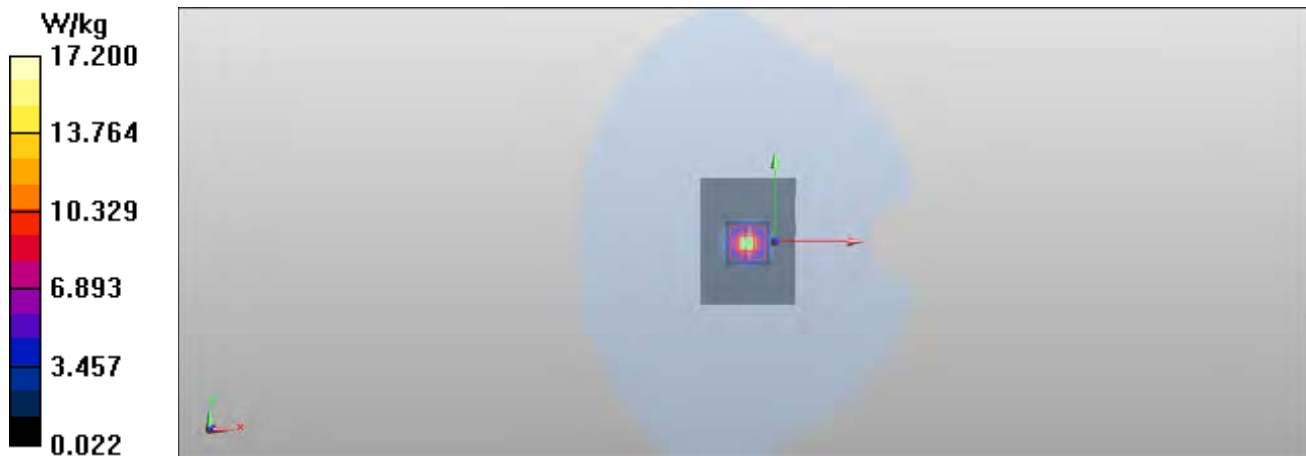
Peak SAR (extrapolated) = 31.903 mW/g

SAR(1 g) = 8.14 mW/g

SAR(10 g) = 2.32 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 15.6 W/kg



Date/Time: 2012-06-22 22:00:59

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5500

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5500; Medium Notes: 21.0 C

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.002$ mho/m; $\epsilon_r = 36.202$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.6, 4.6, 4.6); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.3 W/kg

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.958 V/m

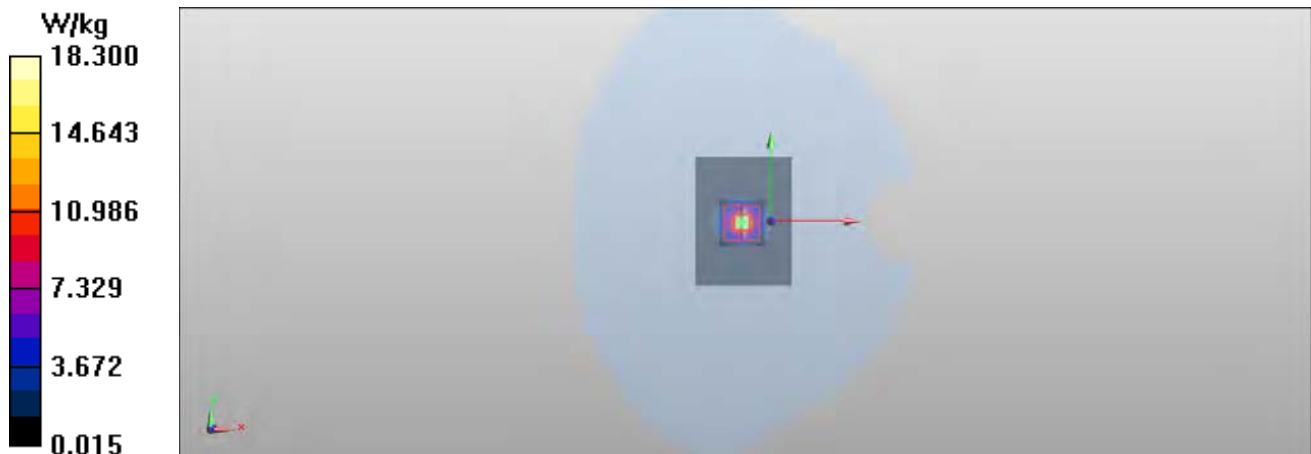
Peak SAR (extrapolated) = 36.512 mW/g

SAR(1 g) = 8.61 mW/g

SAR(10 g) = 2.4 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 16.7 W/kg



Date/Time: 2012-06-23 22:34:45

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5500

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: HSL5500-5800; Medium Notes: 21.0 C

Medium parameters used: $f = 5500$ MHz; $\sigma = 4.795$ mho/m; $\epsilon_r = 34.158$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.6, 4.6, 4.6); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.975 V/m

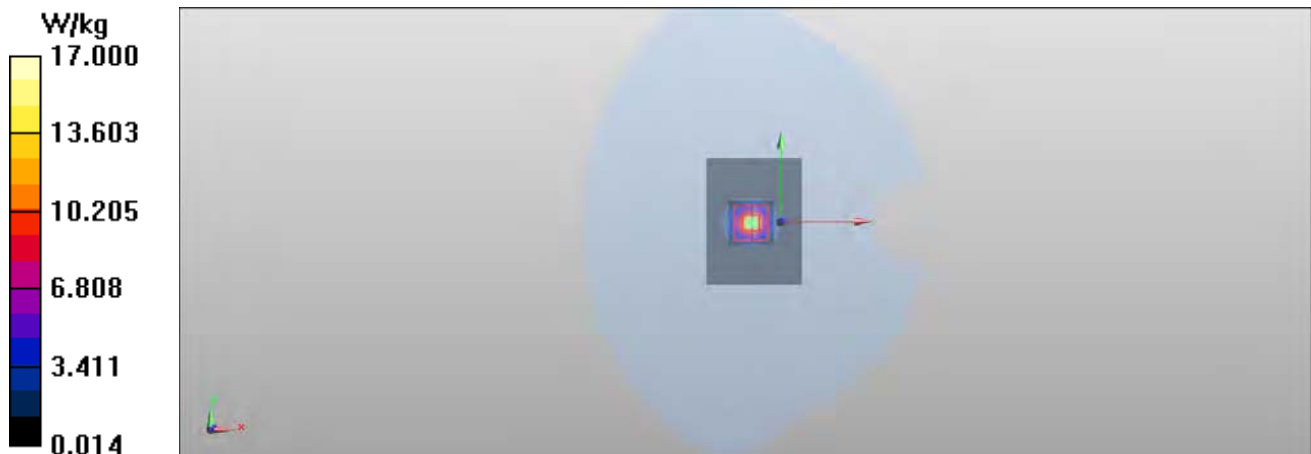
Peak SAR (extrapolated) = 34.249 mW/g

SAR(1 g) = 8.18 mW/g

SAR(10 g) = 2.28 mW/g

Power Drift = 0.24 dB

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



Date/Time: 2012-06-24 01:51:42

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: HSL5500-5800; Medium Notes: 21.0 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.094$ mho/m; $\epsilon_r = 33.741$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.14, 4.14, 4.14); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, 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=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.371 V/m

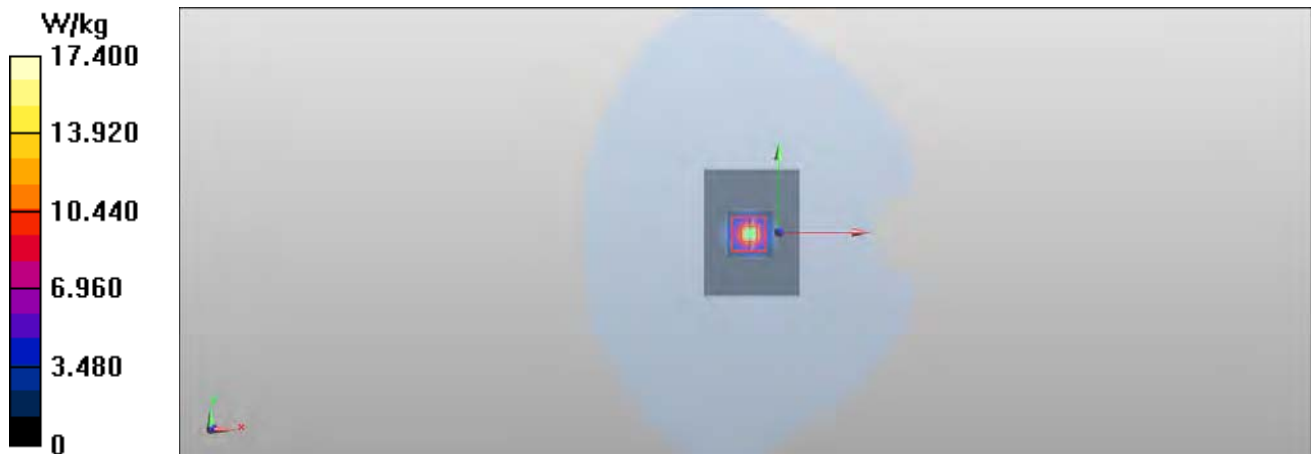
Peak SAR (extrapolated) = 36.033 mW/g

SAR(1 g) = 8.47 mW/g

SAR(10 g) = 2.37 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 16.8 W/kg



Date/Time: 2012-06-25 08:28:35

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: HSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.284$ mho/m; $\epsilon_r = 35.307$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.14, 4.14, 4.14); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.7 W/kg

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 62.899 V/m

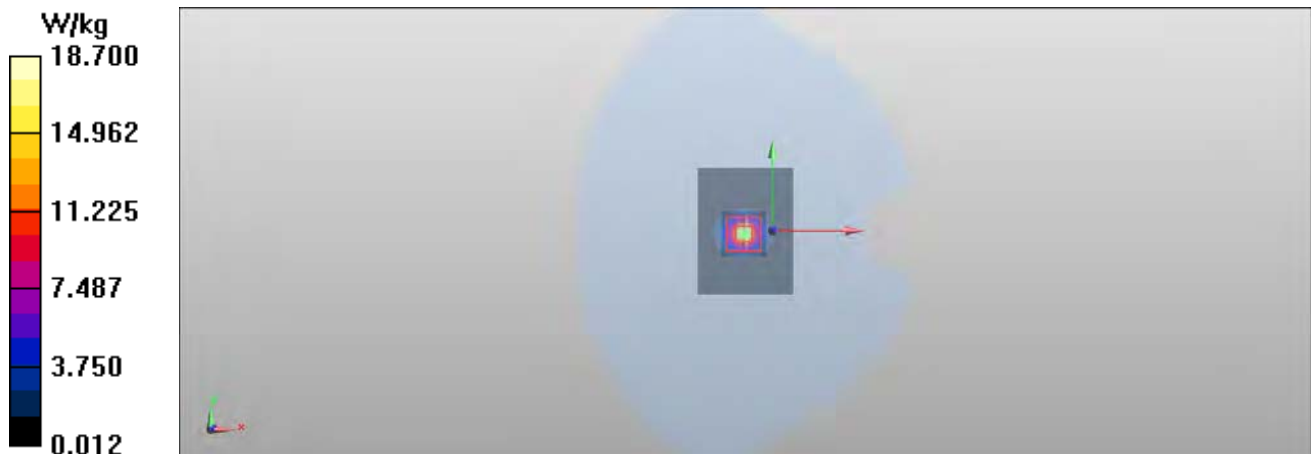
Peak SAR (extrapolated) = 36.389 mW/g

SAR(1 g) = 8.71 mW/g

SAR(10 g) = 2.44 mW/g

Power Drift = 0.14 dB

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



SAR Report

Appendix A for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-24 06:15:09

Test Laboratory: TCC Nokia

Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 21.1 C

Medium parameters used: f = 750 MHz; σ = 0.963 mho/m; ϵ_r = 54.574; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.27 W/kg

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

Reference Value = 49.442 V/m

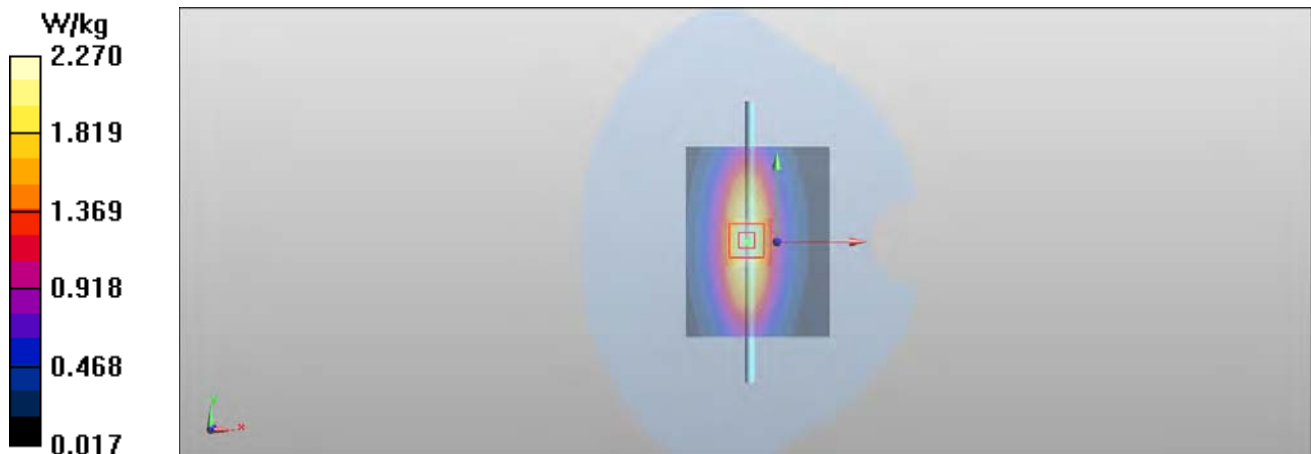
Peak SAR (extrapolated) = 3.117 mW/g

SAR(1 g) = 2.14 mW/g

SAR(10 g) = 1.42 mW/g

Power Drift = 0.05 dB

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



Date/Time: 2012-06-25 06:57:09

Test Laboratory: TCC Nokia
Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 750 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.246$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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 = 49.024 V/m

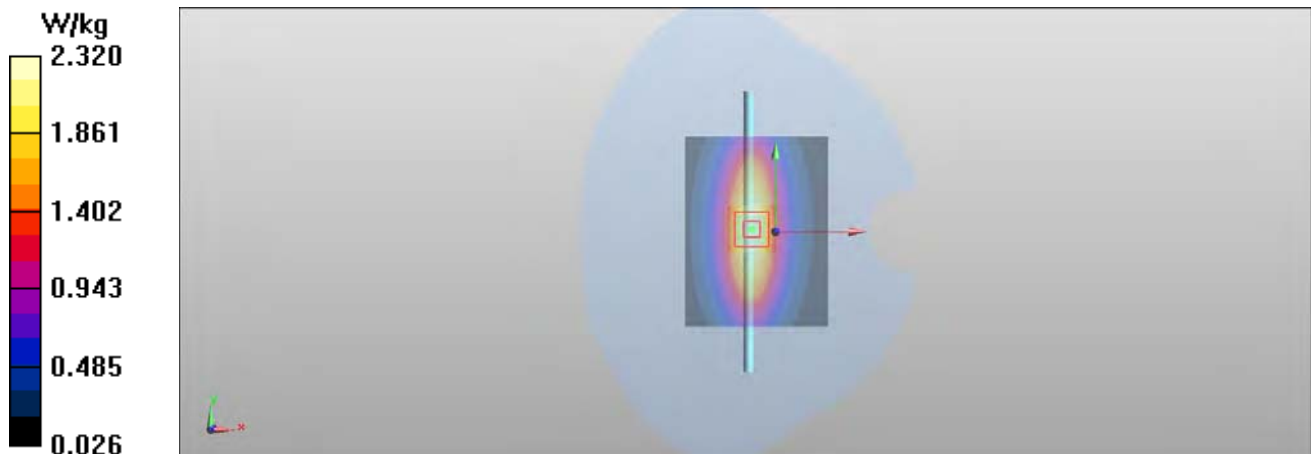
Peak SAR (extrapolated) = 3.140 mW/g

SAR(1 g) = 2.16 mW/g

SAR(10 g) = 1.43 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 2.34 W/kg



Date/Time: 2012-06-26 06:47:51

Test Laboratory: TCC Nokia
Type: D750V3; Serial: D750V3 - SN:1034

Communication System: CW750

Frequency: 750 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 750 MHz; $\sigma = 0.997$ mho/m; $\epsilon_r = 54.053$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.35 W/kg

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

Reference Value = 49.522 V/m

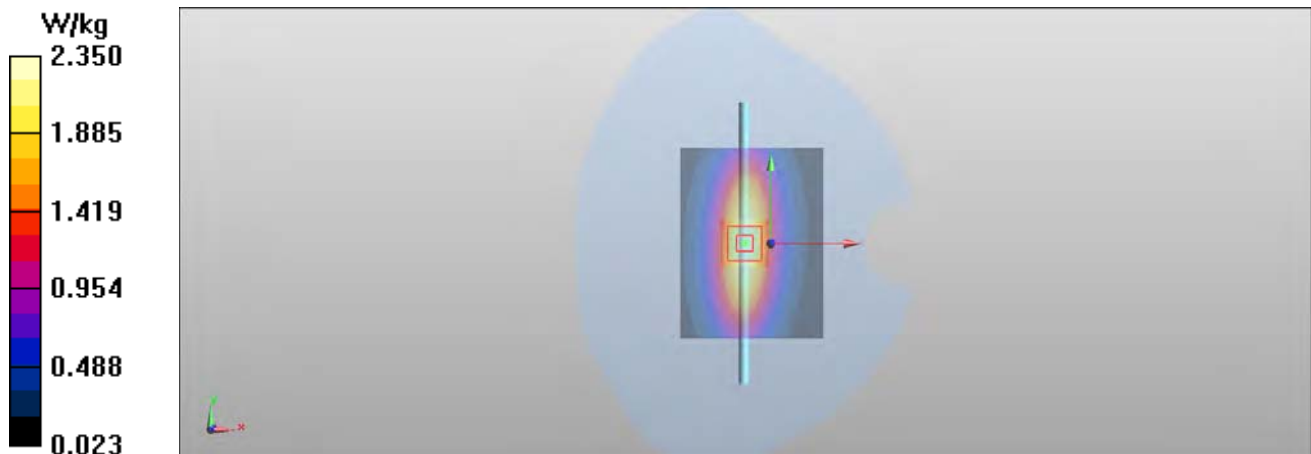
Peak SAR (extrapolated) = 3.194 mW/g

SAR(1 g) = 2.2 mW/g

SAR(10 g) = 1.45 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 2.37 W/kg



Date/Time: 2012-06-14 18:35:23

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 835 MHz; σ = 0.998 mho/m; ϵ_r = 53.789; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.69 W/kg

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

Reference Value = 52.557 V/m

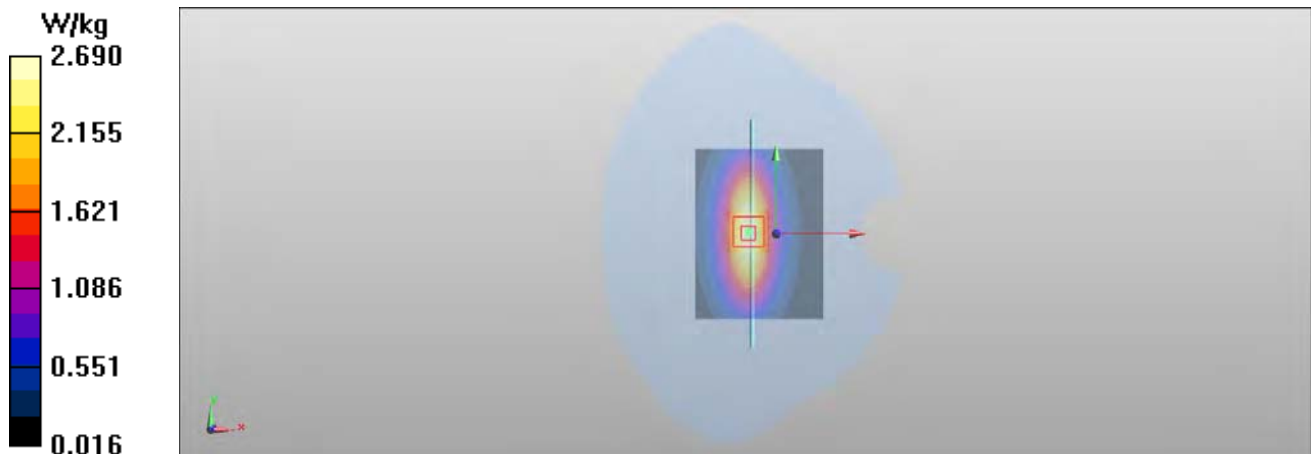
Peak SAR (extrapolated) = 3.616 mW/g

SAR(1 g) = 2.51 mW/g

SAR(10 g) = 1.66 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 2.73 W/kg



Date/Time: 2012-06-16 09:50:58

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 835 MHz; σ = 0.987 mho/m; ϵ_r = 53.55; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 2.64 W/kg

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

Reference Value = 51.541 V/m

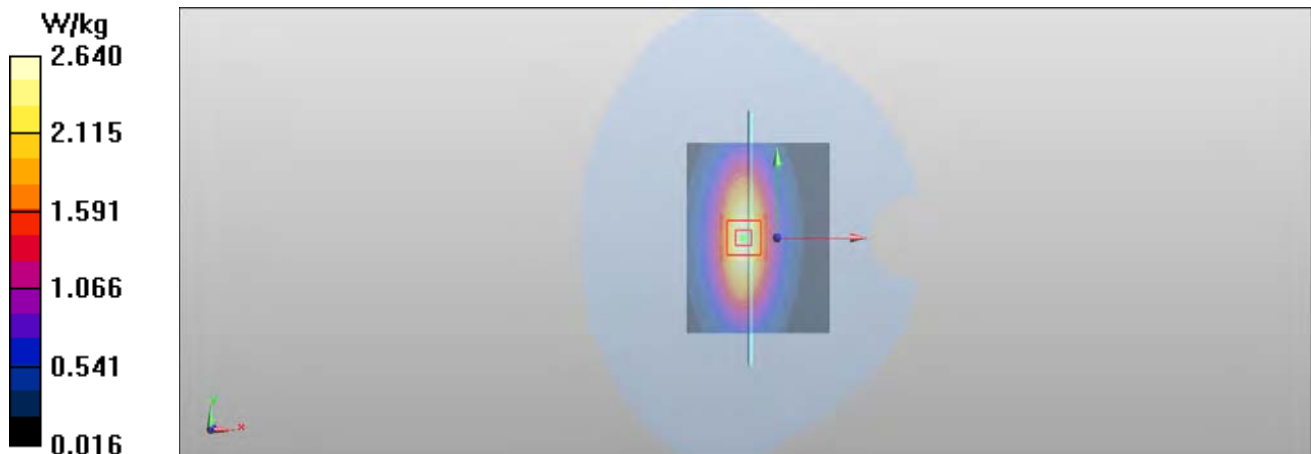
Peak SAR (extrapolated) = 3.526 mW/g

SAR(1 g) = 2.46 mW/g

SAR(10 g) = 1.63 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 2.66 W/kg



Date/Time: 2012-06-22 00:48:31

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

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

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

Reference Value = 52.641 V/m

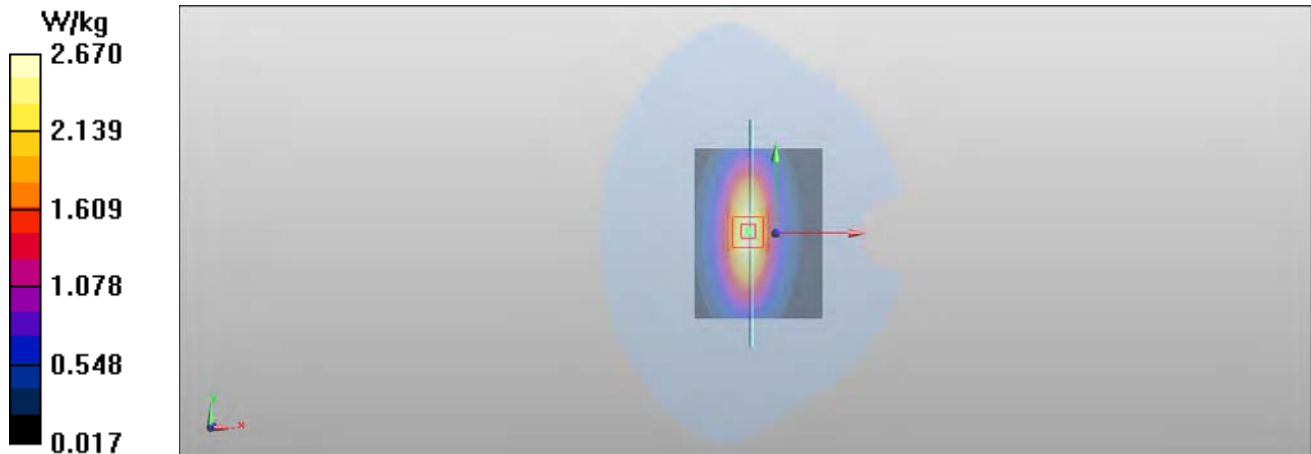
Peak SAR (extrapolated) = 3.553 mW/g

SAR(1 g) = 2.49 mW/g

SAR(10 g) = 1.65 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 2.69 W/kg



Date/Time: 2012-06-24 07:14:14

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used: f = 835 MHz; σ = 0.991 mho/m; ϵ_r = 54.131; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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 = 52.720 V/m

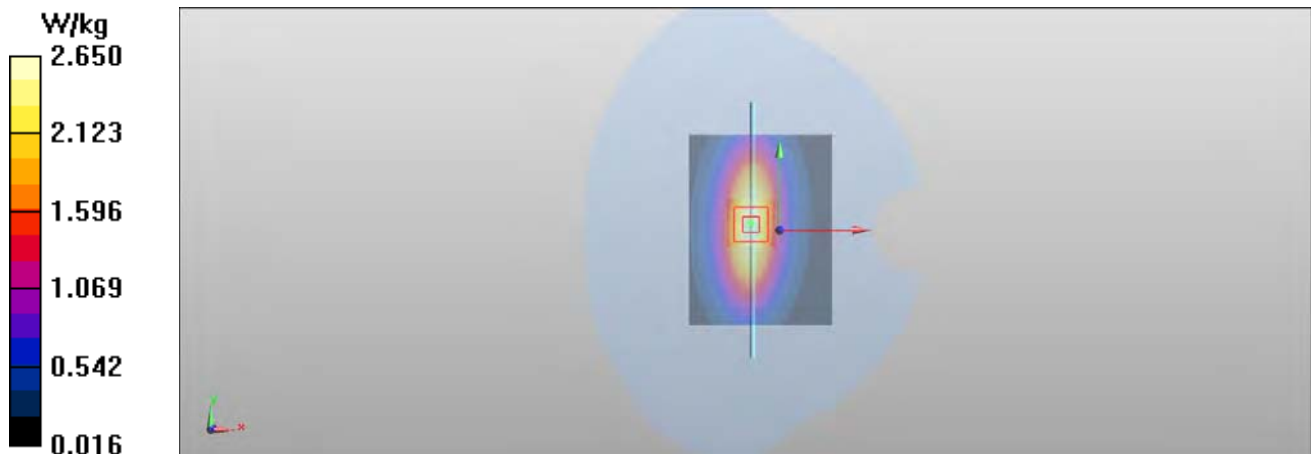
Peak SAR (extrapolated) = 3.520 mW/g

SAR(1 g) = 2.47 mW/g

SAR(10 g) = 1.64 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 2.66 W/kg



Date/Time: 2012-06-25 06:42:50

Test Laboratory: TCC Nokia

Type: D835V2; Serial: D835V2 - SN:462

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.6 C

Medium parameters used: f = 835 MHz; σ = 0.999 mho/m; ϵ_r = 53.337; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

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

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

Reference Value = 51.956 V/m

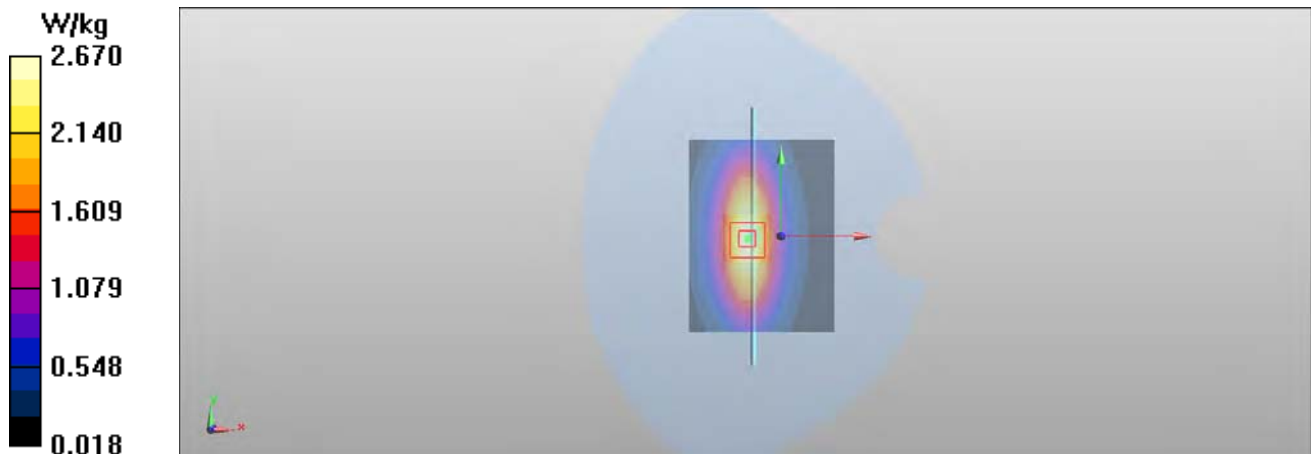
Peak SAR (extrapolated) = 3.552 mW/g

SAR(1 g) = 2.48 mW/g

SAR(10 g) = 1.65 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 2.69 W/kg



Date/Time: 2012-06-16 06:47:34

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3\text{ C}$

Medium parameters used: $f = 1800\text{ MHz}$; $\sigma = 1.492\text{ mho/m}$; $\epsilon_r = 52.605$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 11.9 W/kg

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

Reference Value = 86.570 V/m

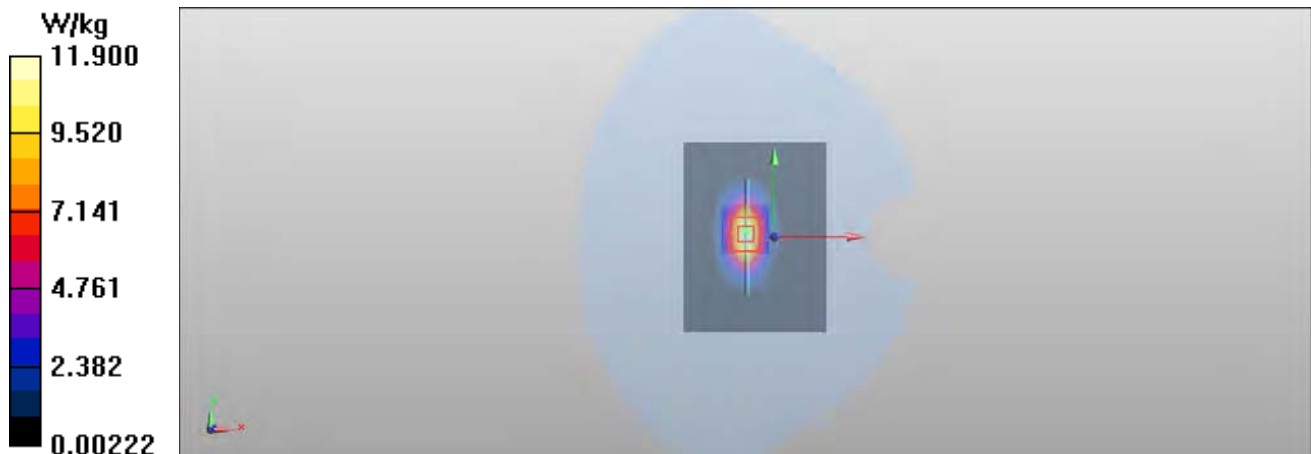
Peak SAR (extrapolated) = 17.161 mW/g

SAR(1 g) = 9.69 mW/g

SAR(10 g) = 5.12 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 10.9 W/kg



Date/Time: 2012-06-17 06:29:24

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.4\text{ C}$

Medium parameters used: $f = 1800\text{ MHz}$; $\sigma = 1.494\text{ mho/m}$; $\epsilon_r = 52.197$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

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

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

Reference Value = 87.208 V/m

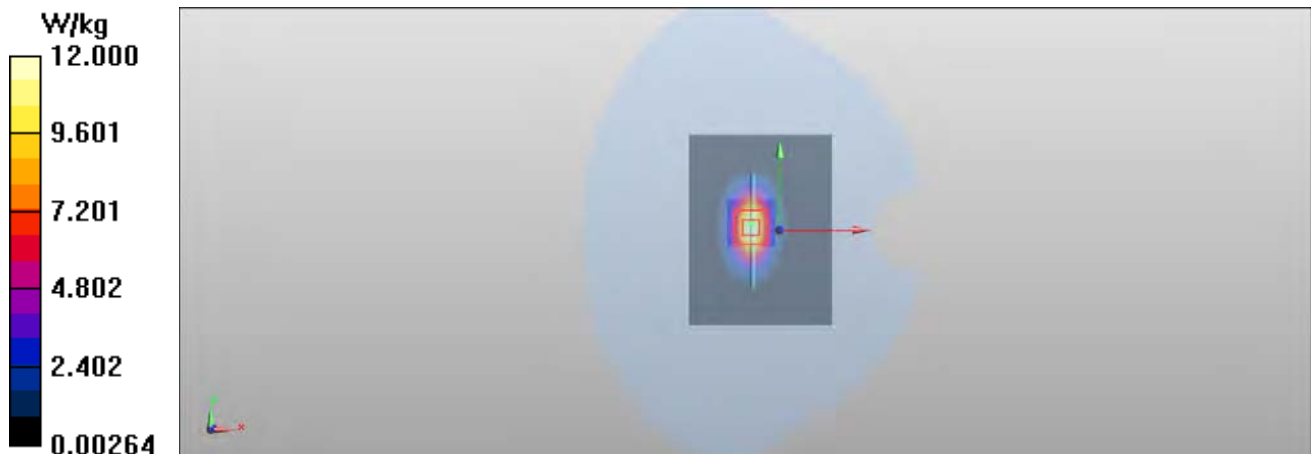
Peak SAR (extrapolated) = 17.327 mW/g

SAR(1 g) = 9.79 mW/g

SAR(10 g) = 5.17 mW/g

Power Drift = 0.06 dB

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



Date/Time: 2012-06-18 09:18:18

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3\text{ C}$

Medium parameters used: $f = 1800\text{ MHz}$; $\sigma = 1.491\text{ mho/m}$; $\epsilon_r = 52.485$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 11.9 W/kg

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

Reference Value = 85.997 V/m

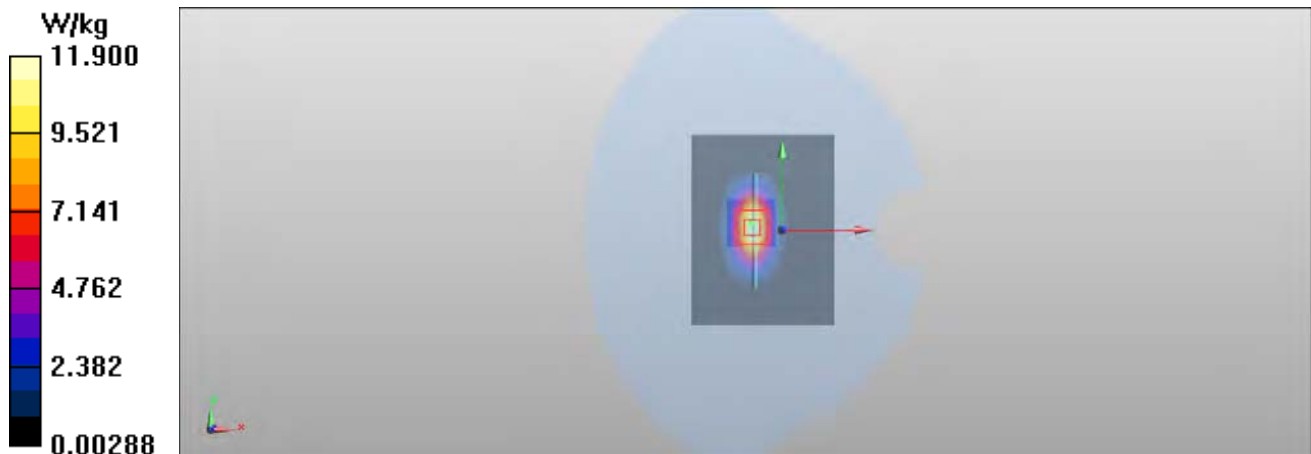
Peak SAR (extrapolated) = 17.062 mW/g

SAR(1 g) = 9.63 mW/g

SAR(10 g) = 5.09 mW/g

Power Drift = 0.09 dB

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



Date/Time: 2012-08-16 14:44:59

Test Laboratory: TCC Nokia

Type: D1800V2; Serial: D1800V2 - SN:2d065

Communication System: CW1800

Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.9 C

Medium parameters used: f = 1800 MHz; $\sigma = 1.517$ mho/m; $\epsilon_r = 52.421$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 12.1 W/kg

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

Reference Value = 83.831 V/m

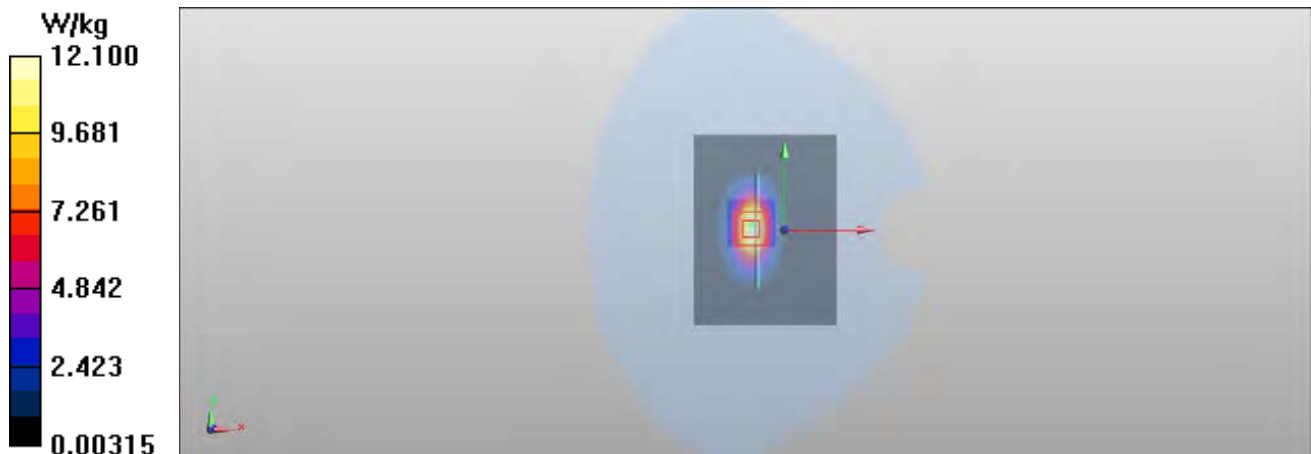
Peak SAR (extrapolated) = 17.546 mW/g

SAR(1 g) = 9.91 mW/g

SAR(10 g) = 5.22 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 11.2 W/kg



Date/Time: 2012-06-13 09:54:43

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

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.7\text{ C}$

Medium parameters used: $f = 1900\text{ MHz}$; $\sigma = 1.517\text{ mho/m}$; $\epsilon_r = 52.525$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 13.0 W/kg

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

Reference Value = 88.713 V/m

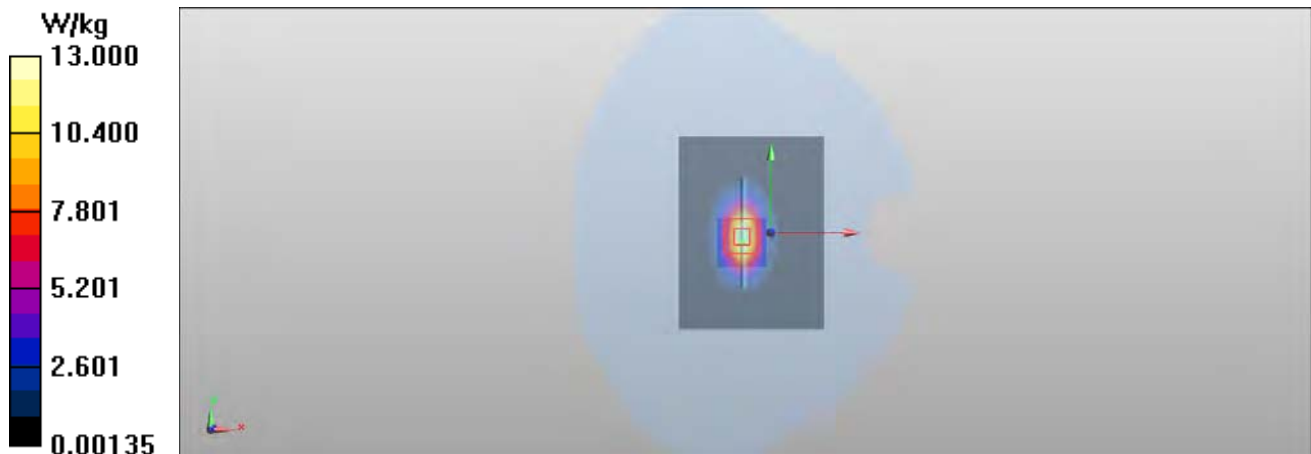
Peak SAR (extrapolated) = 19.330 mW/g

SAR(1 g) = 10.7 mW/g

SAR(10 g) = 5.6 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 12.1 W/kg



Date/Time: 2012-06-17 06:41:32

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 51.843$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 13.2 W/kg

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

Reference Value = 89.113 V/m

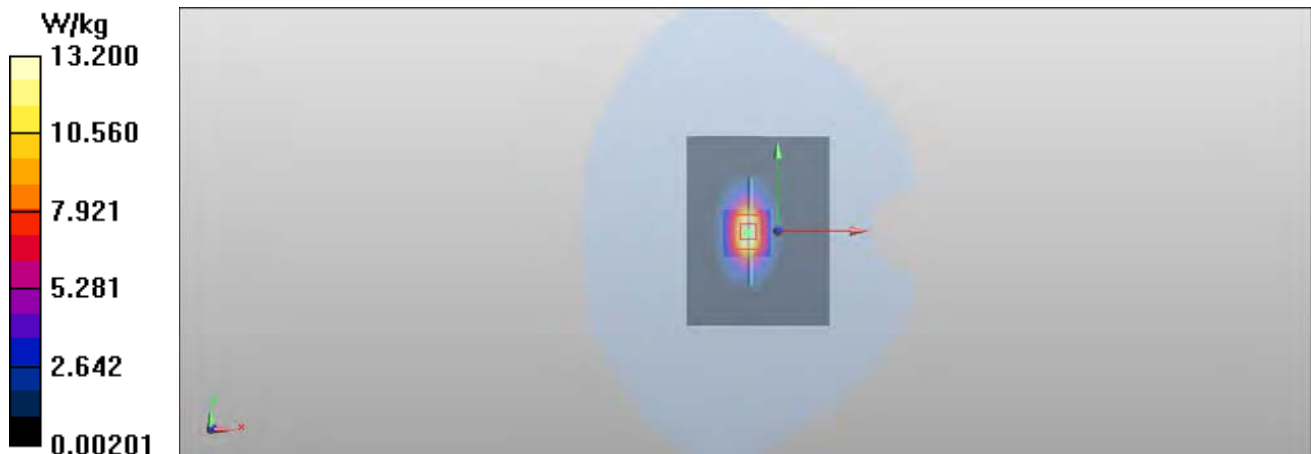
Peak SAR (extrapolated) = 19.478 mW/g

SAR(1 g) = 10.8 mW/g

SAR(10 g) = 5.68 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 12.2 W/kg



Date/Time: 2012-06-20 06:30:54

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.512$ mho/m; $\epsilon_r = 52.411$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Reference Value = 88.628 V/m

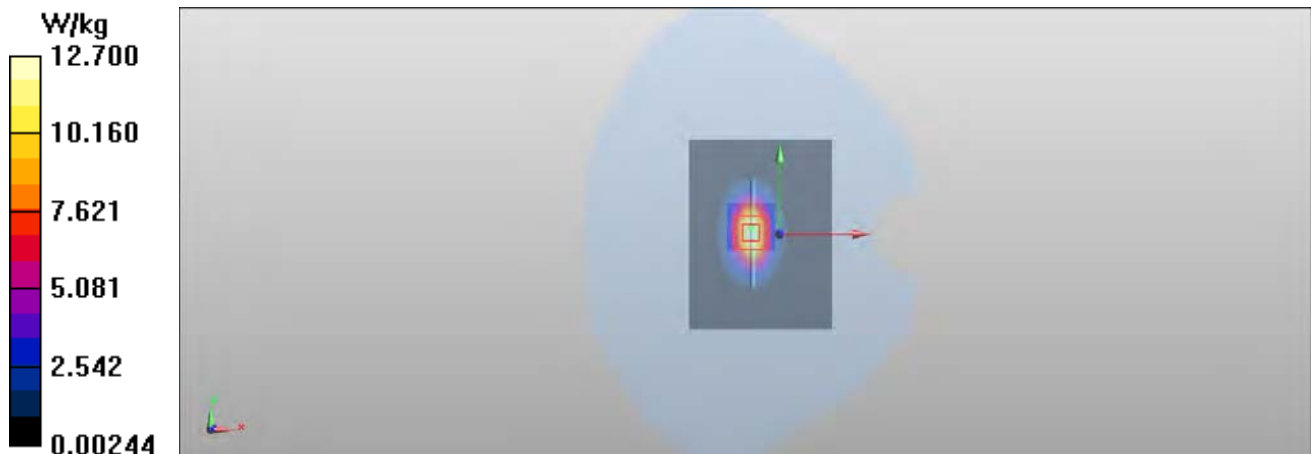
Peak SAR (extrapolated) = 18.767 mW/g

SAR(1 g) = 10.4 mW/g

SAR(10 g) = 5.5 mW/g

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 11.7 W/kg



Date/Time: 2012-06-21 07:30:32

Test Laboratory: TCC Nokia

Type: D1900V2; Serial: D1900V2 - SN:5d030

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 20.9\text{ C}$

Medium parameters used: $f = 1900\text{ MHz}$; $\sigma = 1.528\text{ mho/m}$; $\epsilon_r = 52.253$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 13.2 W/kg

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

Reference Value = 86.986 V/m

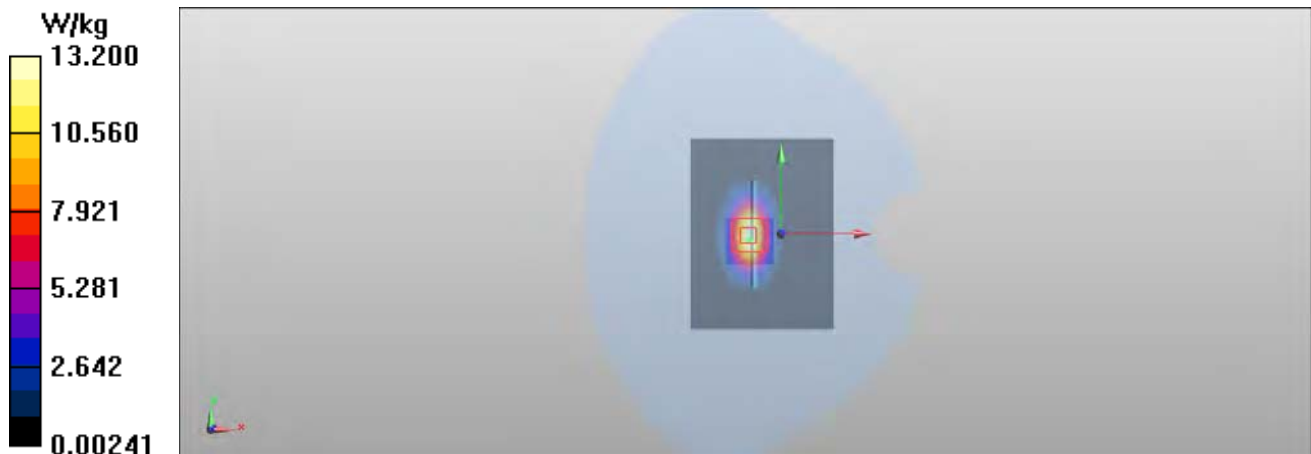
Peak SAR (extrapolated) = 19.538 mW/g

SAR(1 g) = 10.8 mW/g

SAR(10 g) = 5.64 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 12.2 W/kg



Date/Time: 2012-06-22 02:40:41

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; $\sigma = 1.537$ mho/m; $\epsilon_r = 52.495$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 13.4 W/kg

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

Reference Value = 88.482 V/m

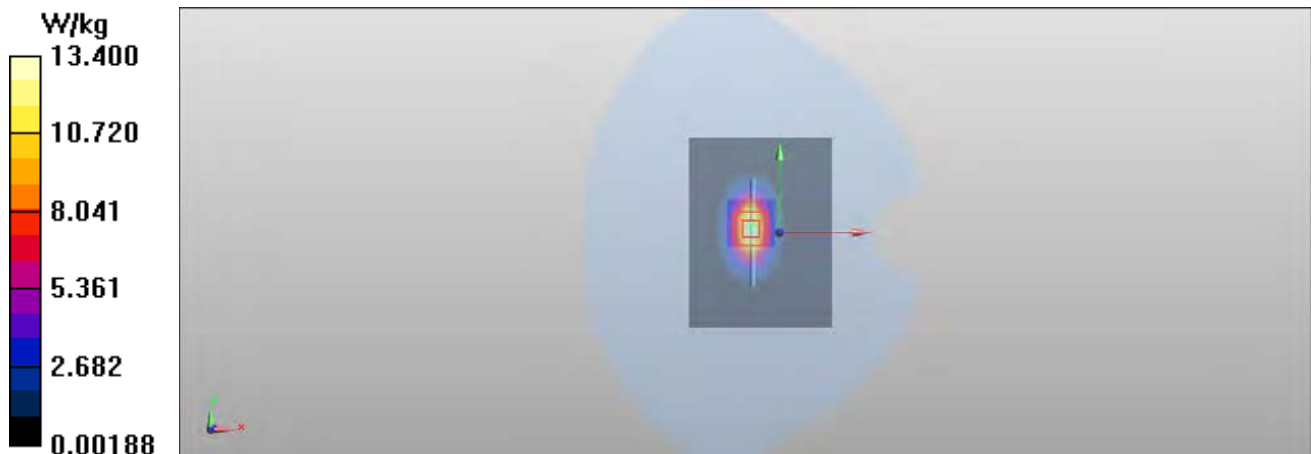
Peak SAR (extrapolated) = 19.624 mW/g

SAR(1 g) = 10.8 mW/g

SAR(10 g) = 5.65 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 12.2 W/kg



Date/Time: 2012-06-23 10:35:49

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= 20.6C

Medium parameters used: f = 2450 MHz; σ = 1.971 mho/m; ϵ_r = 50.313; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 94.024 V/m

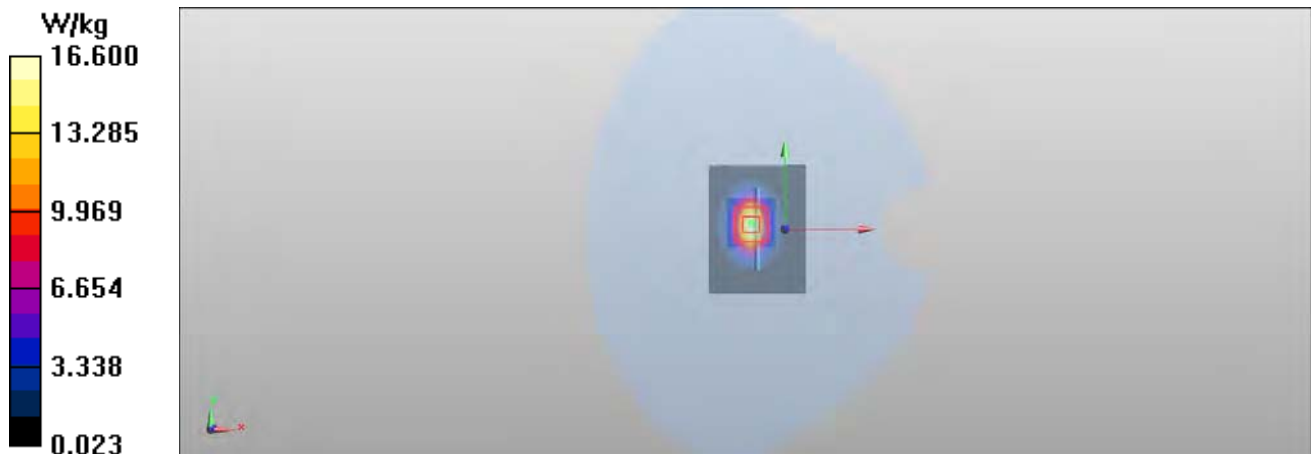
Peak SAR (extrapolated) = 27.736 mW/g

SAR(1 g) = 13.8 mW/g

SAR(10 g) = 6.39 mW/g

Power Drift = 0.17 dB

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



Date/Time: 2012-06-24 09:09:38

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:729

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2450\text{ MHz}$; $\sigma = 1.969\text{ mho/m}$; $\epsilon_r = 50.168$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: $dx=1.000\text{ mm}$, $dy=1.000\text{ mm}$

Maximum value of SAR (interpolated) = 16.8 W/kg

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

Reference Value = 97.624 V/m

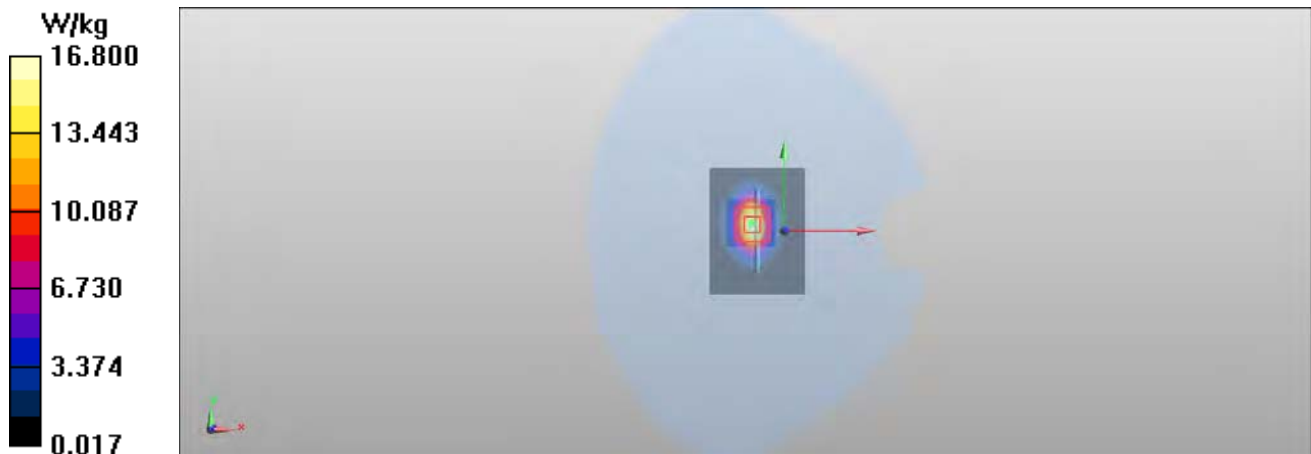
Peak SAR (extrapolated) = 27.966 mW/g

SAR(1 g) = 13.9 mW/g

SAR(10 g) = 6.43 mW/g

Power Drift = 0.01 dB

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



Date/Time: 2012-06-25 06:27:13

Test Laboratory: TCC Nokia

Type: D2450V2; Serial: D2450V2 - SN:729

Communication System: CW2450

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.8\text{ C}$

Medium parameters used: $f = 2450\text{ MHz}$; $\sigma = 1.943\text{ mho/m}$; $\epsilon_r = 50.63$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=250mW/Area Scan (61x81x1): Interpolated grid: $dx=1.000\text{ mm}$, $dy=1.000\text{ mm}$

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

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

Reference Value = 86.914 V/m

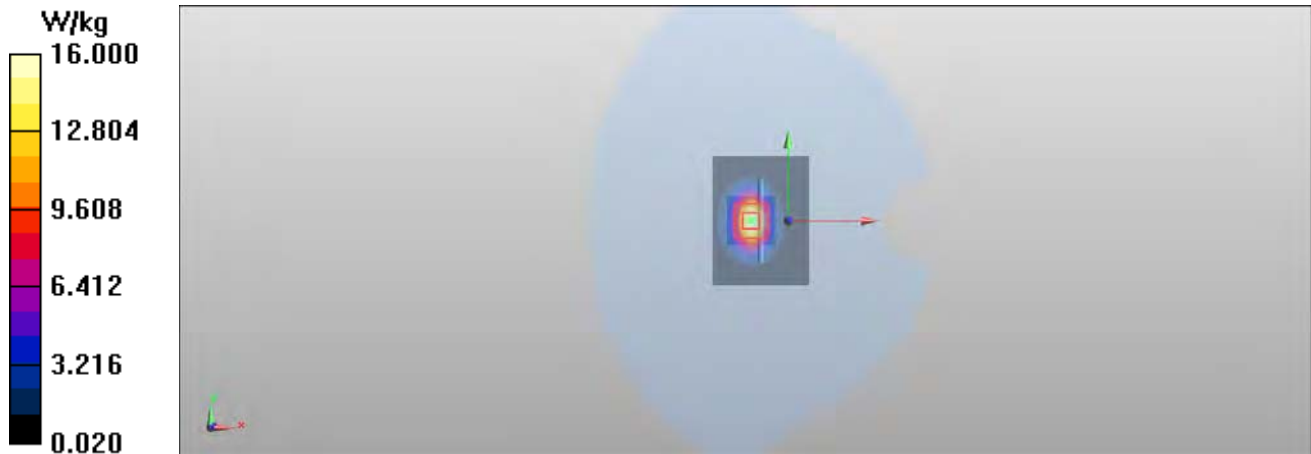
Peak SAR (extrapolated) = 27.118 mW/g

SAR(1 g) = 13.5 mW/g

SAR(10 g) = 6.27 mW/g

Power Drift = -0.03 dB

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



Date/Time: 2012-06-25 13:07:20

Test Laboratory: TCC Nokia
Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.455$ mho/m; $\epsilon_r = 48.986$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.131 V/m

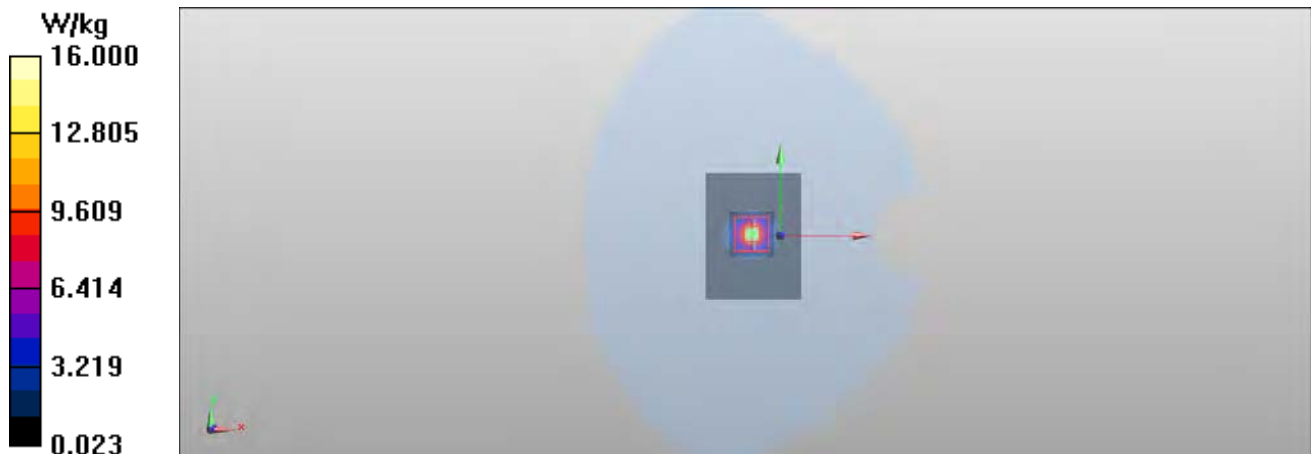
Peak SAR (extrapolated) = 30.382 mW/g

SAR(1 g) = 7.82 mW/g

SAR(10 g) = 2.16 mW/g

Power Drift = 0.10 dB

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



Date/Time: 2012-06-26 09:09:19

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.36$ mho/m; $\epsilon_r = 48.907$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.6 W/kg

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 59.274 V/m

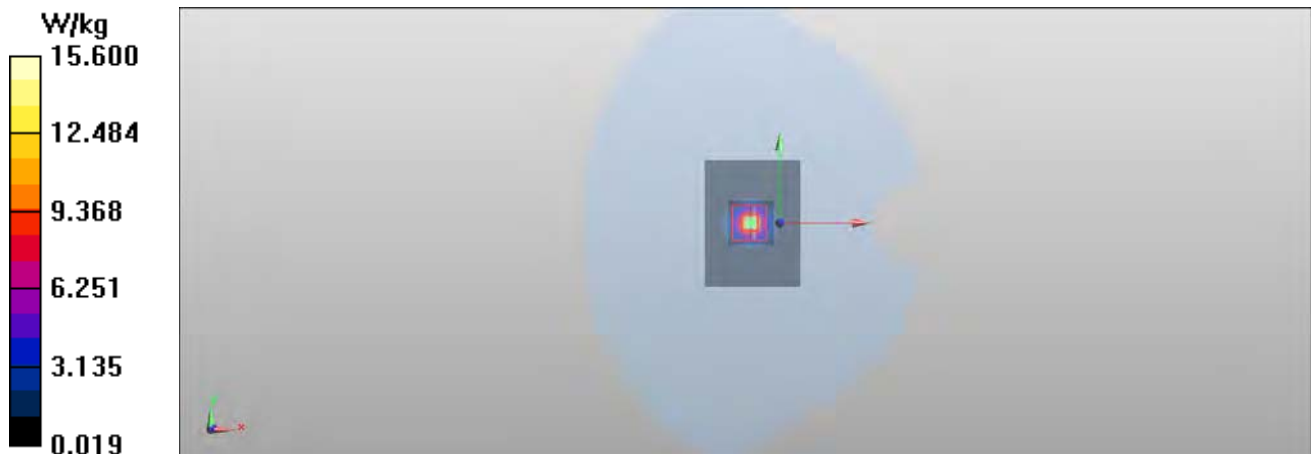
Peak SAR (extrapolated) = 28.694 mW/g

SAR(1 g) = 7.54 mW/g

SAR(10 g) = 2.1 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 14.9 W/kg



Date/Time: 2012-06-27 15:03:38

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 49.033$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.162 V/m

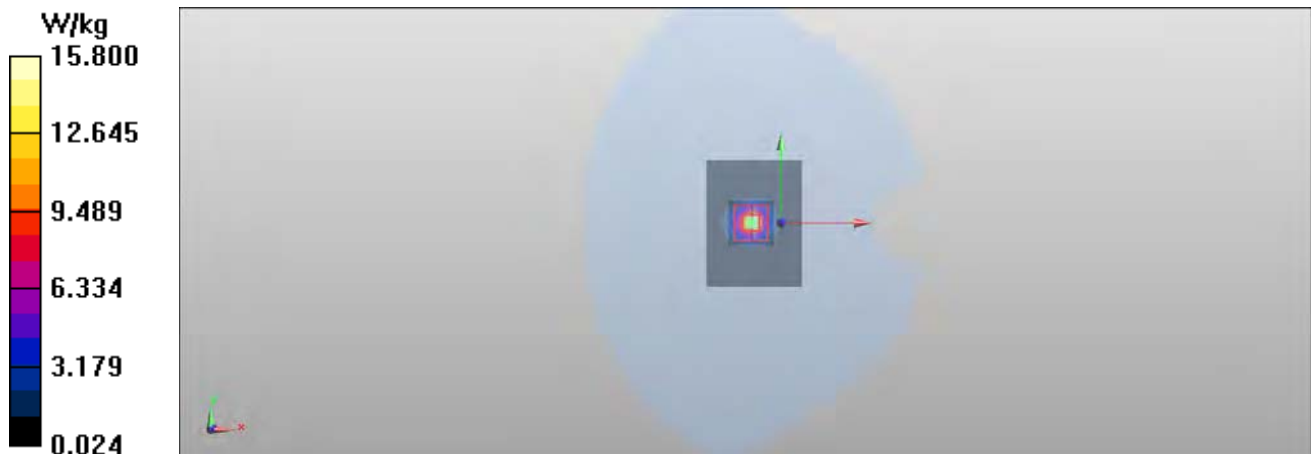
Peak SAR (extrapolated) = 29.746 mW/g

SAR(1 g) = 7.81 mW/g

SAR(10 g) = 2.16 mW/g

Power Drift = 0.10 dB

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



Date/Time: 2012-06-28 08:50:41

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5200

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.364$ mho/m; $\epsilon_r = 49.088$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 58.831 V/m

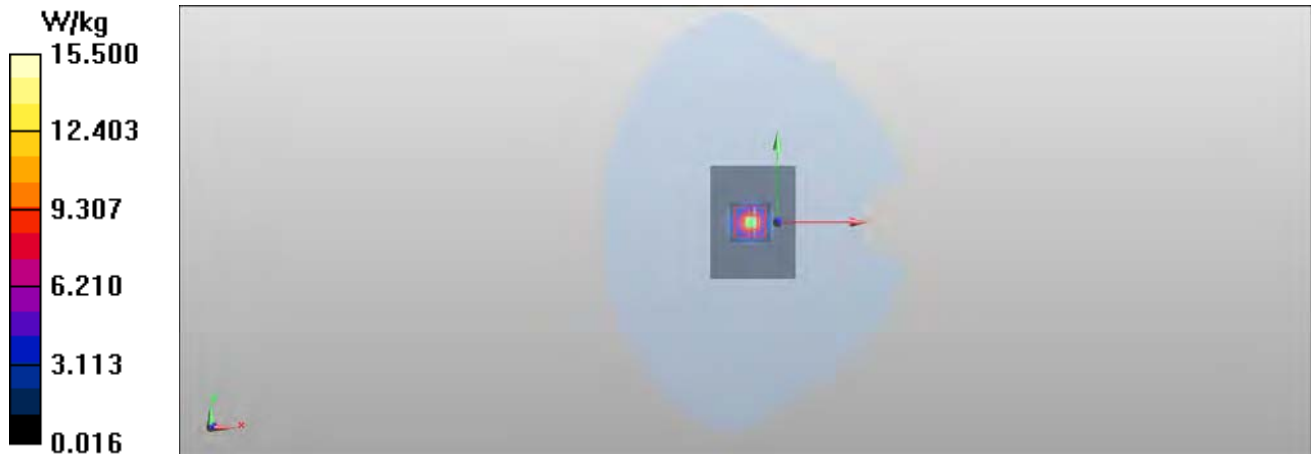
Peak SAR (extrapolated) = 28.622 mW/g

SAR(1 g) = 7.67 mW/g

SAR(10 g) = 2.13 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 14.5 W/kg



Date/Time: 2012-06-28 22:20:52

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5500

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: 21.0 C

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.811$ mho/m; $\epsilon_r = 48.189$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.5, 3.5, 3.5); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, 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=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.498 V/m

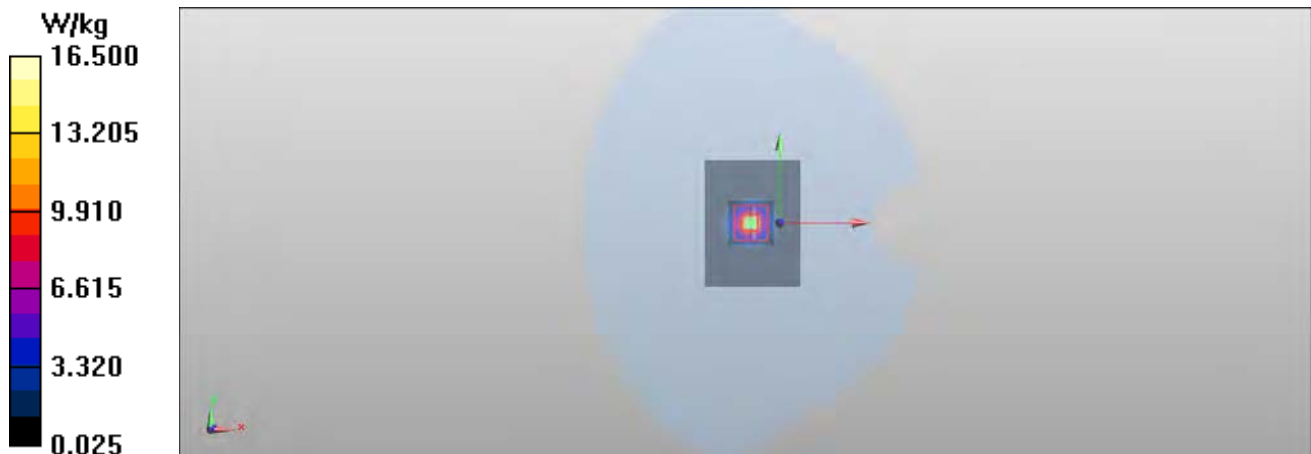
Peak SAR (extrapolated) = 32.498 mW/g

SAR(1 g) = 7.99 mW/g

SAR(10 g) = 2.18 mW/g

Power Drift = 0.04 dB

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



Date/Time: 2012-06-28 23:56:43

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: 21.0 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 6.228$ mho/m; $\epsilon_r = 47.703$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.78, 3.78, 3.78); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 14.8 W/kg

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 55.029 V/m

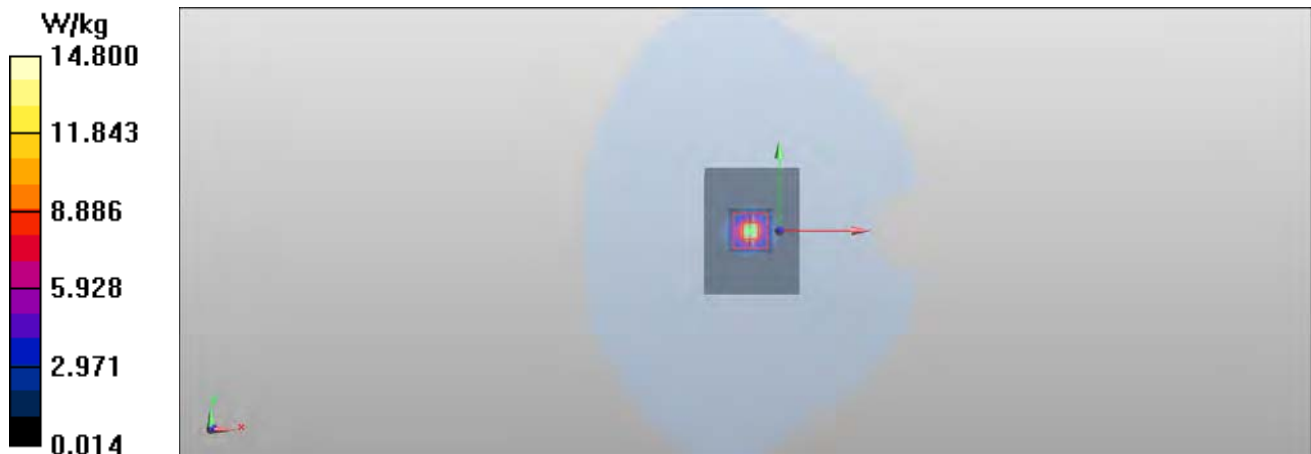
Peak SAR (extrapolated) = 30.204 mW/g

SAR(1 g) = 6.96 mW/g

SAR(10 g) = 1.9 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 14.3 W/kg



Date/Time: 2012-06-30 09:40:32

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: 21.6 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 6.196$ mho/m; $\epsilon_r = 47.276$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.78, 3.78, 3.78); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.176 V/m

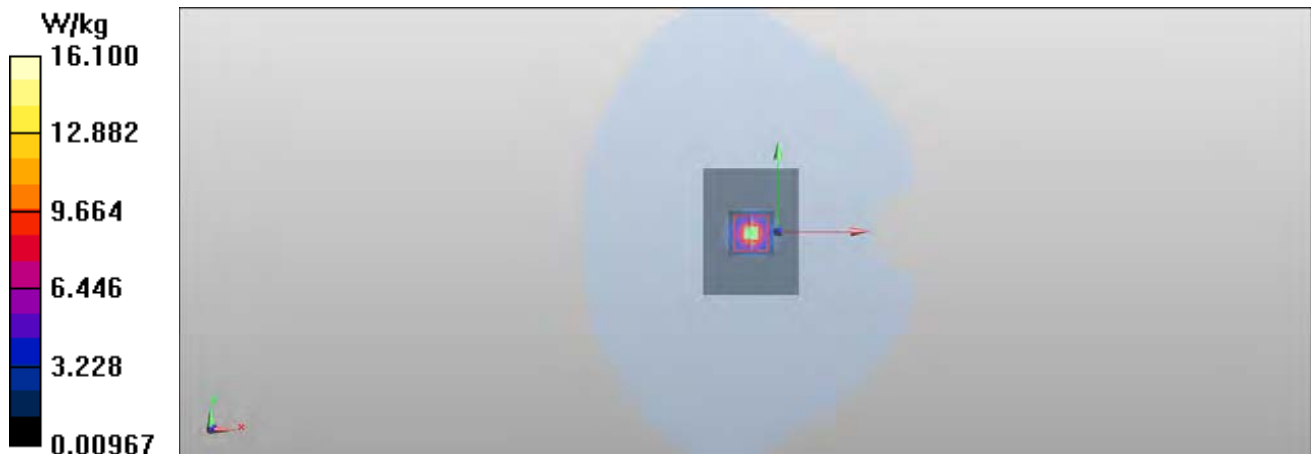
Peak SAR (extrapolated) = 31.211 mW/g

SAR(1 g) = 7.35 mW/g

SAR(10 g) = 2 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 14.5 W/kg



Date/Time: 2012-07-02 07:56:04

Test Laboratory: TCC Nokia

Type: D5GHzV2; Serial: D5GHzV2 - SN: 1032

Communication System: CW5800

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: 21.6 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 6.254$ mho/m; $\epsilon_r = 47.339$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.78, 3.78, 3.78); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

d=15mm, Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

d=15mm, Pin=100mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.736 V/m

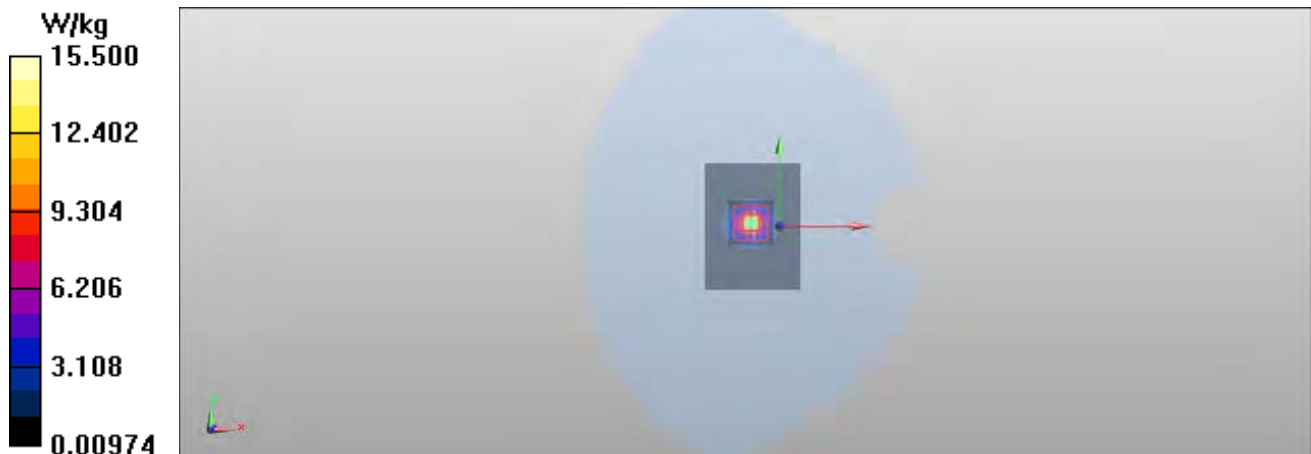
Peak SAR (extrapolated) = 30.929 mW/g

SAR(1 g) = 7.36 mW/g

SAR(10 g) = 2.02 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 14.7 W/kg



APPENDIX B.1: HEAD MEASUREMENT SCANS

Date/Time: 2012-06-21 16:17:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 710$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.157$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - QPSK - 10MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0565 mW/g

LTE-Left/Cheek - Middle - QPSK - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 3.411 V/m

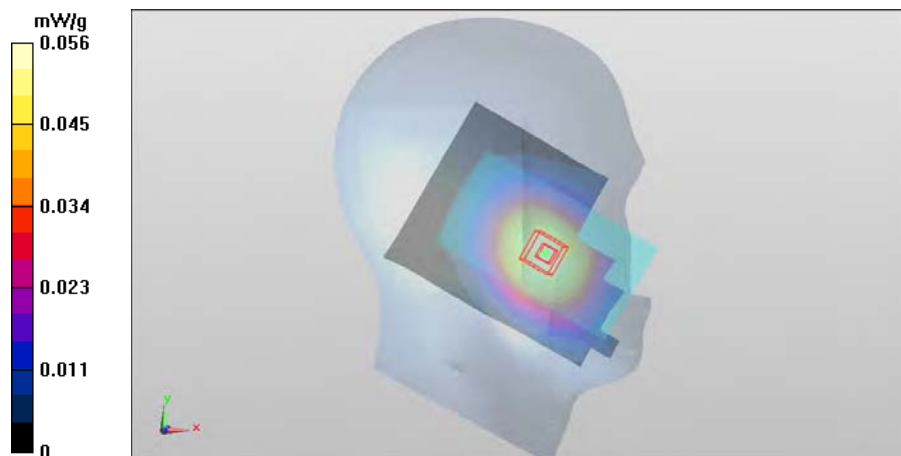
Peak SAR (extrapolated) = 0.062 mW/g

SAR(1 g) = 0.052 mW/g

SAR(10 g) = 0.041 mW/g

Power Drift = -0.38 dB

Maximum value of SAR (measured) = 0.0544 mW/g



Date/Time: 2012-06-22 02:59:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 710$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.157$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Tilt - Middle - QPSK - 10MHz – 100% RB /Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.0389 mW/g

LTE-Left/Tilt - Middle - QPSK - 10MHz - 100% RB /Zoom Scan (5x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.569 V/m

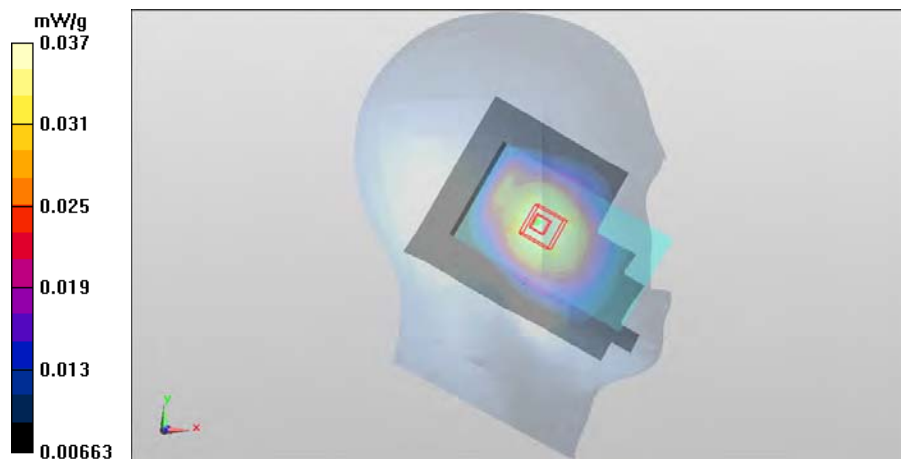
Peak SAR (extrapolated) = 0.043 mW/g

SAR(1 g) = 0.036 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 0.0374 mW/g



Date/Time: 2012-06-22 20:37:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.884$ mho/m; $\epsilon_r = 40.933$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 10MHz – 100% RB offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Right/Cheek - Middle - QPSK - 10MHz – 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.555 V/m

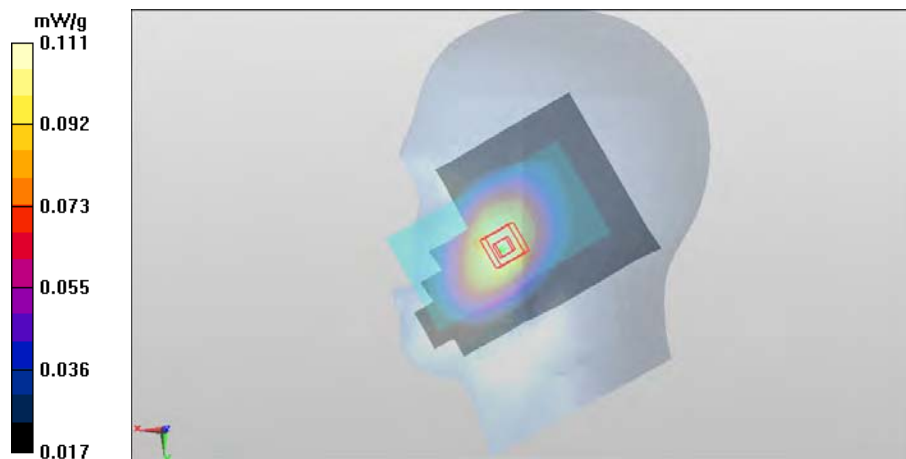
Peak SAR (extrapolated) = 0.132 mW/g

SAR(1 g) = 0.106 mW/g

SAR(10 g) = 0.081 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.111 mW/g



Date/Time: 2012-06-27 09:49:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0705 mW/g

LTE - Right/Tilt - Middle - QPSK - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.871 V/m

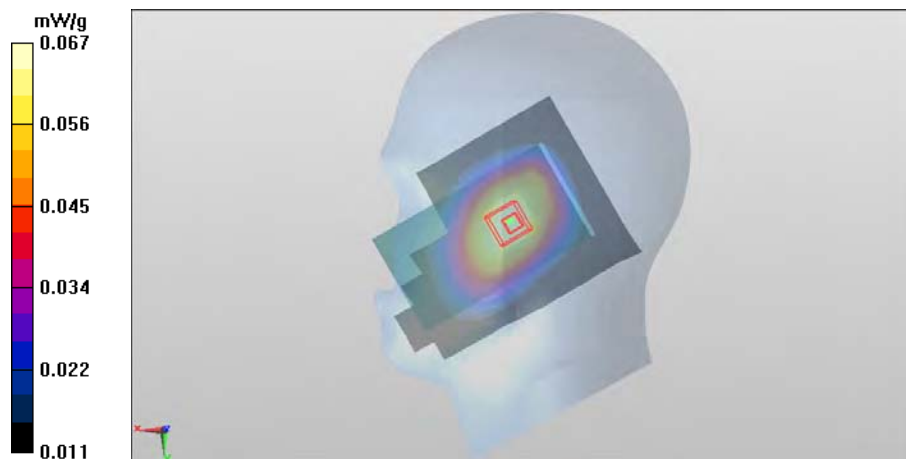
Peak SAR (extrapolated) = 0.078 mW/g

SAR(1 g) = 0.064 mW/g

SAR(10 g) = 0.050 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 0.0674 mW/g



Date/Time: 2012-06-21 16:40:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - QPSK - 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0599 mW/g

LTE-Left/Cheek - Middle - QPSK - 10MHz - 25 RB - 50% offset /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 3.237 V/m

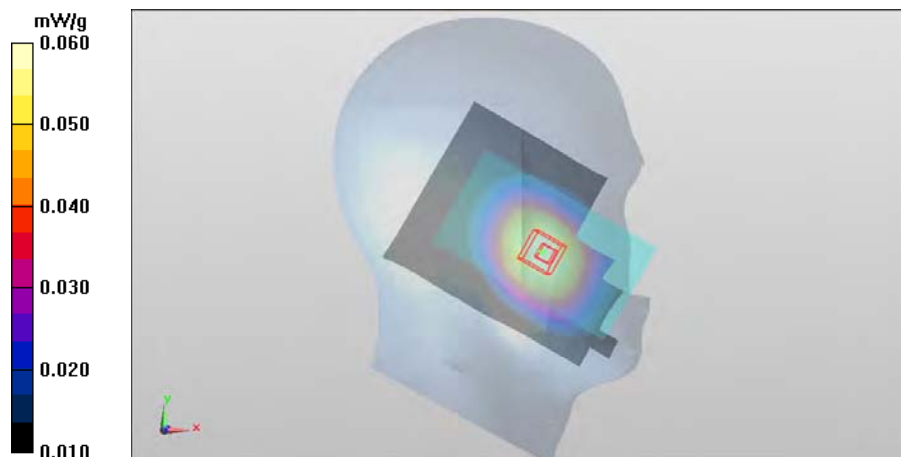
Peak SAR (extrapolated) = 0.069 mW/g

SAR(1 g) = 0.057 mW/g

SAR(10 g) = 0.045 mW/g

Power Drift = 0.47 dB

Maximum value of SAR (measured) = 0.0598 mW/g



Date/Time: 2012-06-22 03:18:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 710$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.157$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Tilt - Middle - QPSK - 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.0416 mW/g

LTE-Left/Tilt - Middle - QPSK - 10MHz - 25 RB - 50% offset/Zoom Scan (5x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.845 V/m

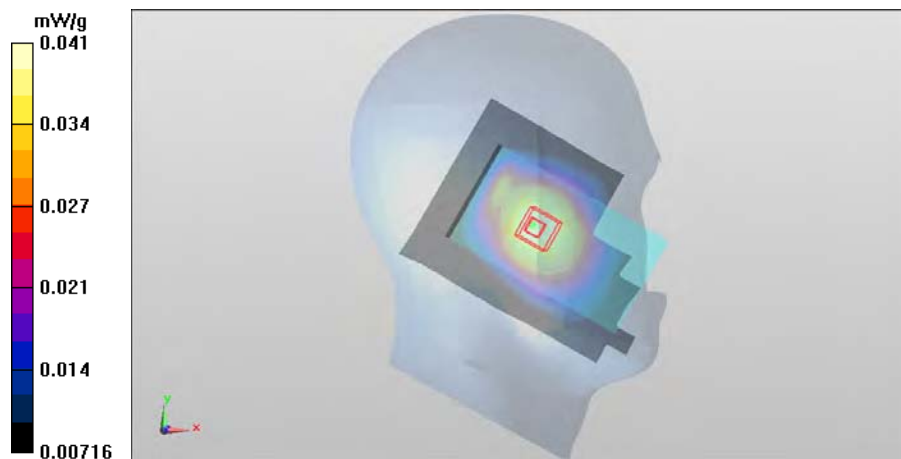
Peak SAR (extrapolated) = 0.048 mW/g

SAR(1 g) = 0.039 mW/g

SAR(10 g) = 0.031 mW/g

Power Drift = 0.19 dB

Maximum value of SAR (measured) = 0.0409 mW/g



Date/Time: 2012-06-22 21:18:29

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 25 RB -50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.129 mW/g

LTE - Right/Cheek - Middle - QPSK - 10MHz - 25 RB -50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.887 V/m

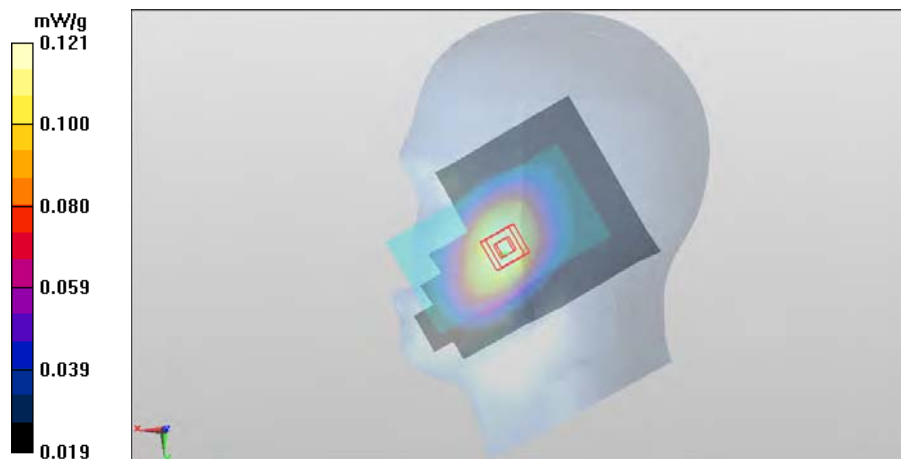
Peak SAR (extrapolated) = 0.145 mW/g

SAR(1 g) = 0.117 mW/g

SAR(10 g) = 0.089 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.121 mW/g



Date/Time: 2012-06-27 10:05:29

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0750 mW/g

LTE - Right/Tilt - Middle - QPSK - 10MHz - 25 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.270 V/m

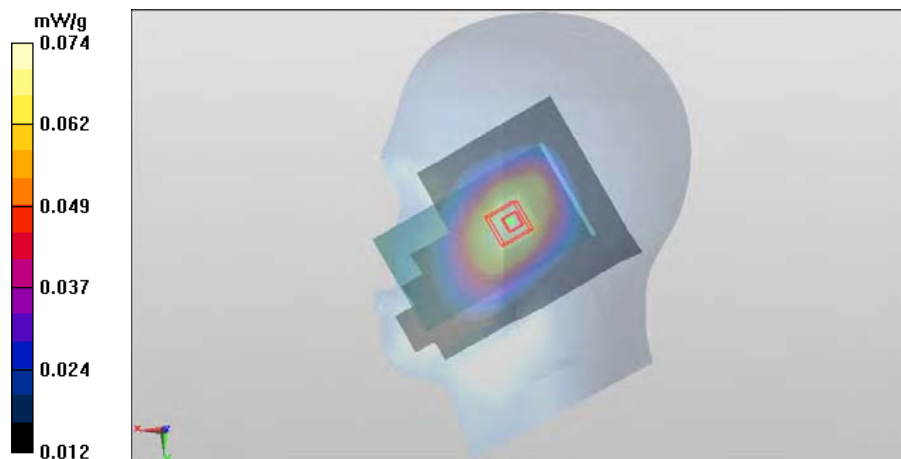
Peak SAR (extrapolated) = 0.086 mW/g

SAR(1 g) = 0.071 mW/g

SAR(10 g) = 0.055 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 0.0744 mW/g



Date/Time: 2012-06-21 16:59:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0740 mW/g

LTE-Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 3.674 V/m

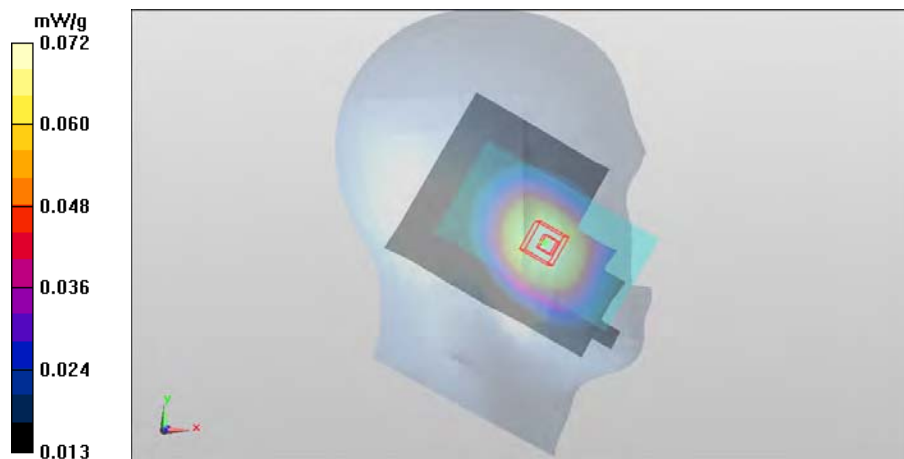
Peak SAR (extrapolated) = 0.082 mW/g

SAR(1 g) = 0.069 mW/g

SAR(10 g) = 0.054 mW/g

Power Drift = 0.29 dB

Maximum value of SAR (measured) = 0.0719 mW/g



Date/Time: 2012-06-22 06:19:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0675 mW/g

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.704 V/m

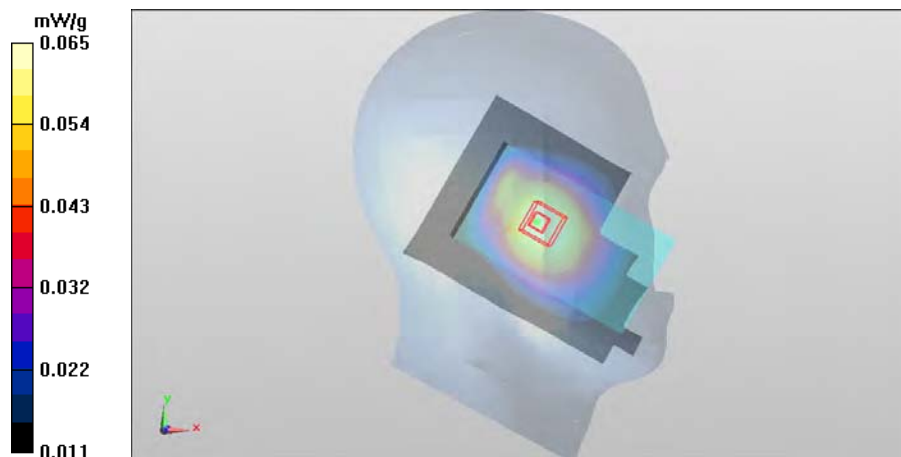
Peak SAR (extrapolated) = 0.075 mW/g

SAR(1 g) = 0.062 mW/g

SAR(10 g) = 0.048 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.0648 mW/g



Date/Time: 2012-06-22 21:38:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1 RB -50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.158 mW/g

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1 RB -50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 13.194 V/m

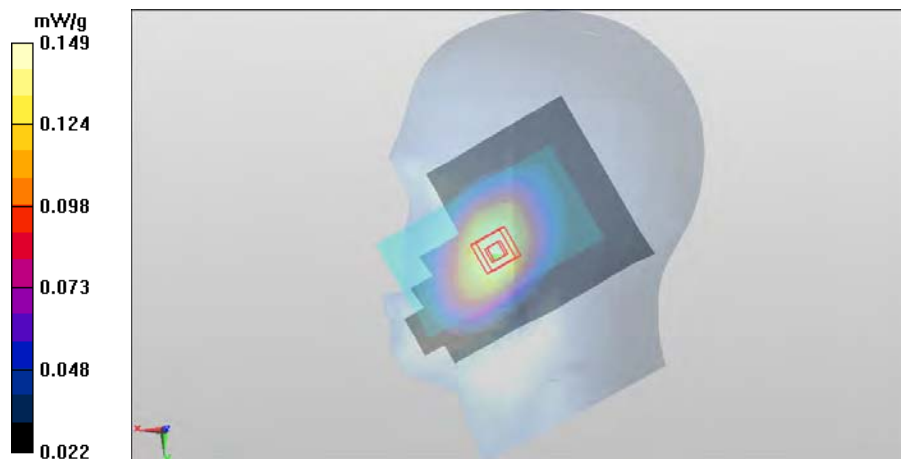
Peak SAR (extrapolated) = 0.177 mW/g

SAR(1 g) = 0.143 mW/g

SAR(10 g) = 0.110 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.149 mW/g



Date/Time: 2012-06-27 10:22:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; σ = 0.89 mho/m; ϵ_r = 40.646; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0943 mW/g

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.308 V/m

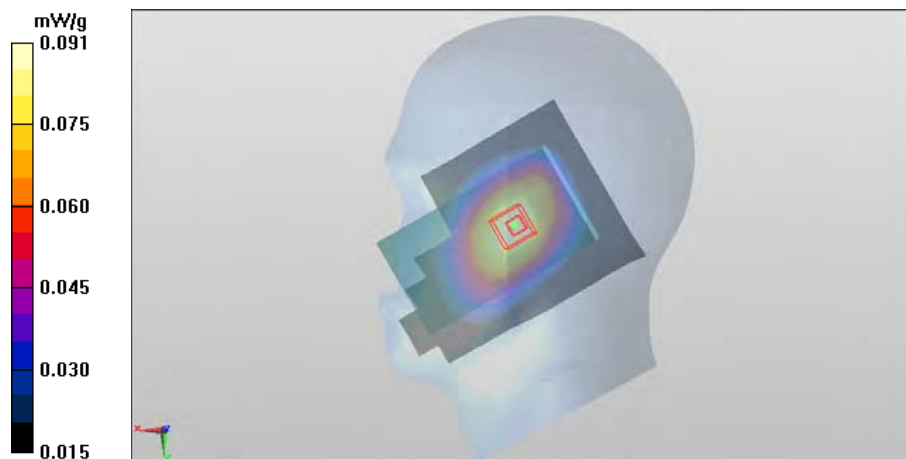
Peak SAR (extrapolated) = 0.104 mW/g

SAR(1 g) = 0.086 mW/g

SAR(10 g) = 0.067 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.0907 mW/g



Date/Time: 2012-06-21 17:16:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0952 mW/g

LTE-Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.169 V/m

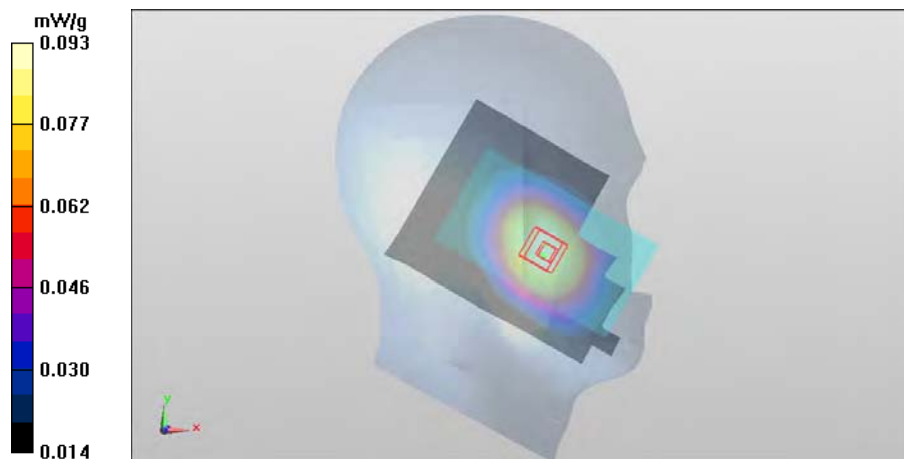
Peak SAR (extrapolated) = 0.108 mW/g

SAR(1 g) = 0.089 mW/g

SAR(10 g) = 0.070 mW/g

Power Drift = 0.31 dB

Maximum value of SAR (measured) = 0.0929 mW/g



Date/Time: 2012-06-22 07:11:09

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0792 mW/g

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.619 V/m

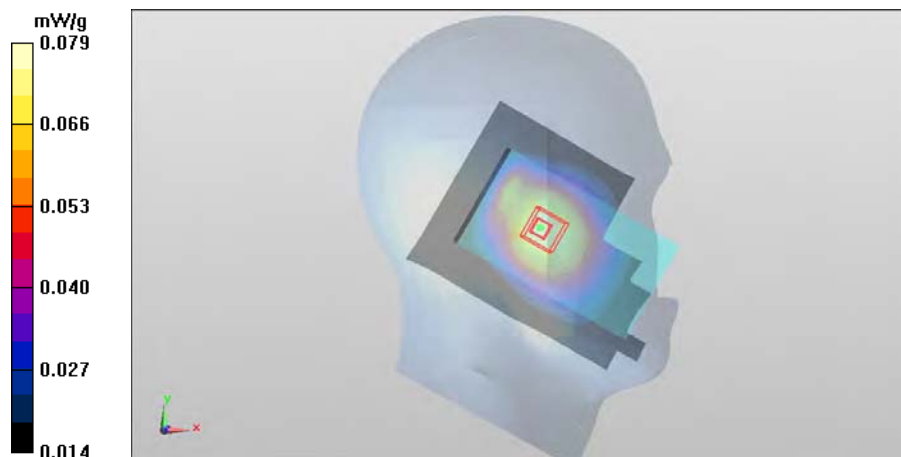
Peak SAR (extrapolated) = 0.091 mW/g

SAR(1 g) = 0.075 mW/g

SAR(10 g) = 0.059 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.0791 mW/g



Date/Time: 2012-06-27 16:02:58

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 711 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 711 MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.639$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - High - QPSK - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.248 mW/g

LTE - Right/Cheek - High - QPSK - 10MHz - 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 16.605 V/m

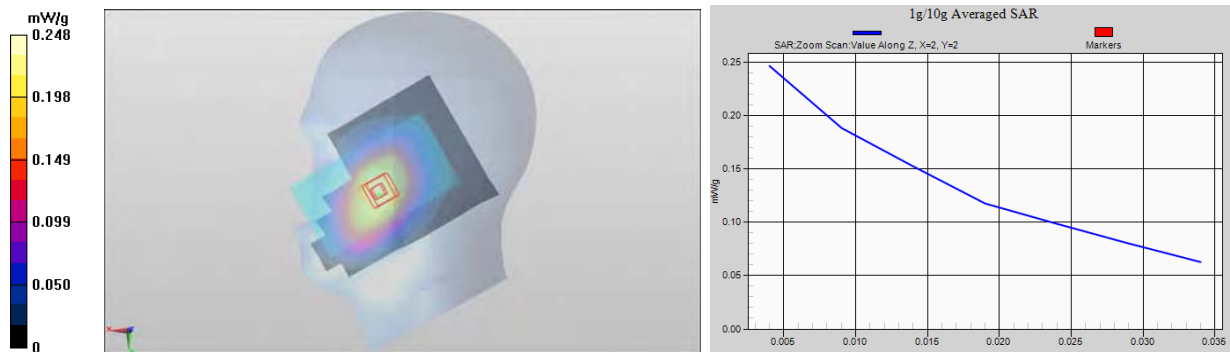
Peak SAR (extrapolated) = 0.286 mW/g

SAR(1 g) = 0.226 mW/g

SAR(10 g) = 0.172 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.246 mW/g



Date/Time: 2012-06-23 02:18:18

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0897 mW/g

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.078 V/m

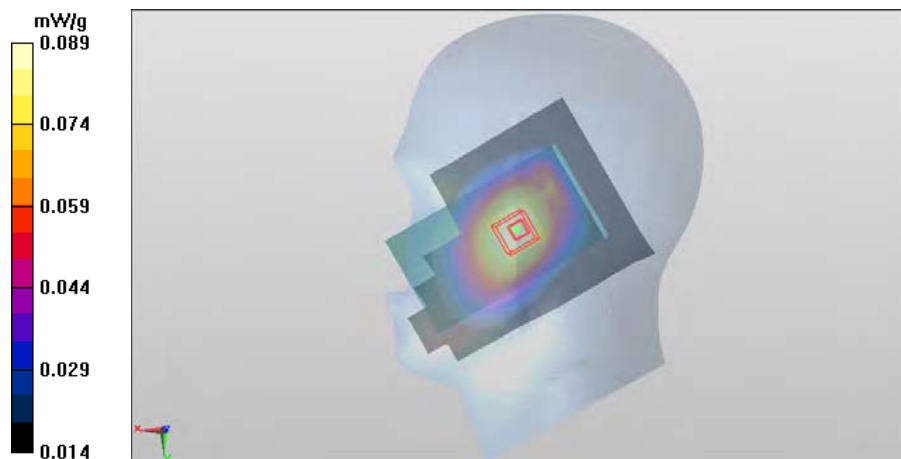
Peak SAR (extrapolated) = 0.102 mW/g

SAR(1 g) = 0.085 mW/g

SAR(10 g) = 0.067 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.0886 mW/g



Date/Time: 2012-06-28 13:50:47

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: $t = 20.3$ C

Medium parameters used: $f = 710$ MHz; $\sigma = 0.882$ mho/m; $\epsilon_r = 41.901$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.0765 mW/g

LTE - Left/Cheek - Middle - QPSK - 10MHz - 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.535 V/m

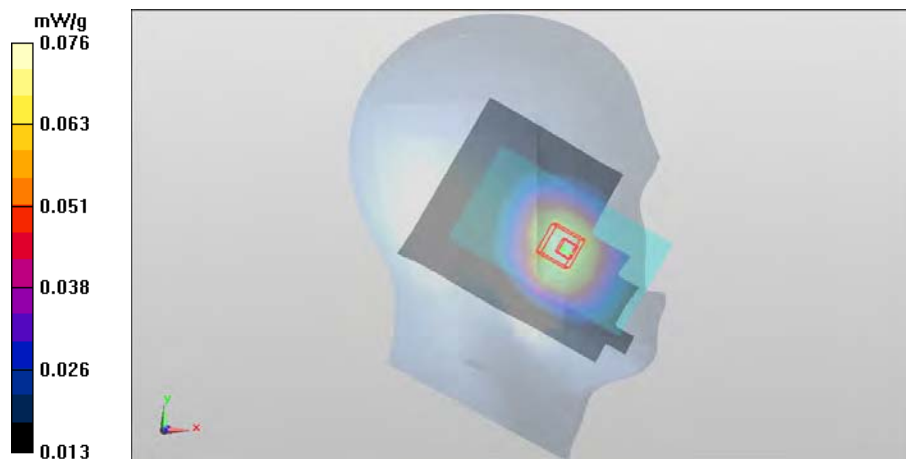
Peak SAR (extrapolated) = 0.087 mW/g

SAR(1 g) = 0.072 mW/g

SAR(10 g) = 0.056 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.0760 mW/g



Date/Time: 2012-06-22 07:36:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.884$ mho/m; $\epsilon_r = 40.933$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 0% offset /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0412 mW/g

LTE - Left/Tilt - Middle - QPSK - 10MHz - 1 RB - 0% offset /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.783 V/m

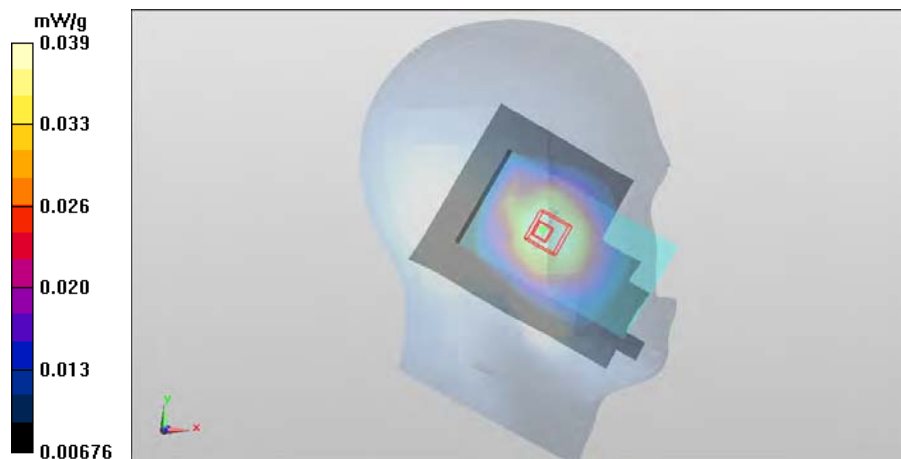
Peak SAR (extrapolated) = 0.048 mW/g

SAR(1 g) = 0.037 mW/g

SAR(10 g) = 0.029 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.0393 mW/g



Date/Time: 2012-06-23 01:40:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1 RB -0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1 RB -0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.851 V/m

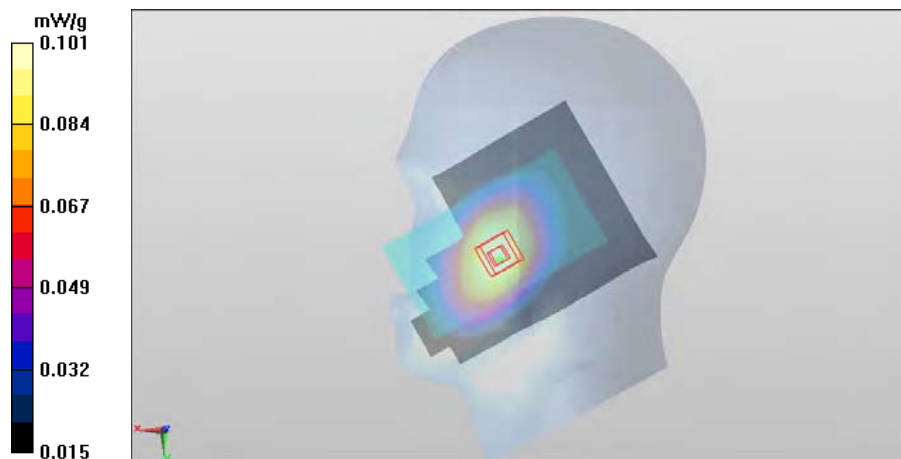
Peak SAR (extrapolated) = 0.118 mW/g

SAR(1 g) = 0.097 mW/g

SAR(10 g) = 0.075 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.101 mW/g



Date/Time: 2012-06-23 01:59:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.884$ mho/m; $\epsilon_r = 40.933$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0520 mW/g

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.500 V/m

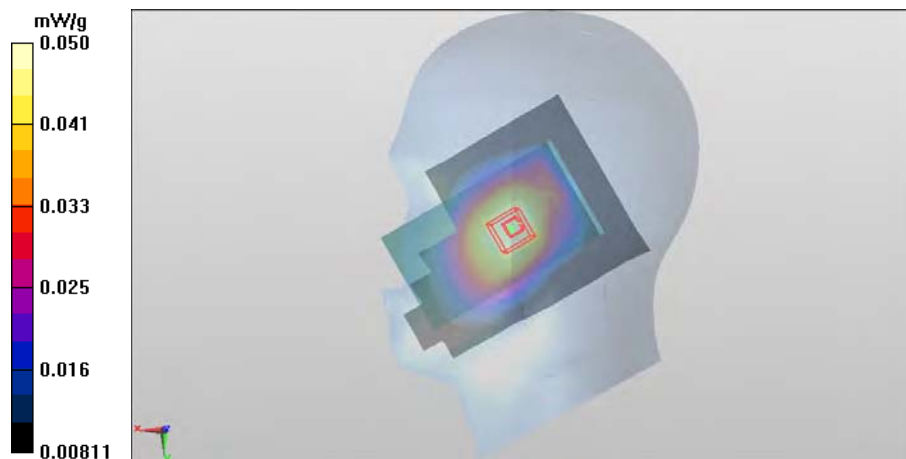
Peak SAR (extrapolated) = 0.058 mW/g

SAR(1 g) = 0.048 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = 0.23 dB

Maximum value of SAR (measured) = 0.0498 mW/g



Date/Time: 2012-06-21 21:43:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0622 mW/g

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.426 V/m

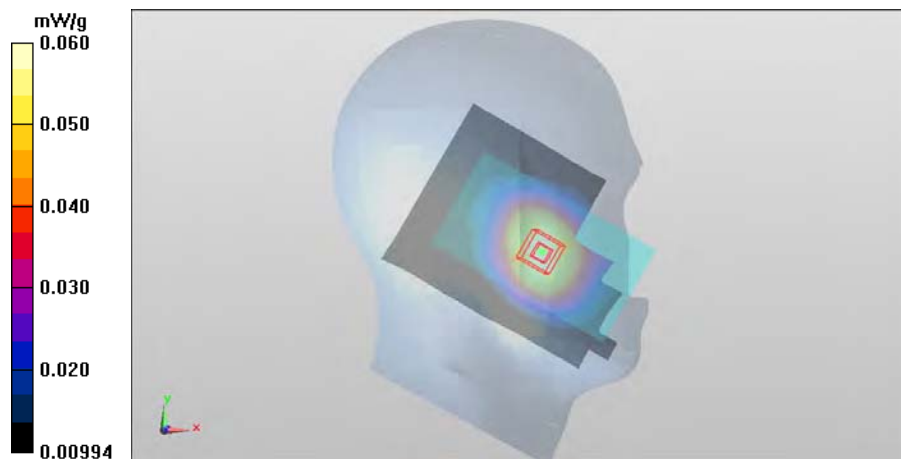
Peak SAR (extrapolated) = 0.072 mW/g

SAR(1 g) = 0.057 mW/g

SAR(10 g) = 0.044 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0602 mW/g



Date/Time: 2012-06-22 14:30:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: $t = 20.3\text{ C}$

Medium parameters used: $f = 710\text{ MHz}$; $\sigma = 0.884\text{ mho/m}$; $\epsilon_r = 40.933$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 100% RB /Area Scan (81x121x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.0350 mW/g

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.200 V/m

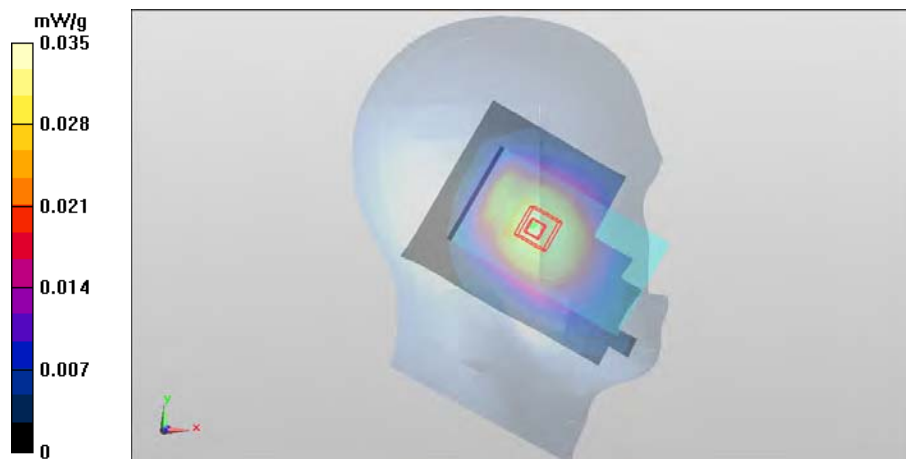
Peak SAR (extrapolated) = 0.039 mW/g

SAR(1 g) = 0.031 mW/g

SAR(10 g) = 0.024 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.0327 mW/g



Date/Time: 2012-06-27 06:16:58

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; σ = 0.89 mho/m; ϵ_r = 40.646; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0908 mW/g

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.221 V/m

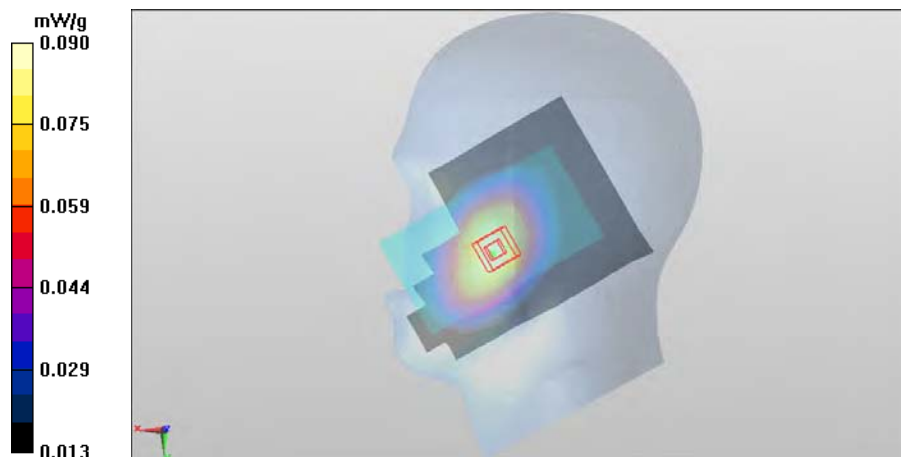
Peak SAR (extrapolated) = 0.106 mW/g

SAR(1 g) = 0.087 mW/g

SAR(10 g) = 0.067 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0898 mW/g



Date/Time: 2012-06-27 10:40:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: $f = 710 \text{ MHz}$; $\sigma = 0.89 \text{ mho/m}$; $\epsilon_r = 40.646$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 100% RB /Area Scan (81x121x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.0529 mW/g

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.818 V/m

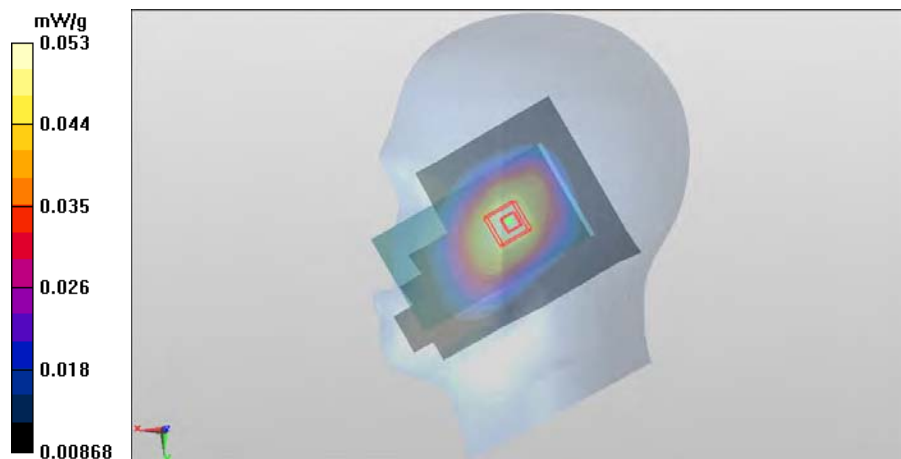
Peak SAR (extrapolated) = 0.062 mW/g

SAR(1 g) = 0.050 mW/g

SAR(10 g) = 0.039 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0528 mW/g



Date/Time: 2012-06-21 22:15:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 41.157$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 25 RB - 50% offset /Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0678 mW/g

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 25 RB - 50% offset /Zoom Scan (6x5x7)/Cube 0: Measurement grid:

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

Reference Value = 2.932 V/m

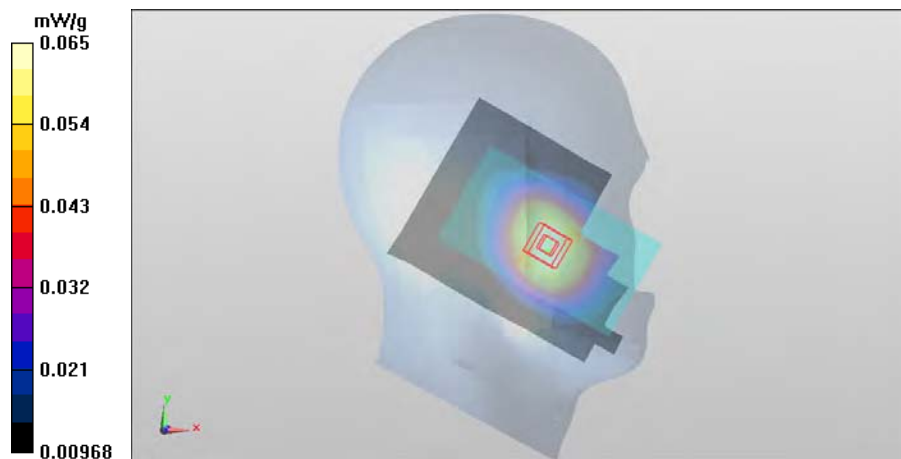
Peak SAR (extrapolated) = 0.077 mW/g

SAR(1 g) = 0.063 mW/g

SAR(10 g) = 0.049 mW/g

Power Drift = 0.48 dB

Maximum value of SAR (measured) = 0.0654 mW/g



Date/Time: 2012-06-22 14:49:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0388 mW/g

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 25 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.445 V/m

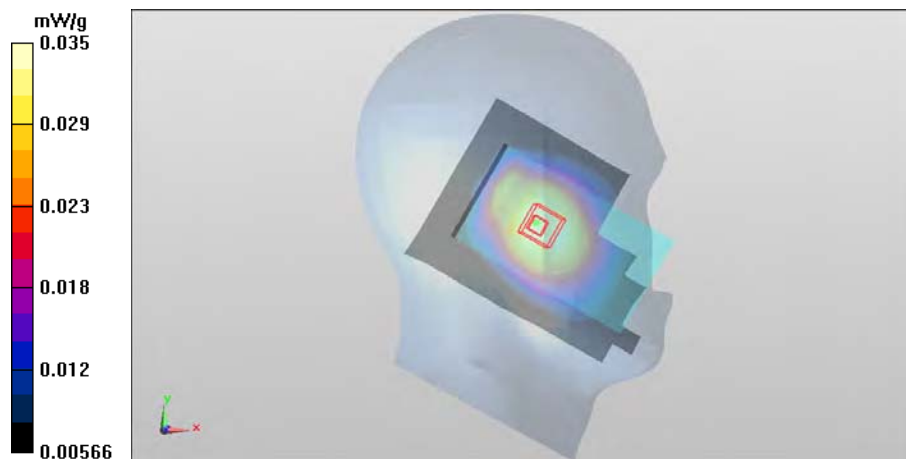
Peak SAR (extrapolated) = 0.042 mW/g

SAR(1 g) = 0.034 mW/g

SAR(10 g) = 0.026 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.0353 mW/g



Date/Time: 2012-06-27 06:36:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid:
dx=15mm, dy=15mm

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

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 25 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.797 V/m

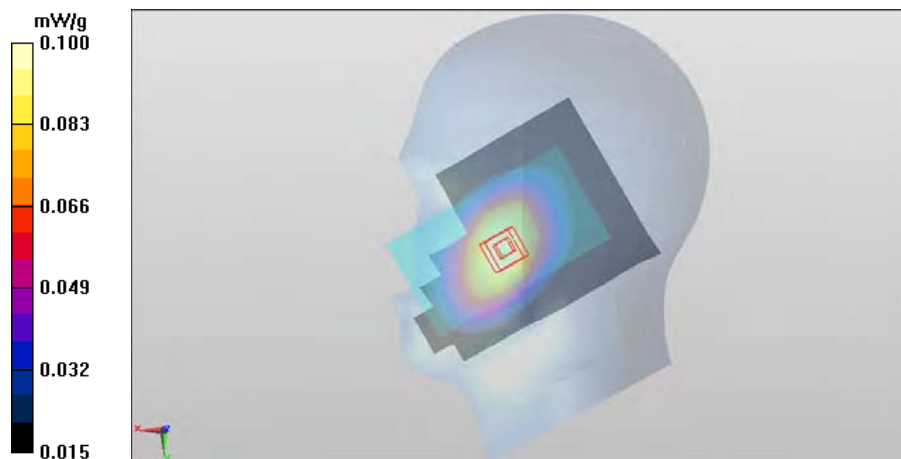
Peak SAR (extrapolated) = 0.117 mW/g

SAR(1 g) = 0.096 mW/g

SAR(10 g) = 0.074 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.100 mW/g



Date/Time: 2012-06-27 11:24:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 25 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0604 mW/g

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 25 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.220 V/m

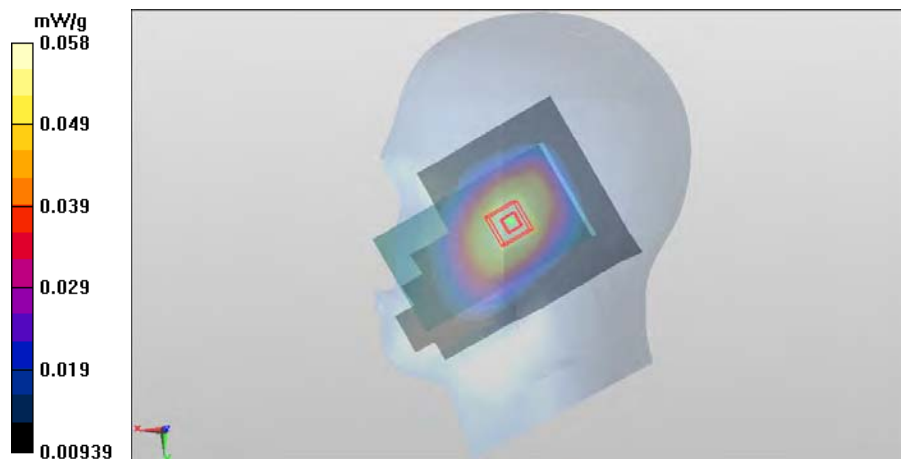
Peak SAR (extrapolated) = 0.068 mW/g

SAR(1 g) = 0.056 mW/g

SAR(10 g) = 0.043 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.0584 mW/g



Date/Time: 2012-06-22 01:57:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0789 mW/g

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.526 V/m

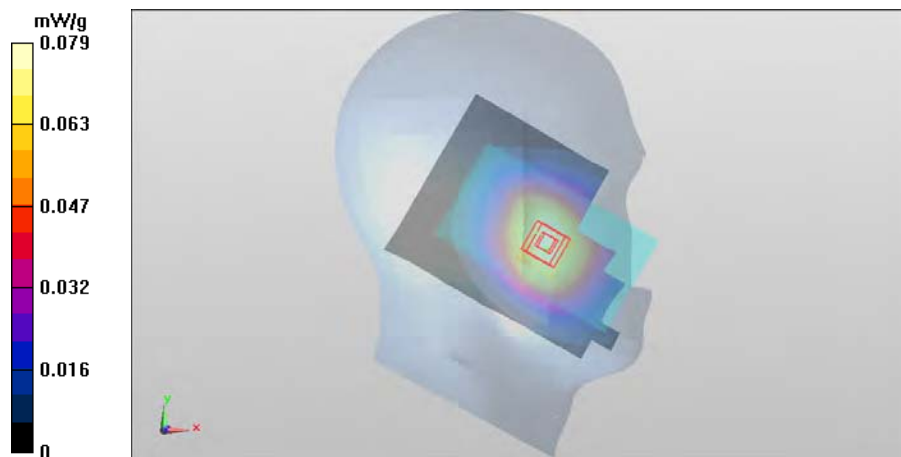
Peak SAR (extrapolated) = 0.092 mW/g

SAR(1 g) = 0.074 mW/g

SAR(10 g) = 0.057 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0772 mW/g



Date/Time: 2012-06-22 15:06:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; σ = 0.884 mho/m; ϵ_r = 40.933; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 50% offset /Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0428 mW/g

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 50% offset /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.902 V/m

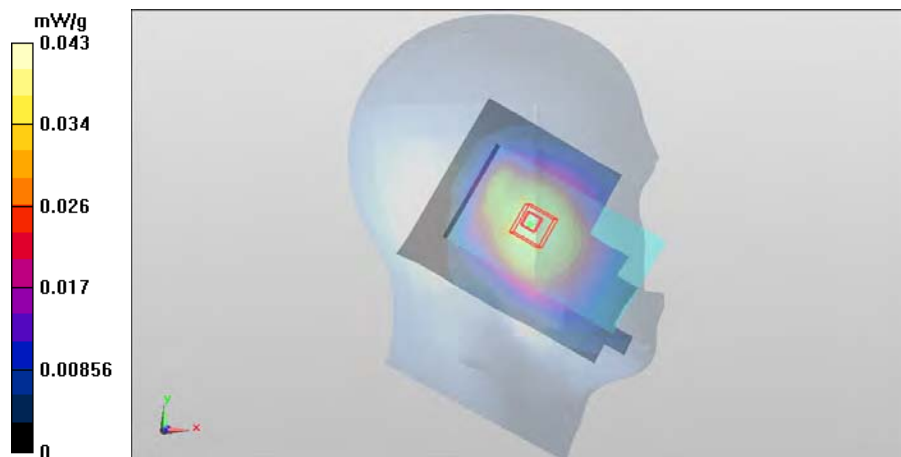
Peak SAR (extrapolated) = 0.049 mW/g

SAR(1 g) = 0.039 mW/g

SAR(10 g) = 0.030 mW/g

Power Drift = 0.29 dB

Maximum value of SAR (measured) = 0.0409 mW/g



Date/Time: 2012-06-27 06:52:25

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.120 mW/g

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.773 V/m

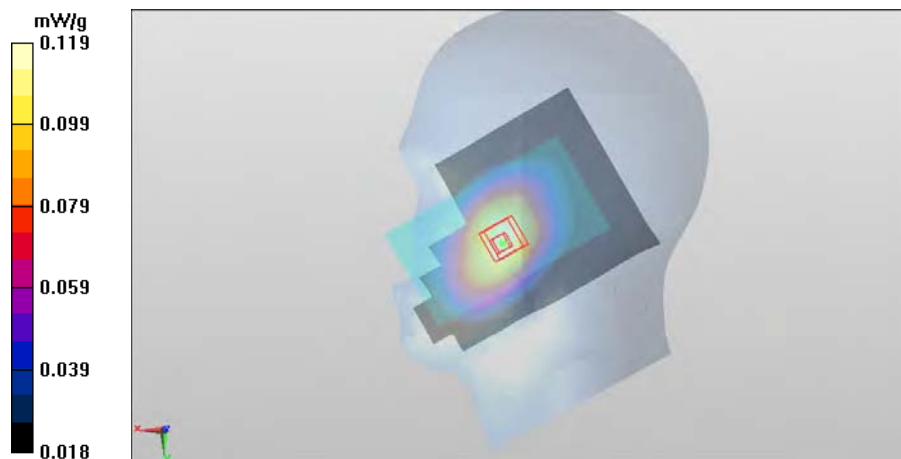
Peak SAR (extrapolated) = 0.140 mW/g

SAR(1 g) = 0.114 mW/g

SAR(10 g) = 0.088 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.119 mW/g



Date/Time: 2012-06-27 14:44:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0689 mW/g

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.654 V/m

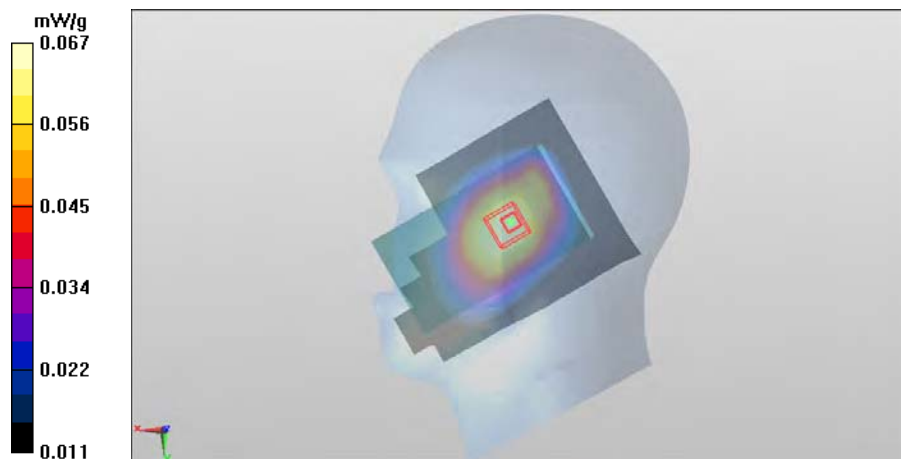
Peak SAR (extrapolated) = 0.076 mW/g

SAR(1 g) = 0.062 mW/g

SAR(10 g) = 0.049 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.0669 mW/g



Date/Time: 2012-06-22 02:17:21

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0946 mW/g

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Zoom Scan (6x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.932 V/m

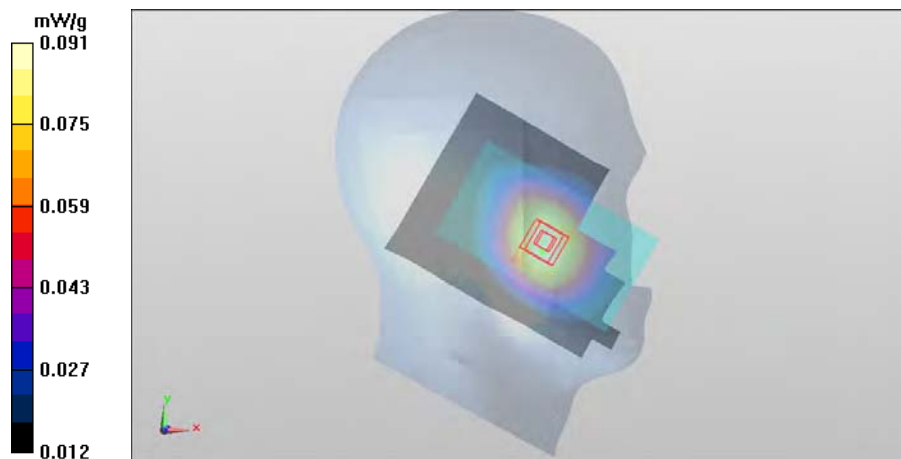
Peak SAR (extrapolated) = 0.110 mW/g

SAR(1 g) = 0.087 mW/g

SAR(10 g) = 0.067 mW/g

Power Drift = 0.35 dB

Maximum value of SAR (measured) = 0.0911 mW/g



Date/Time: 2012-06-22 15:23:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.884$ mho/m; $\epsilon_r = 40.933$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0559 mW/g

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 100% offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid:

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

Reference Value = 7.618 V/m

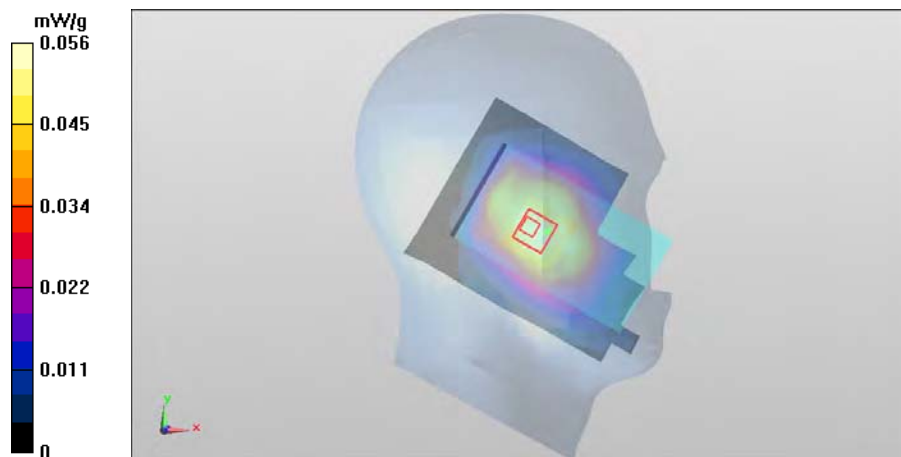
Peak SAR (extrapolated) = 0.071 mW/g

SAR(1 g) = 0.058 mW/g

SAR(10 g) = 0.044 mW/g

Power Drift = 0.46 dB

Maximum value of SAR (measured) = 0.0626 mW/g



Date/Time: 2012-06-27 07:09:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.150 mW/g

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.942 V/m

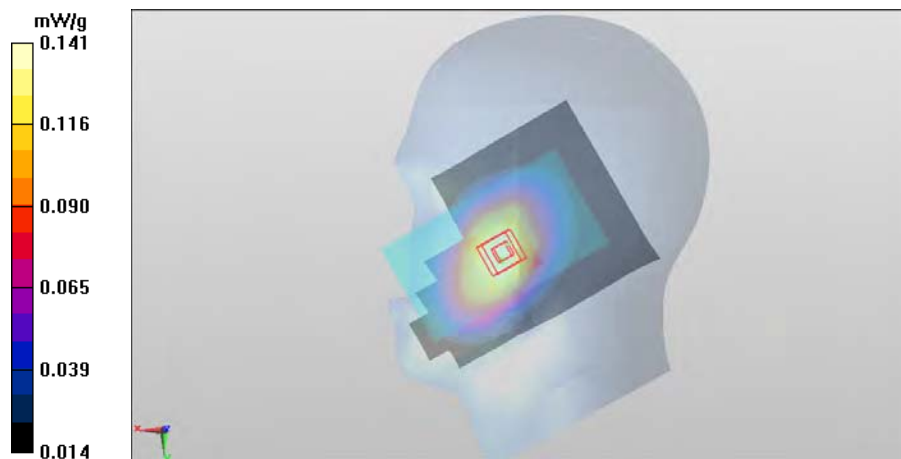
Peak SAR (extrapolated) = 0.175 mW/g

SAR(1 g) = 0.135 mW/g

SAR(10 g) = 0.104 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.141 mW/g



Date/Time: 2012-06-27 15:08:09

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0800 mW/g

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.499 V/m

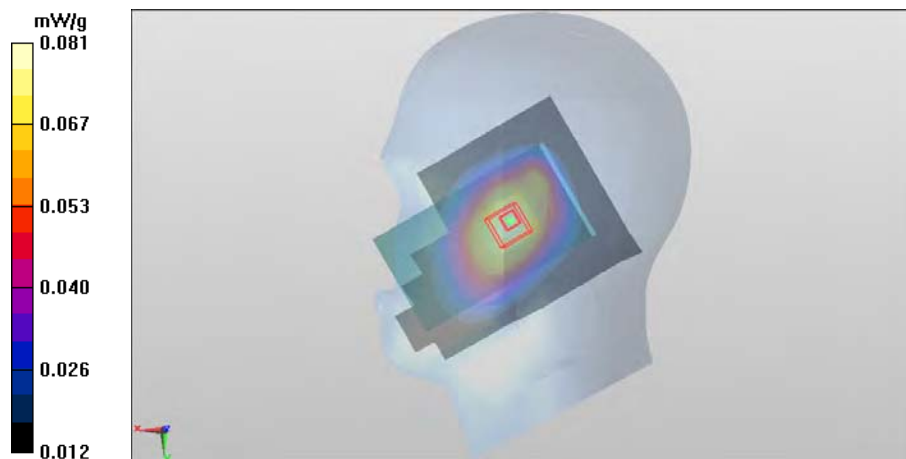
Peak SAR (extrapolated) = 0.094 mW/g

SAR(1 g) = 0.076 mW/g

SAR(10 g) = 0.059 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.0807 mW/g



Date/Time: 2012-06-22 02:36:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL700; Medium Notes: t= 21.3 C

Medium parameters used: f = 710 MHz; σ = 0.887 mho/m; ϵ_r = 41.157; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0521 mW/g

LTE-Left/Cheek - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Zoom Scan (6x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.517 V/m

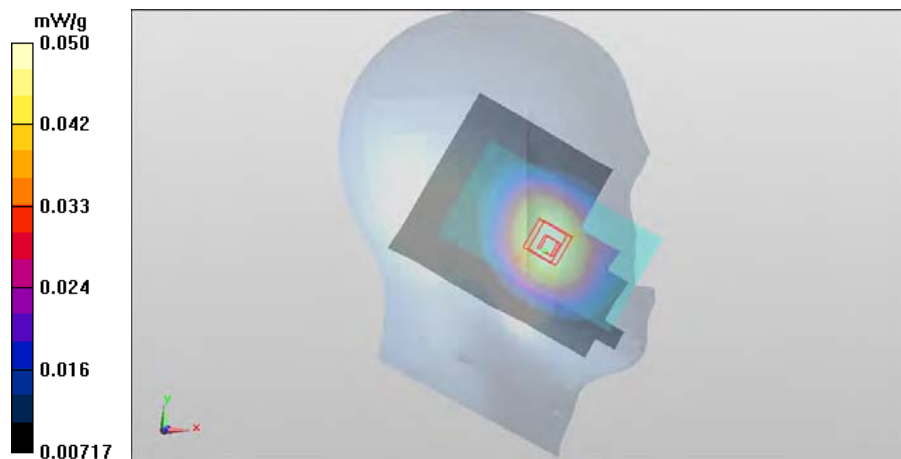
Peak SAR (extrapolated) = 0.059 mW/g

SAR(1 g) = 0.049 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = 0.22 dB

Maximum value of SAR (measured) = 0.0502 mW/g



Date/Time: 2012-06-22 15:48:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 20.3 C

Medium parameters used: f = 710 MHz; $\sigma = 0.884$ mho/m; $\epsilon_r = 40.933$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0339 mW/g

LTE - Left/Tilt - Middle - 16QAM- 10MHz - 1 RB - 0% offset/Zoom Scan (5x6x7)/Cube 0: Measurement grid:

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

Reference Value = 6.239 V/m

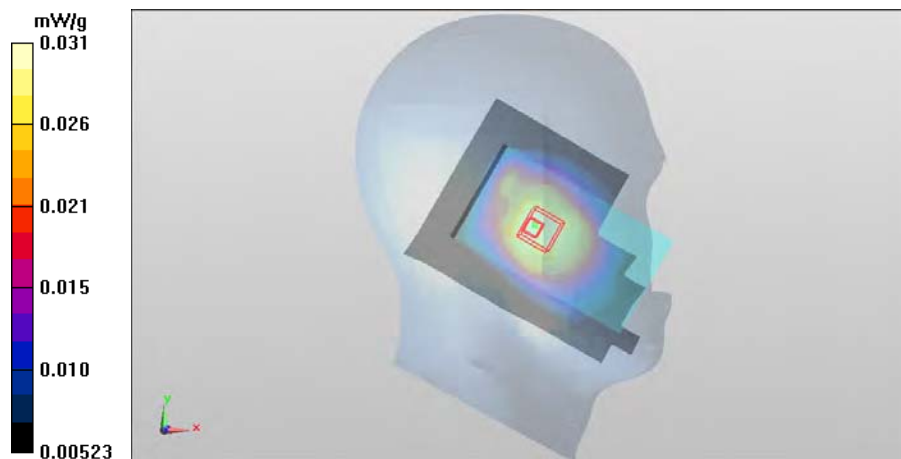
Peak SAR (extrapolated) = 0.042 mW/g

SAR(1 g) = 0.028 mW/g

SAR(10 g) = 0.022 mW/g

Power Drift = -0.32 dB

Maximum value of SAR (measured) = 0.0309 mW/g



Date/Time: 2012-06-27 07:28:29

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0829 mW/g

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.711 V/m

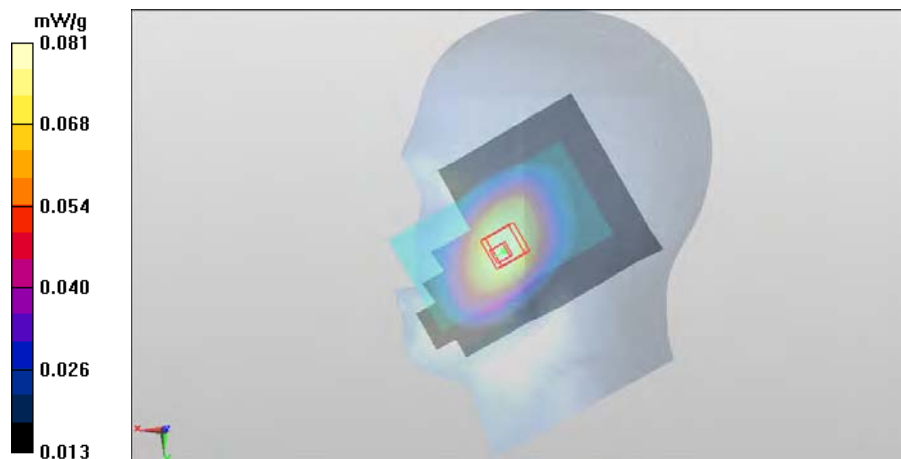
Peak SAR (extrapolated) = 0.095 mW/g

SAR(1 g) = 0.077 mW/g

SAR(10 g) = 0.060 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 0.0812 mW/g



Date/Time: 2012-06-27 15:25:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: HSL750; Medium Notes: t= 21.0

Medium parameters used: f = 710 MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 40.646$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial: -
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0489 mW/g

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.924 V/m

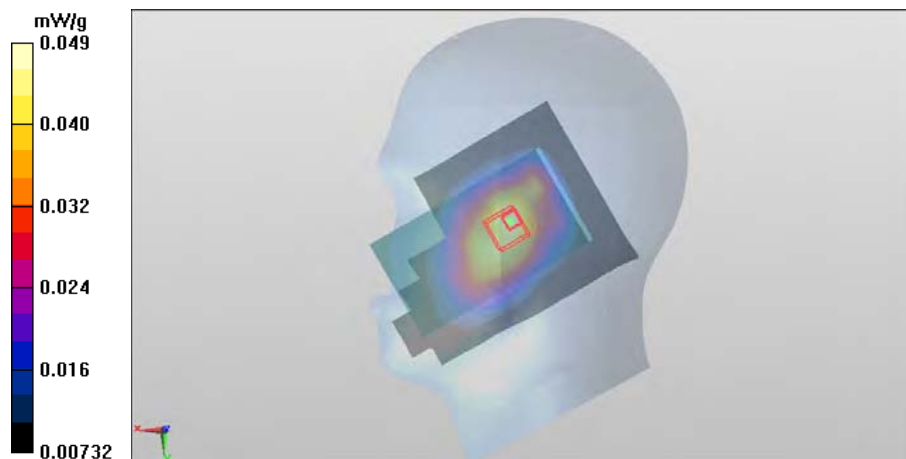
Peak SAR (extrapolated) = 0.062 mW/g

SAR(1 g) = 0.044 mW/g

SAR(10 g) = 0.034 mW/g

Power Drift = 0.32 dB

Maximum value of SAR (measured) = 0.0485 mW/g



Date/Time: 2012-06-14 11:38:26

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 837 MHz; σ = 0.92 mho/m; ϵ_r = 40.472; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

GSM - Left/Cheek - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.376 mW/g

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

Reference Value = 7.732 V/m

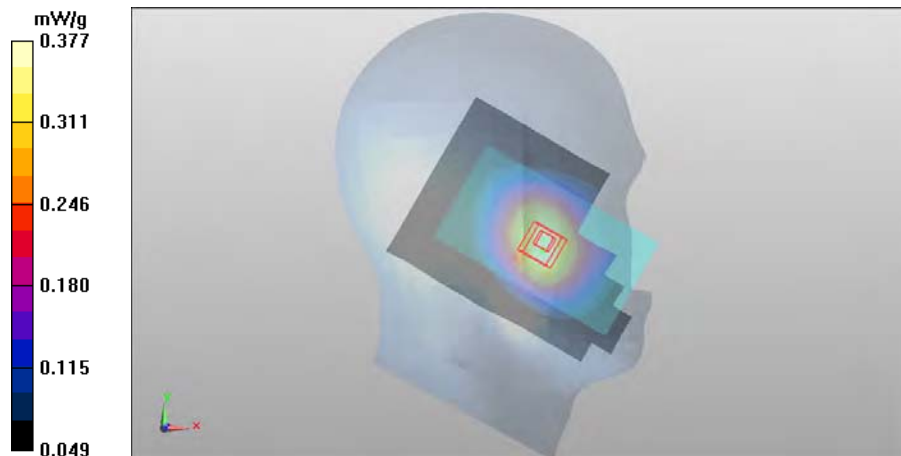
Peak SAR (extrapolated) = 0.438 mW/g

SAR(1 g) = 0.358 mW/g

SAR(10 g) = 0.272 mW/g

Power Drift = -0.21 dB

Maximum value of SAR (measured) = 0.377 mW/g



Date/Time: 2012-06-14 12:03:18

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 837 MHz; σ = 0.92 mho/m; ϵ_r = 40.472; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Left/Cheek - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.649 mW/g

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

Reference Value = 9.743 V/m

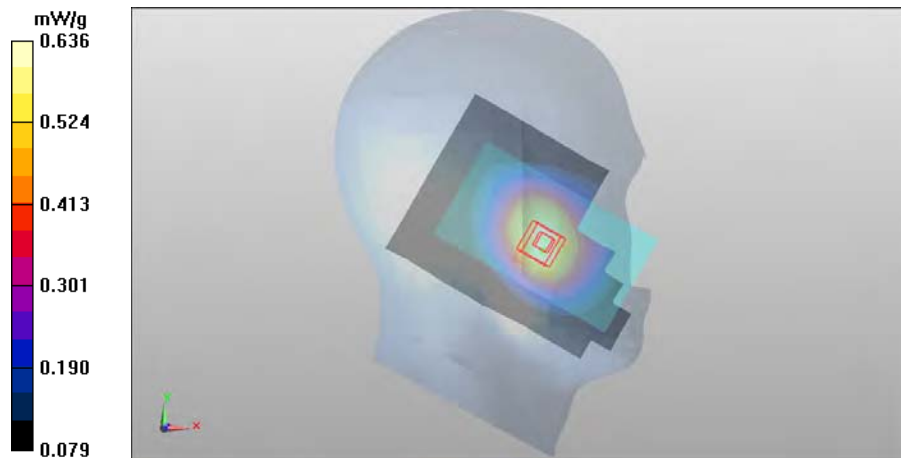
Peak SAR (extrapolated) = 0.740 mW/g

SAR(1 g) = 0.602 mW/g

SAR(10 g) = 0.454 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.636 mW/g



Date/Time: 2012-06-14 12:23:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 837 MHz; σ = 0.92 mho/m; ϵ_r = 40.472; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Left/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.419 mW/g

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

Reference Value = 14.392 V/m

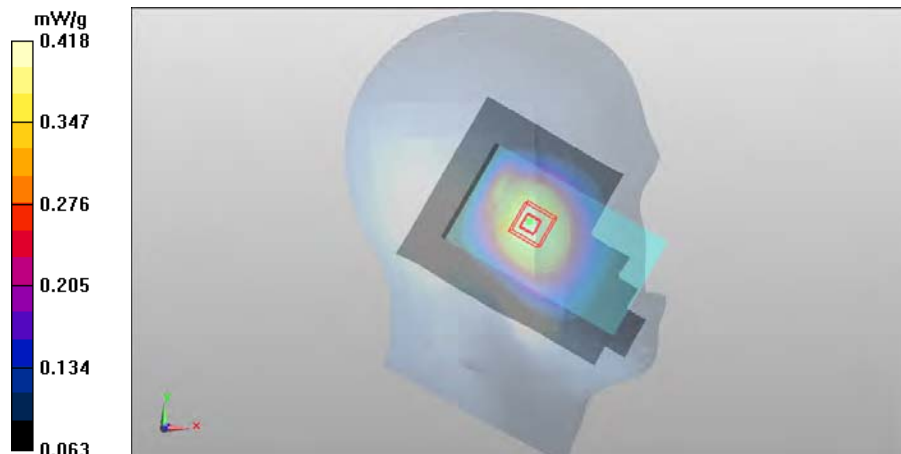
Peak SAR (extrapolated) = 0.480 mW/g

SAR(1 g) = 0.398 mW/g

SAR(10 g) = 0.308 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.418 mW/g



Date/Time: 2012-06-14 17:29:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 849 MHz; σ = 0.928 mho/m; ϵ_r = 40.393; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Right/Cheek - High/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.780 mW/g

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

Reference Value = 11.257 V/m

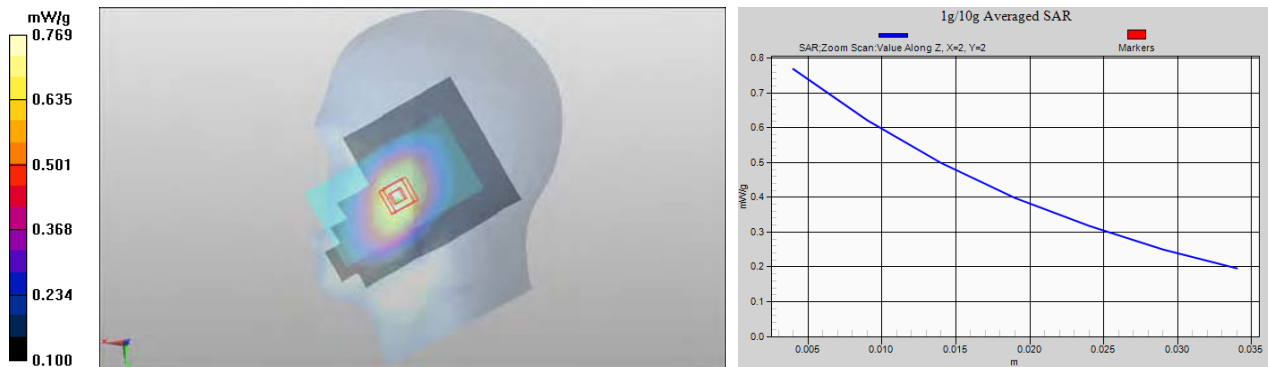
Peak SAR (extrapolated) = 0.894 mW/g

SAR(1 g) = 0.735 mW/g

SAR(10 g) = 0.563 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.769 mW/g



Date/Time: 2012-06-14 16:52:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 837 MHz; σ = 0.92 mho/m; ϵ_r = 40.472; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Right/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.456 mW/g

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

Reference Value = 14.951 V/m

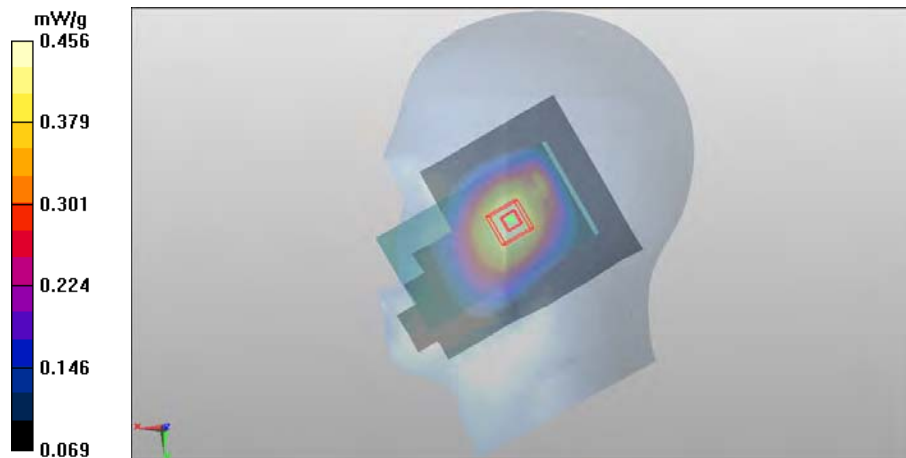
Peak SAR (extrapolated) = 0.521 mW/g

SAR(1 g) = 0.433 mW/g

SAR(10 g) = 0.334 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.456 mW/g



Date/Time: 2012-06-14 17:57:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot 8PSK EGPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: HSL835; Medium Notes: t= 21.2 C

Medium parameters used: f = 849 MHz; σ = 0.928 mho/m; ϵ_r = 40.393; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot QPSK EGPRS - Right/Cheek - High/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.229 mW/g

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

Reference Value = 5.544 V/m

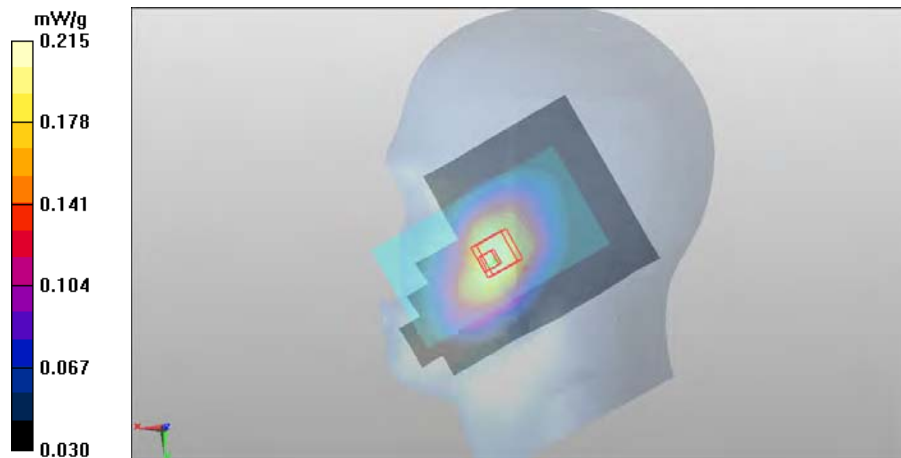
Peak SAR (extrapolated) = 0.252 mW/g

SAR(1 g) = 0.197 mW/g

SAR(10 g) = 0.154 mW/g

Power Drift = 0.37 dB

Maximum value of SAR (measured) = 0.215 mW/g



Date/Time: 2012-06-21 11:19:52

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.899 mho/m; ϵ_r = 40.072; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA - Left/Cheek - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.350 mW/g

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

Reference Value = 7.913 V/m

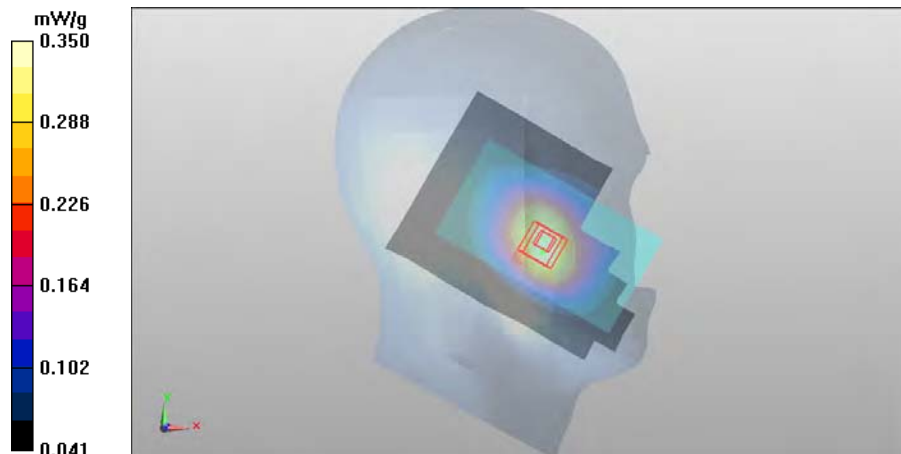
Peak SAR (extrapolated) = 0.414 mW/g

SAR(1 g) = 0.333 mW/g

SAR(10 g) = 0.247 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.350 mW/g



Date/Time: 2012-06-21 11:40:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.899 mho/m; ϵ_r = 40.072; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA - Left/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.213 mW/g

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

Reference Value = 11.274 V/m

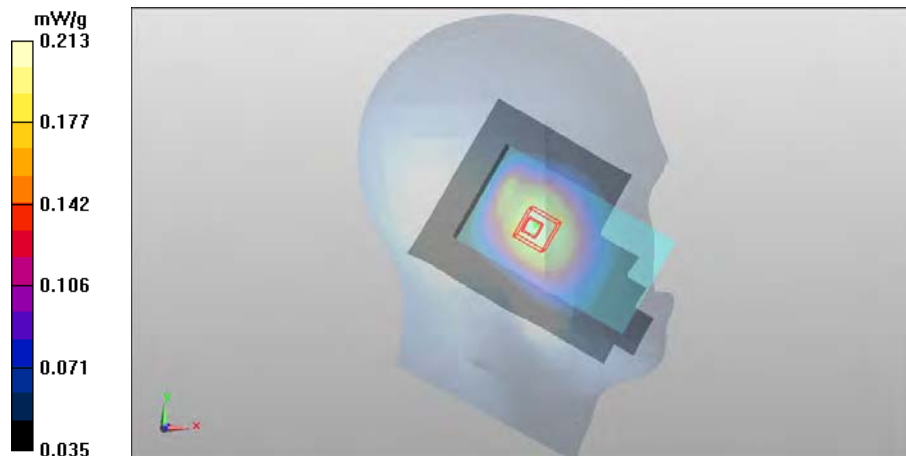
Peak SAR (extrapolated) = 0.247 mW/g

SAR(1 g) = 0.203 mW/g

SAR(10 g) = 0.157 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.213 mW/g



Date/Time: 2012-06-21 12:22:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.893 mho/m; ϵ_r = 40.128; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA - Right/Cheek - Low/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

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

WCDMA - Right/Cheek - Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.924 V/m

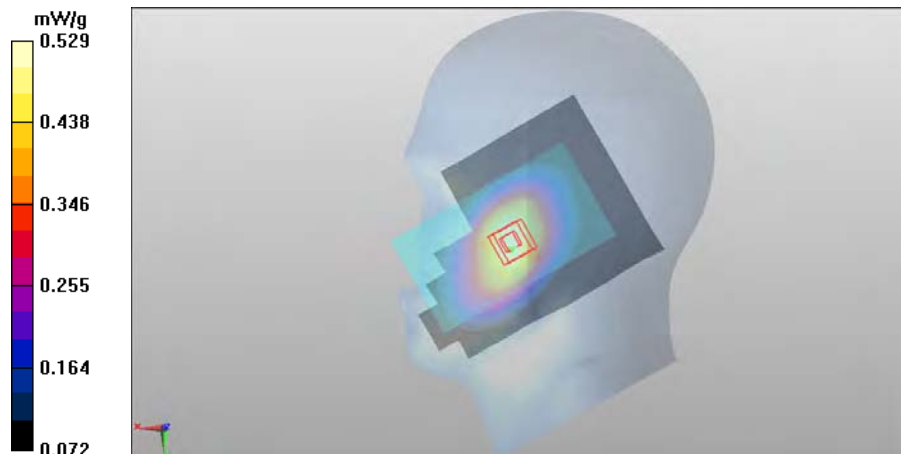
Peak SAR (extrapolated) = 0.615 mW/g

SAR(1 g) = 0.508 mW/g

SAR(10 g) = 0.391 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.529 mW/g



Date/Time: 2012-06-21 12:54:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 40.072$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA - Right/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.255 mW/g

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

Reference Value = 11.610 V/m

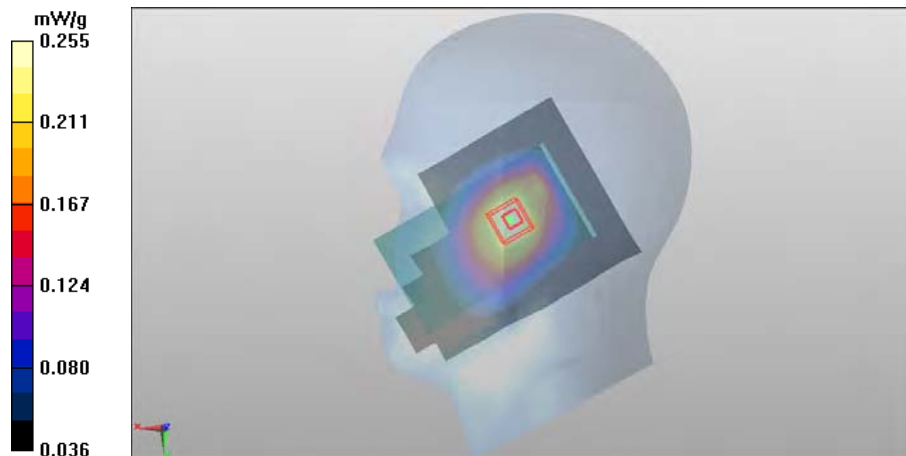
Peak SAR (extrapolated) = 0.295 mW/g

SAR(1 g) = 0.244 mW/g

SAR(10 g) = 0.187 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.255 mW/g



Date/Time: 2012-06-19 16:25:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK -10MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.206 W/kg

LTE - Left/Cheek - Middle - QPSK -10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 4.996 V/m

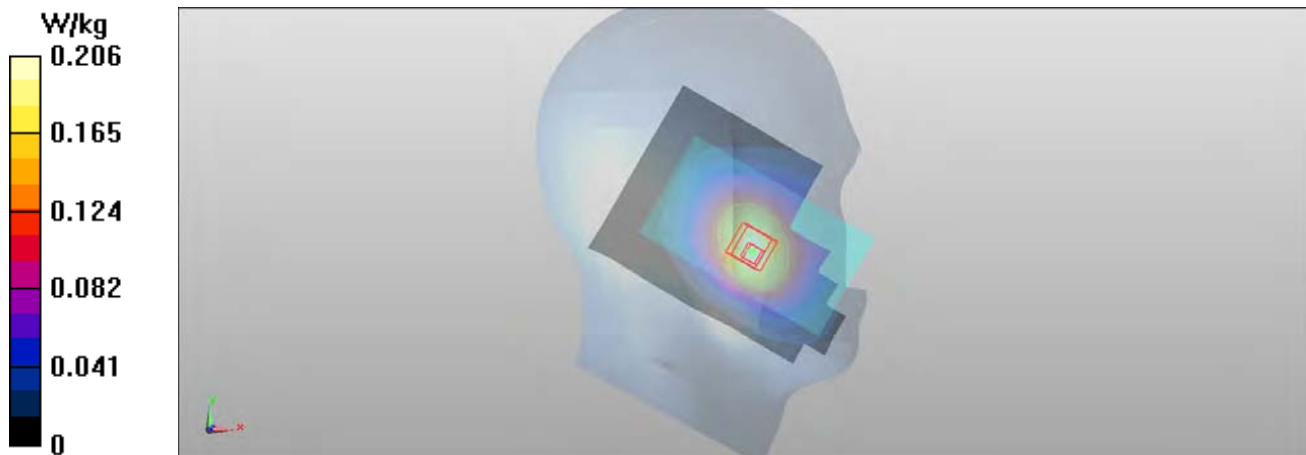
Peak SAR (extrapolated) = 0.241 mW/g

SAR(1 g) = 0.192 mW/g

SAR(10 g) = 0.146 mW/g

Power Drift = 0.43 dB

Maximum value of SAR (measured) = 0.199 W/kg



Date/Time: 2012-06-20 09:10:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 40.709$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK -10MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.128 W/kg

LTE - Left/Tilt - Middle - QPSK -10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.675 V/m

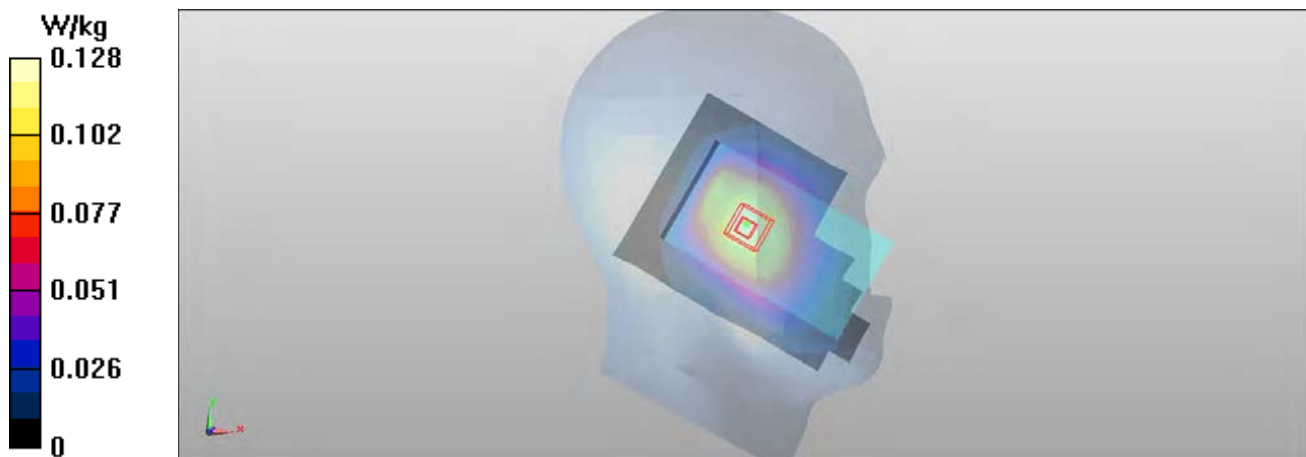
Peak SAR (extrapolated) = 0.146 mW/g

SAR(1 g) = 0.119 mW/g

SAR(10 g) = 0.091 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.124 W/kg



Date/Time: 2012-06-23 12:17:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.232 W/kg

LTE - Right/Cheek - Middle - QPSK - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.399 V/m

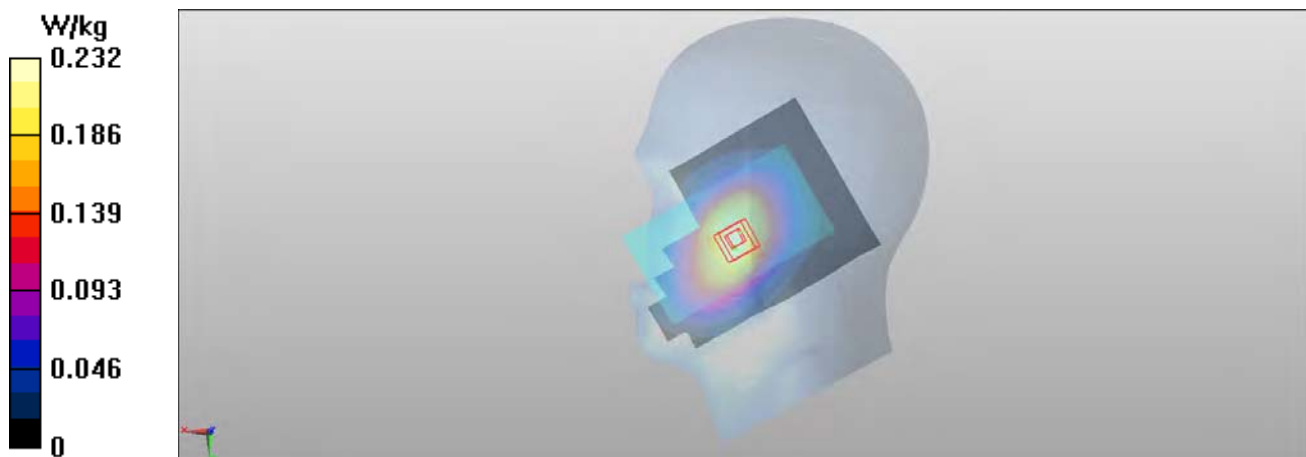
Peak SAR (extrapolated) = 0.269 mW/g

SAR(1 g) = 0.222 mW/g

SAR(10 g) = 0.169 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.232 W/kg



Date/Time: 2012-06-23 19:46:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.93 mho/m; ϵ_r = 40.421; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.133 W/kg

LTE - Right/Tilt - Middle - QPSK - 10MHz - 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.867 V/m

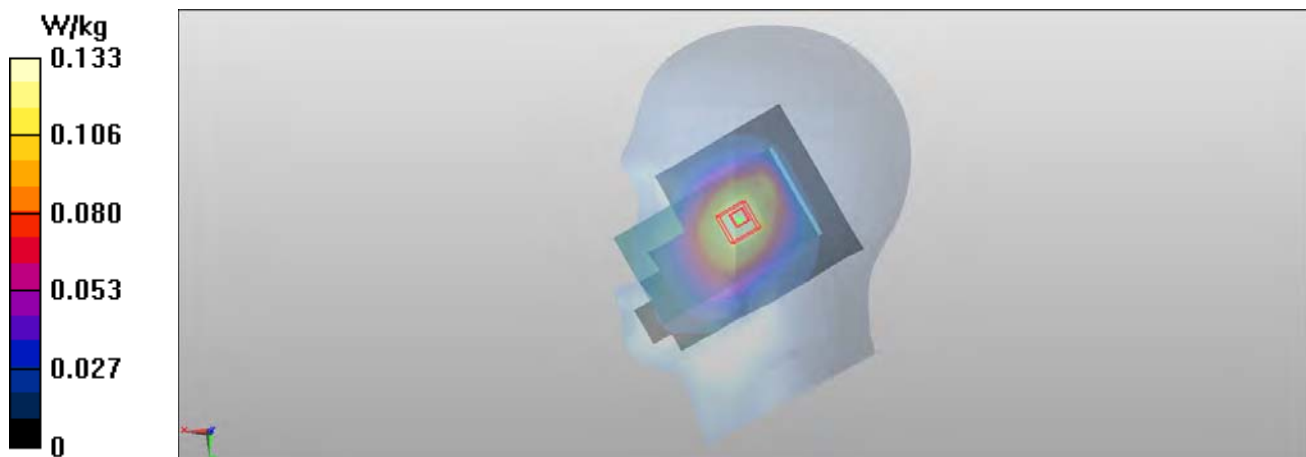
Peak SAR (extrapolated) = 0.152 mW/g

SAR(1 g) = 0.126 mW/g

SAR(10 g) = 0.098 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.131 W/kg



Date/Time: 2012-06-19 17:04:36

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK -10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.201 W/kg

LTE - Left/Cheek - Middle - QPSK -10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.365 V/m

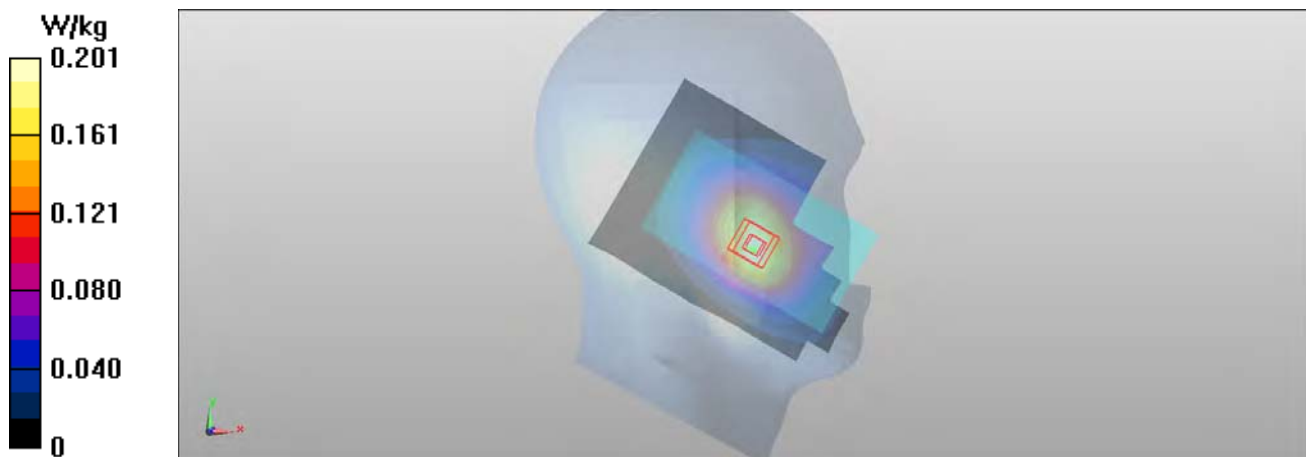
Peak SAR (extrapolated) = 0.237 mW/g

SAR(1 g) = 0.189 mW/g

SAR(10 g) = 0.142 mW/g

Power Drift = 0.37 dB

Maximum value of SAR (measured) = 0.199 W/kg



Date/Time: 2012-06-20 09:29:40

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 40.709$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK -10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.124 W/kg

LTE - Left/Tilt - Middle - QPSK -10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.547 V/m

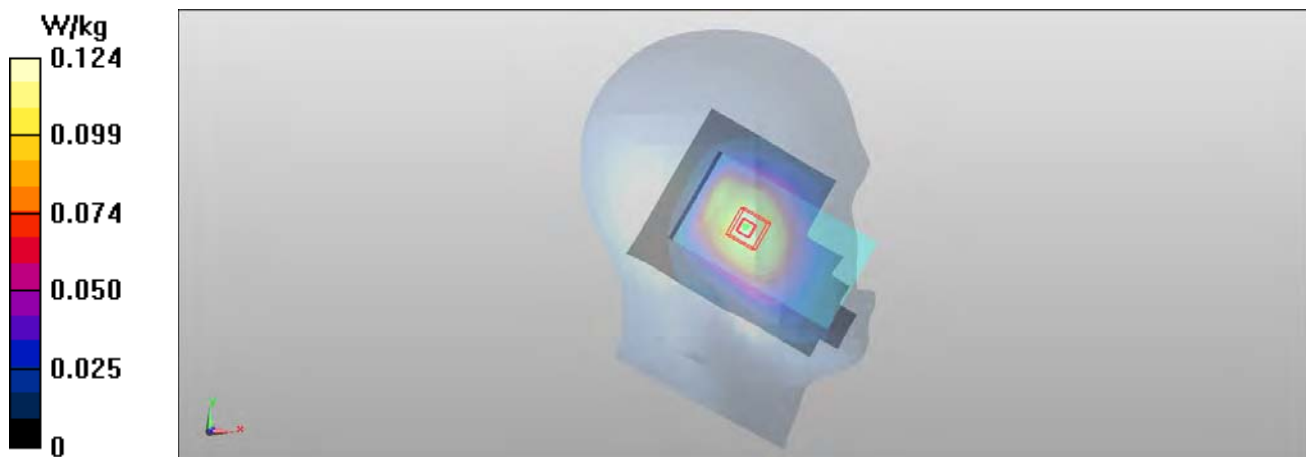
Peak SAR (extrapolated) = 0.143 mW/g

SAR(1 g) = 0.116 mW/g

SAR(10 g) = 0.089 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.123 W/kg



Date/Time: 2012-06-23 12:47:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:
dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.226 W/kg

LTE - Right/Cheek - Middle - QPSK - 10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.175 V/m

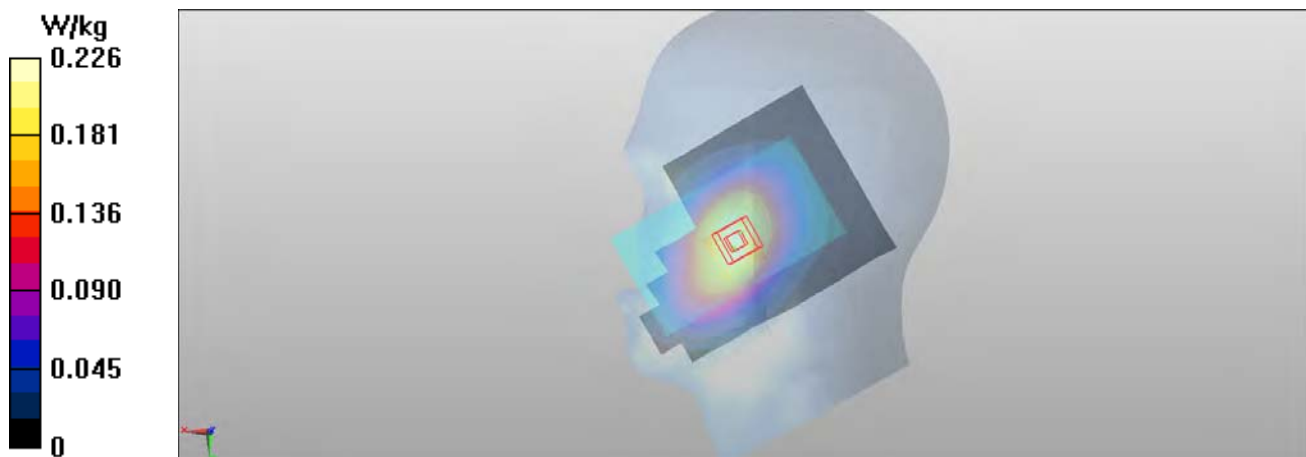
Peak SAR (extrapolated) = 0.258 mW/g

SAR(1 g) = 0.214 mW/g

SAR(10 g) = 0.164 mW/g

Power Drift = 0.27 dB

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



Date/Time: 2012-06-23 20:00:26

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.126 W/kg

LTE - Right/Tilt - Middle - QPSK - 10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.636 V/m

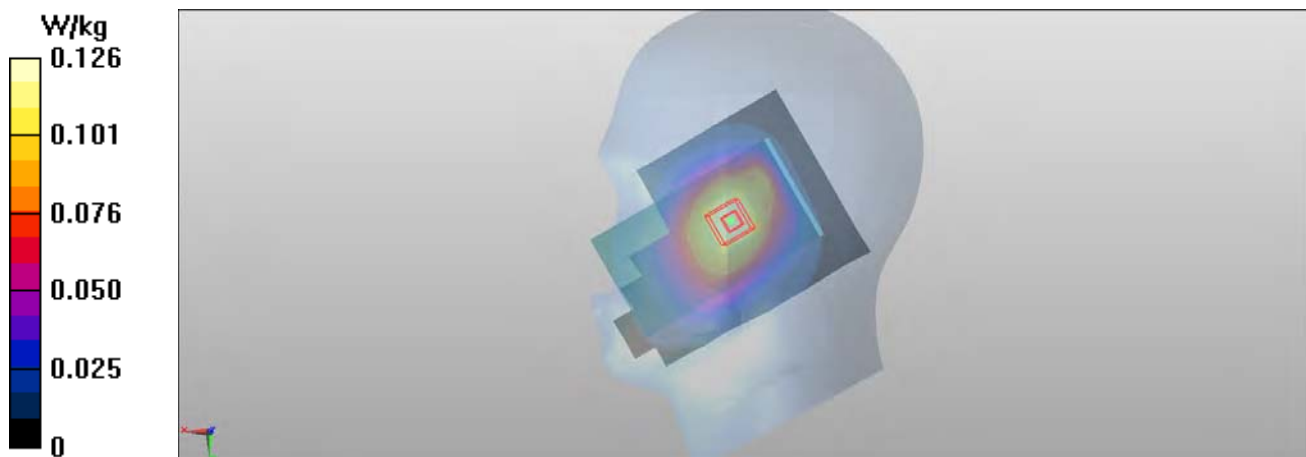
Peak SAR (extrapolated) = 0.148 mW/g

SAR(1 g) = 0.121 mW/g

SAR(10 g) = 0.093 mW/g

Power Drift = 0.14 dB

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



Date/Time: 2012-06-19 17:20:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - 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) = 0.266 W/kg

LTE - Left/Cheek - Middle - QPSK -10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.133 V/m

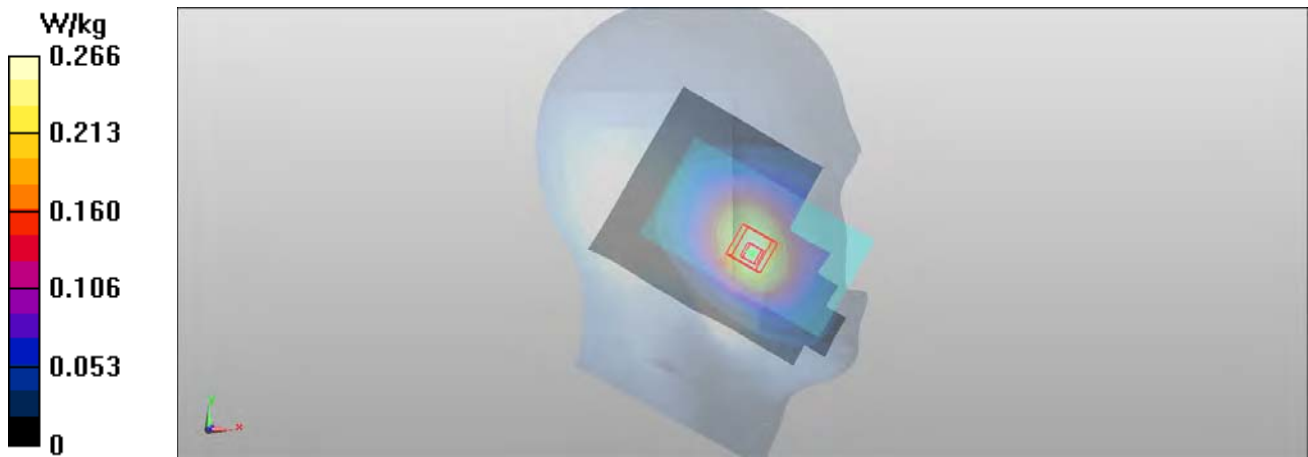
Peak SAR (extrapolated) = 0.302 mW/g

SAR(1 g) = 0.243 mW/g

SAR(10 g) = 0.182 mW/g

Power Drift = 0.26 dB

Maximum value of SAR (measured) = 0.257 W/kg



Date/Time: 2012-06-20 09:48:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 40.709$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.159 W/kg

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.705 V/m

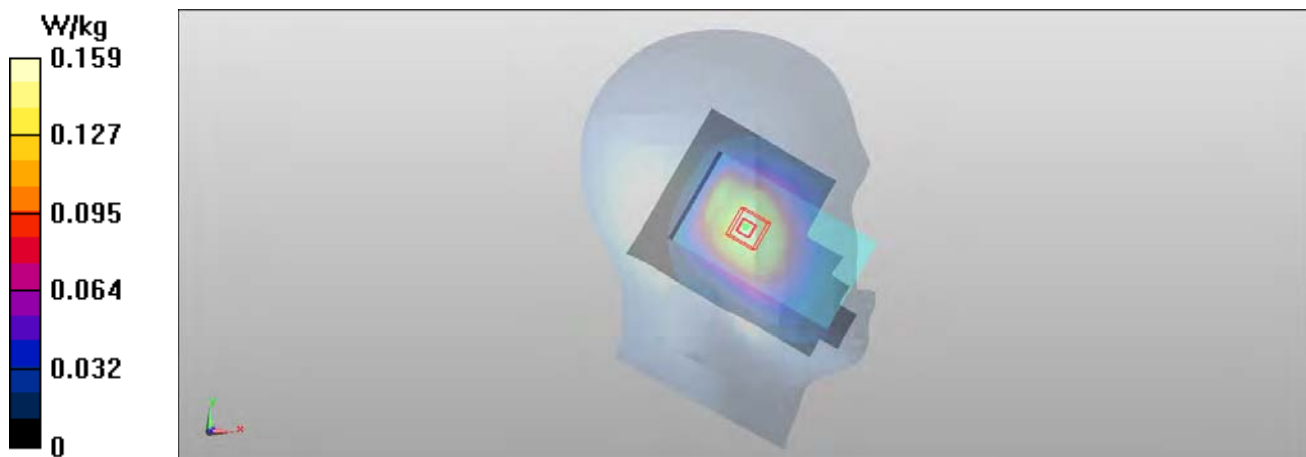
Peak SAR (extrapolated) = 0.180 mW/g

SAR(1 g) = 0.148 mW/g

SAR(10 g) = 0.113 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.156 W/kg



Date/Time: 2012-06-23 13:04:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - 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) = 0.285 W/kg

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.957 V/m

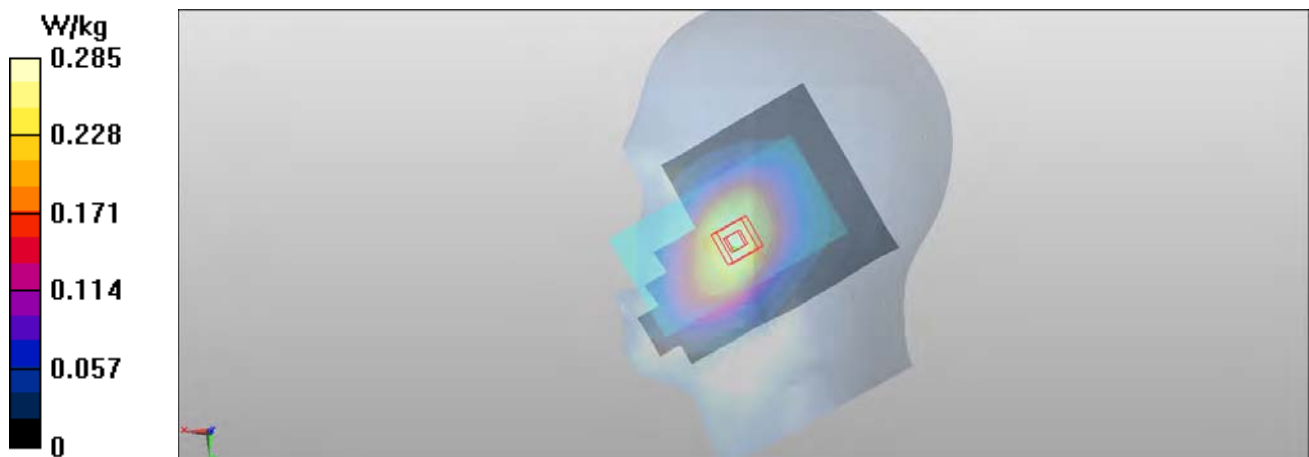
Peak SAR (extrapolated) = 0.330 mW/g

SAR(1 g) = 0.272 mW/g

SAR(10 g) = 0.208 mW/g

Power Drift = 0.25 dB

Maximum value of SAR (measured) = 0.284 W/kg



Date/Time: 2012-06-23 20:14:47

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.158 W/kg

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.555 V/m

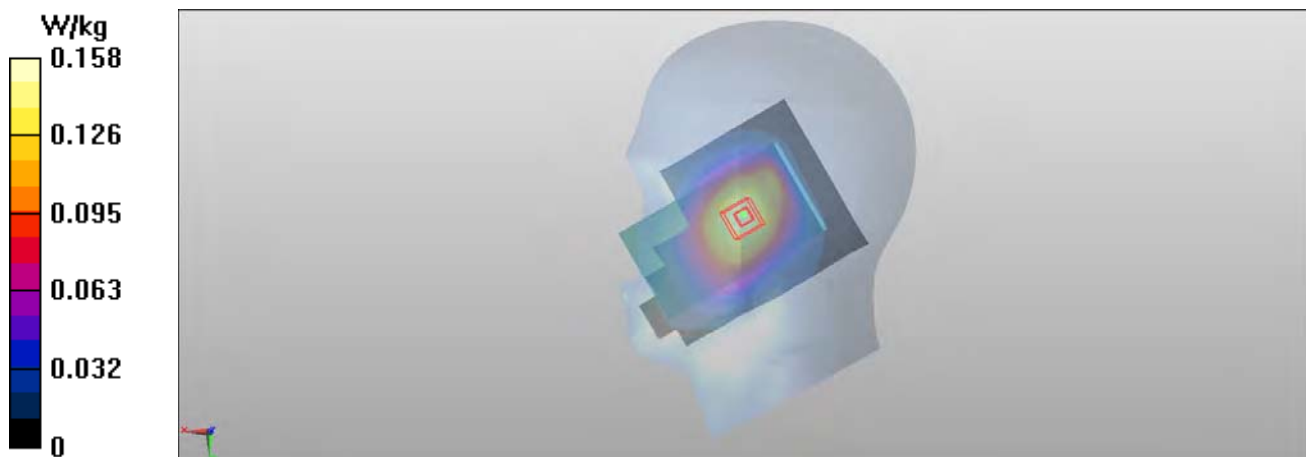
Peak SAR (extrapolated) = 0.186 mW/g

SAR(1 g) = 0.153 mW/g

SAR(10 g) = 0.116 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 0.163 W/kg



Date/Time: 2012-06-19 17:34:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK -10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.338 W/kg

LTE - Left/Cheek - Middle - QPSK -10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.924 V/m

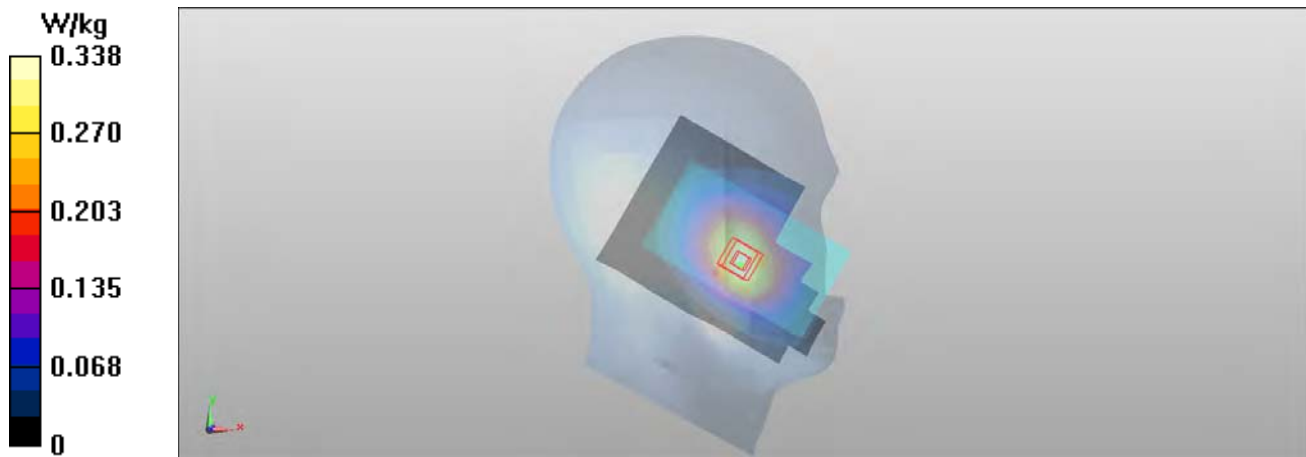
Peak SAR (extrapolated) = 0.388 mW/g

SAR(1 g) = 0.307 mW/g

SAR(10 g) = 0.231 mW/g

Power Drift = 0.30 dB

Maximum value of SAR (measured) = 0.320 W/kg



Date/Time: 2012-06-21 07:22:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 40.062$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.193 W/kg

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.954 V/m

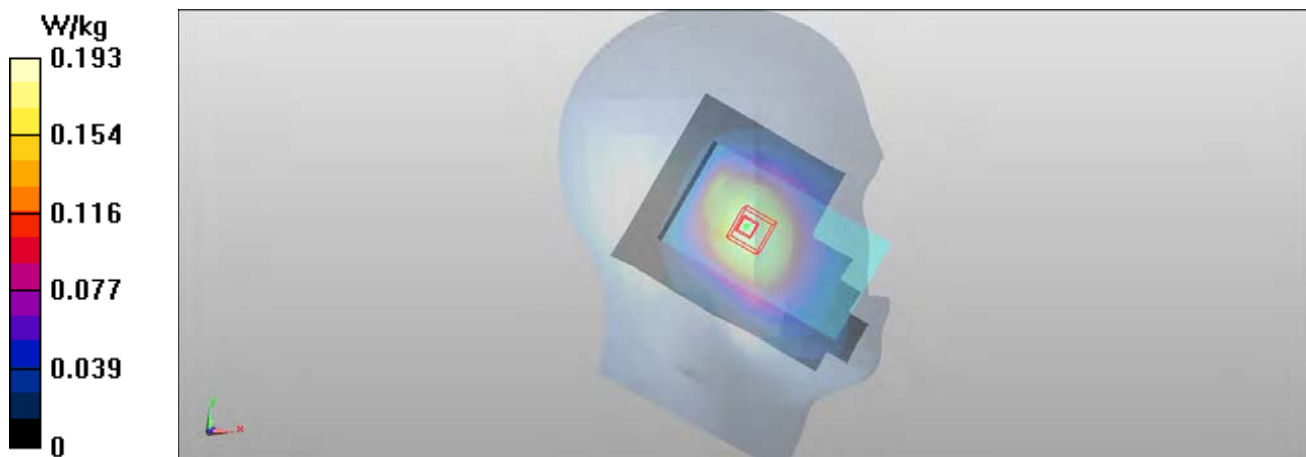
Peak SAR (extrapolated) = 0.224 mW/g

SAR(1 g) = 0.184 mW/g

SAR(10 g) = 0.143 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.194 W/kg



Date/Time: 2012-06-23 13:22:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

dx=1.500 mm, dy=1.500 mm

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

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.023 V/m

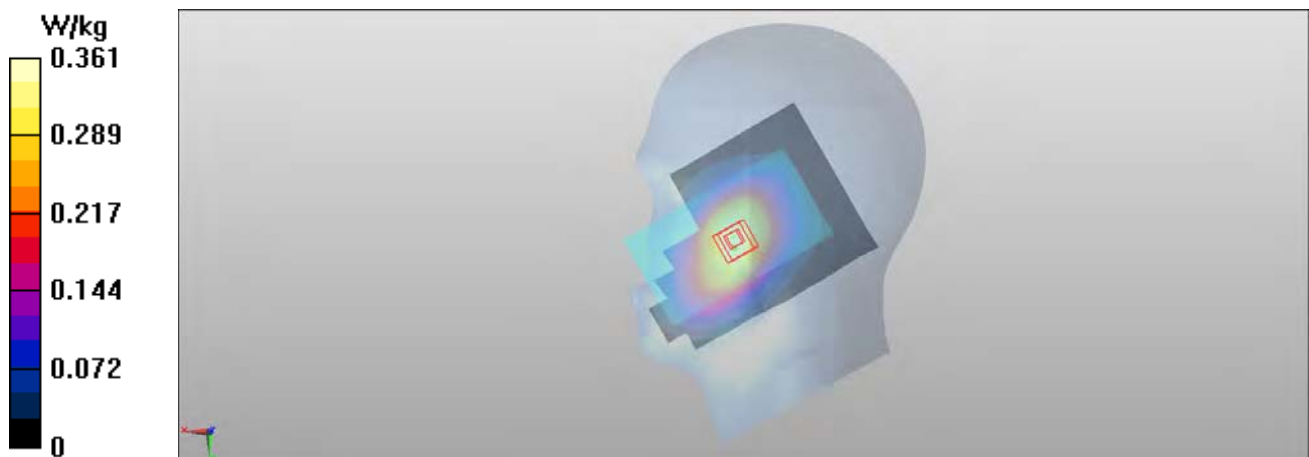
Peak SAR (extrapolated) = 0.403 mW/g

SAR(1 g) = 0.341 mW/g

SAR(10 g) = 0.262 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.357 W/kg



Date/Time: 2012-06-23 20:28:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.206 W/kg

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.024 V/m

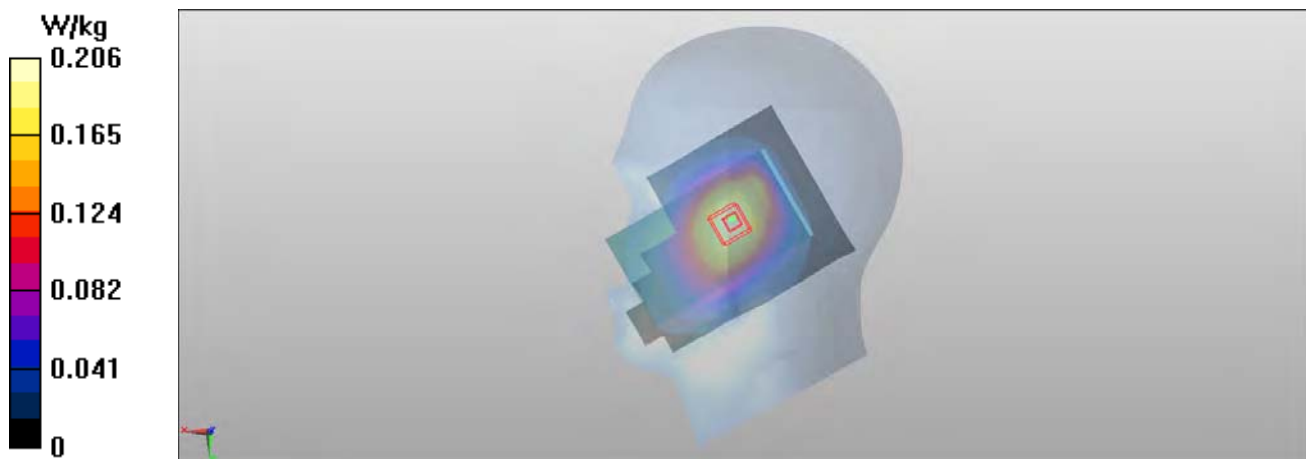
Peak SAR (extrapolated) = 0.239 mW/g

SAR(1 g) = 0.198 mW/g

SAR(10 g) = 0.153 mW/g

Power Drift = -0.05 dB

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



Date/Time: 2012-06-19 17:50:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK -10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.212 W/kg

LTE - Left/Cheek - Middle - QPSK -10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.409 V/m

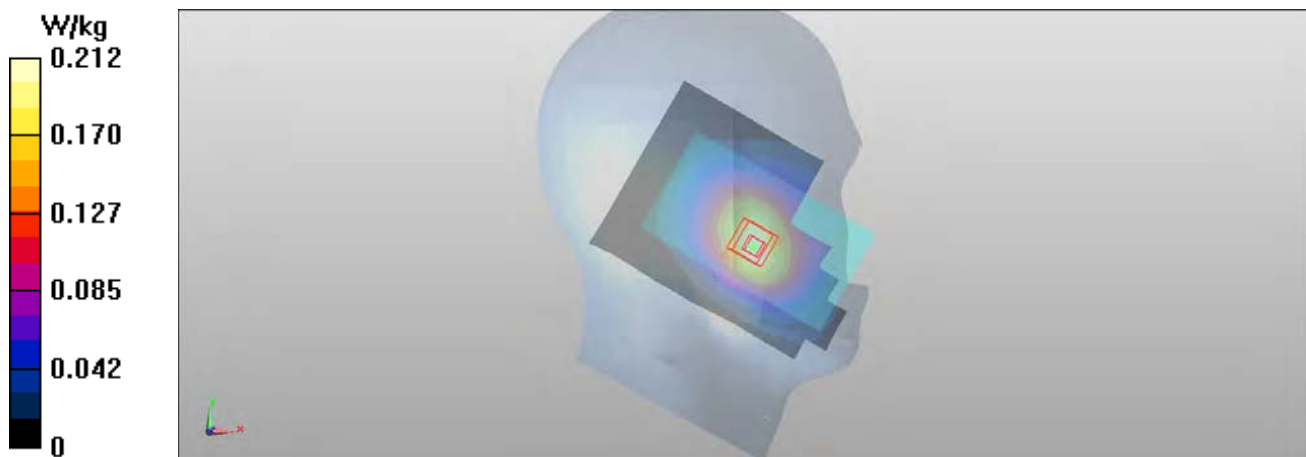
Peak SAR (extrapolated) = 0.245 mW/g

SAR(1 g) = 0.196 mW/g

SAR(10 g) = 0.148 mW/g

Power Drift = 0.43 dB

Maximum value of SAR (measured) = 0.206 W/kg



Date/Time: 2012-06-21 07:41:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 40.062$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.132 W/kg

LTE - Left/Tilt - Middle - QPSK -10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.990 V/m

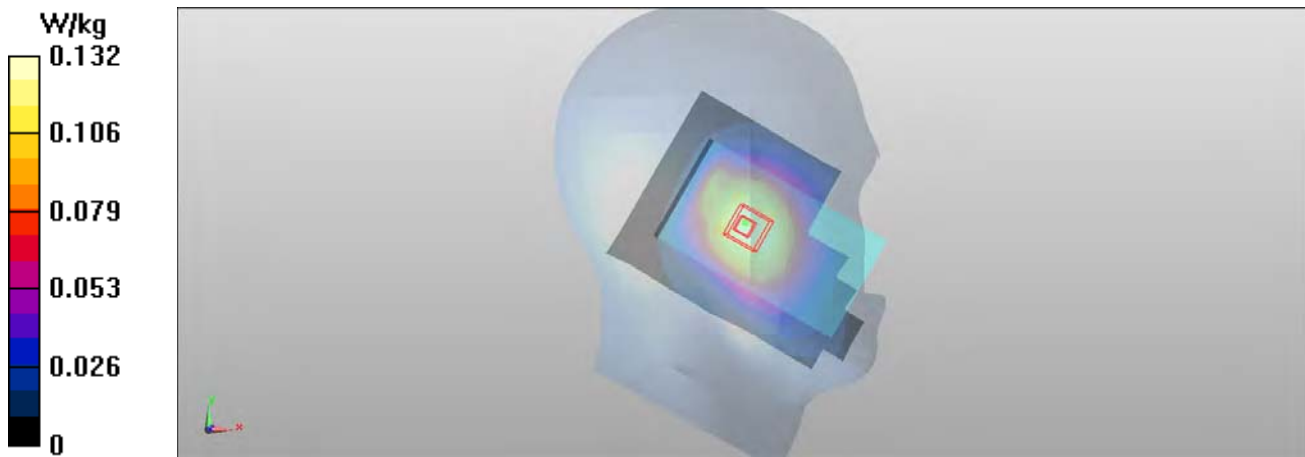
Peak SAR (extrapolated) = 0.148 mW/g

SAR(1 g) = 0.125 mW/g

SAR(10 g) = 0.097 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.130 W/kg



Date/Time: 2012-06-23 13:35:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.242 W/kg

LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.402 V/m

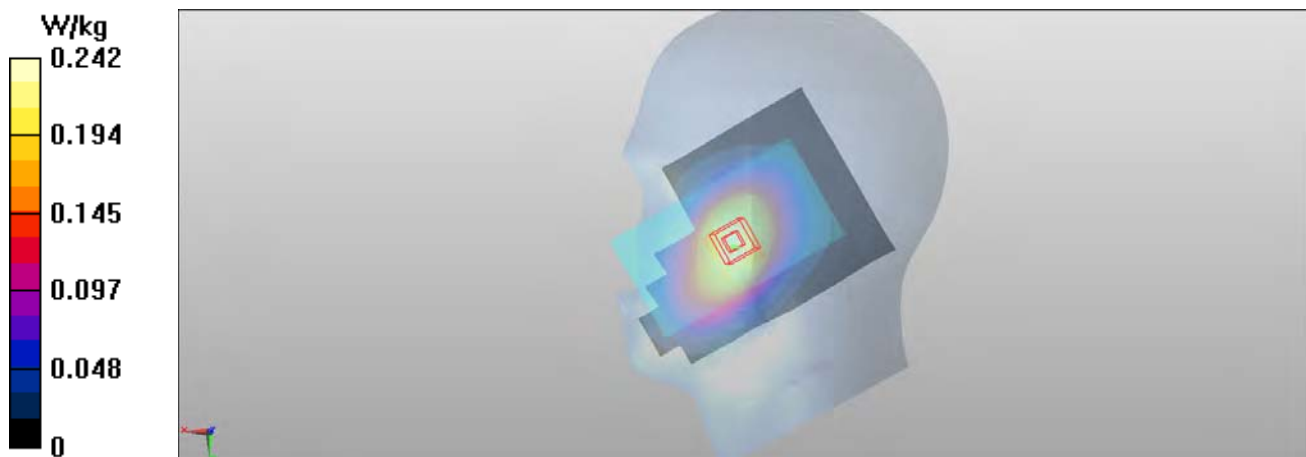
Peak SAR (extrapolated) = 0.283 mW/g

SAR(1 g) = 0.230 mW/g

SAR(10 g) = 0.176 mW/g

Power Drift = 0.27 dB

Maximum value of SAR (measured) = 0.243 W/kg



Date/Time: 2012-06-23 20:41:52

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.157 W/kg

LTE - Right/Tilt - Middle - QPSK - 10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.639 V/m

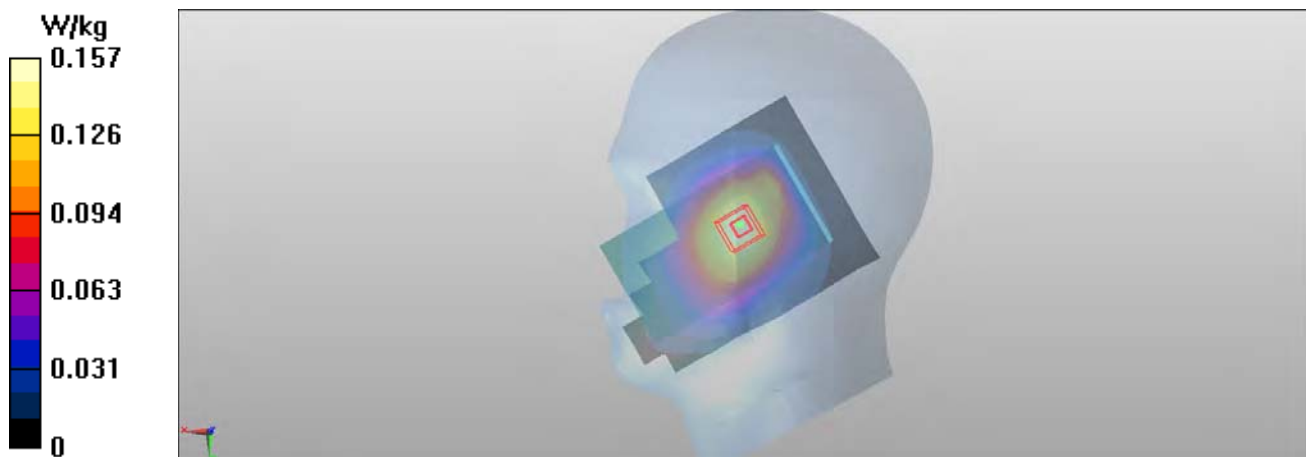
Peak SAR (extrapolated) = 0.179 mW/g

SAR(1 g) = 0.149 mW/g

SAR(10 g) = 0.115 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.156 W/kg



Date/Time: 2012-06-19 19:46:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM -10MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.163 W/kg

LTE - Left/Cheek - Middle - 16QAM -10MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.368 V/m

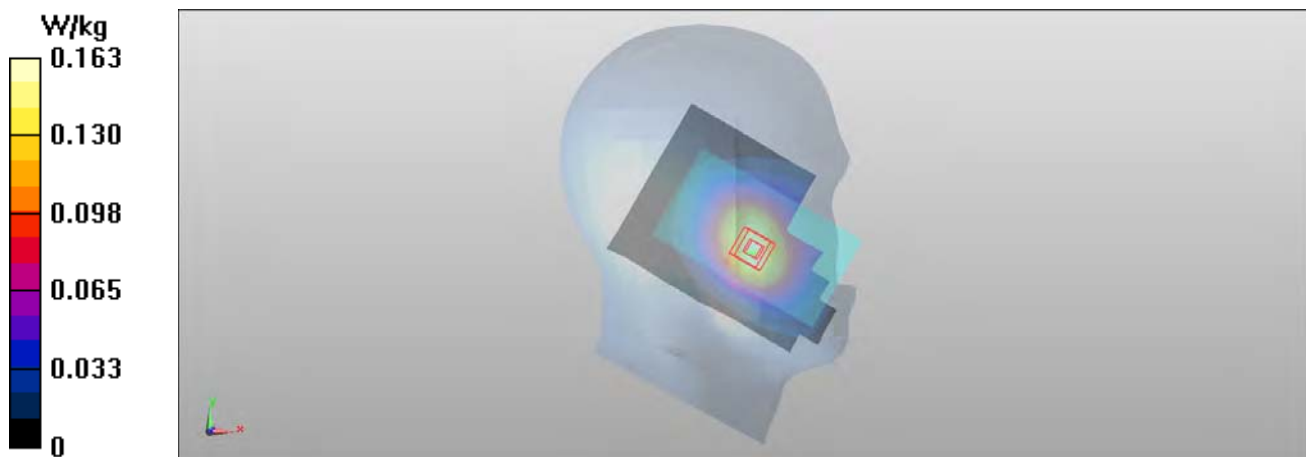
Peak SAR (extrapolated) = 0.183 mW/g

SAR(1 g) = 0.150 mW/g

SAR(10 g) = 0.114 mW/g

Power Drift = 0.44 dB

Maximum value of SAR (measured) = 0.156 W/kg



Date/Time: 2012-06-21 07:59:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0\text{ C}$

Medium parameters used (interpolated): $f = 836.5\text{ MHz}$; $\sigma = 0.9\text{ mho/m}$; $\epsilon_r = 40.062$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM -10MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.101 W/kg

LTE - Left/Tilt - Middle - 16QAM -10MHz - 100% RB Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.045 V/m

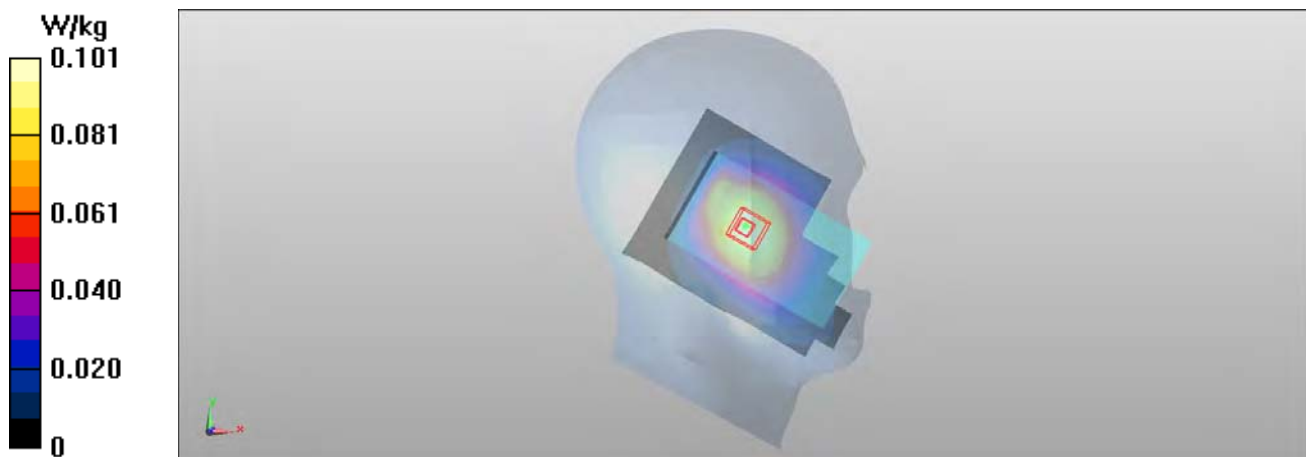
Peak SAR (extrapolated) = 0.116 mW/g

SAR(1 g) = 0.096 mW/g

SAR(10 g) = 0.074 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.101 W/kg



Date/Time: 2012-06-23 16:46:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.184 W/kg

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.562 V/m

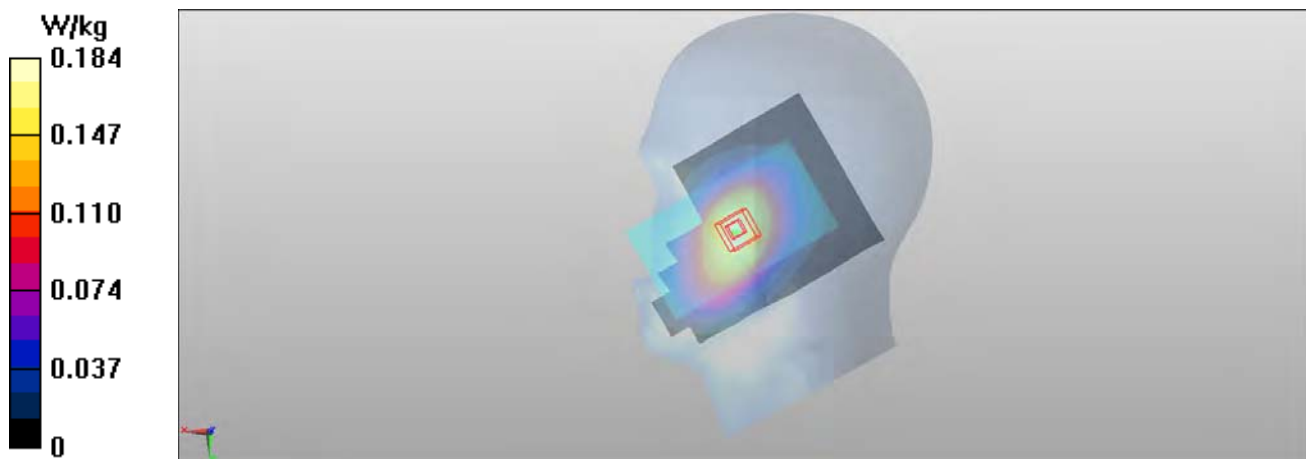
Peak SAR (extrapolated) = 0.211 mW/g

SAR(1 g) = 0.176 mW/g

SAR(10 g) = 0.135 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.184 W/kg



Date/Time: 2012-06-23 23:39:09

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.108 W/kg

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.342 V/m

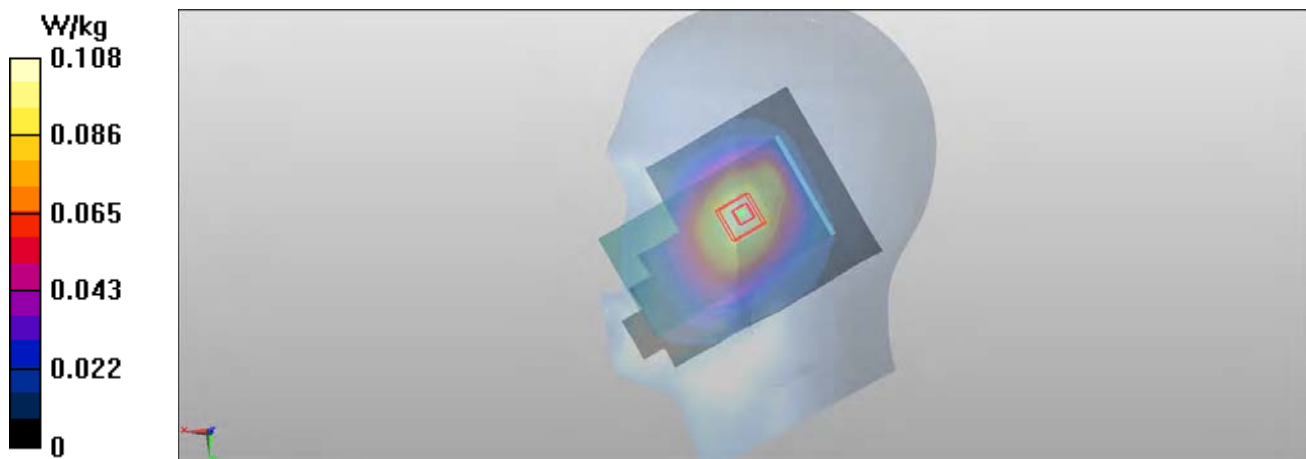
Peak SAR (extrapolated) = 0.123 mW/g

SAR(1 g) = 0.101 mW/g

SAR(10 g) = 0.078 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.106 W/kg



Date/Time: 2012-06-19 20:05:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM -10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.161 W/kg

LTE - Left/Cheek - Middle - 16QAM -10MHz - 50% RB - 50% offset/Zoom Scan 3 (5x5x7)/Cube 0: Measurement

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

Reference Value = 4.283 V/m

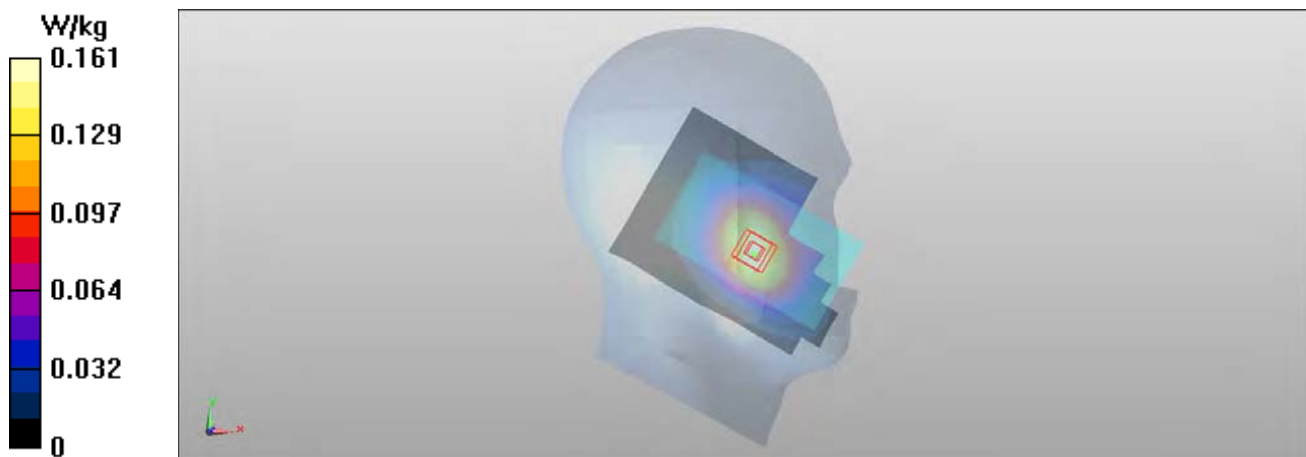
Peak SAR (extrapolated) = 0.187 mW/g

SAR(1 g) = 0.147 mW/g

SAR(10 g) = 0.113 mW/g

Power Drift = 0.58 dB

Maximum value of SAR (measured) = 0.152 W/kg



Date/Time: 2012-06-21 08:15:43

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0\text{ C}$

Medium parameters used (interpolated): $f = 836.5\text{ MHz}$; $\sigma = 0.9\text{ mho/m}$; $\epsilon_r = 40.062$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM -10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.0999 W/kg

LTE - Left/Tilt - Middle - 16QAM -10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.964 V/m

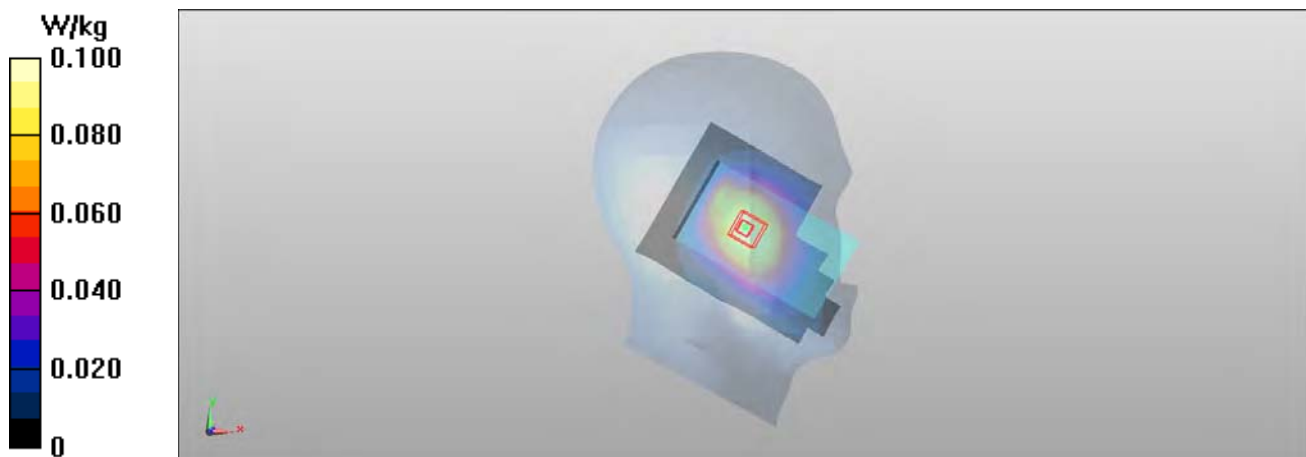
Peak SAR (extrapolated) = 0.114 mW/g

SAR(1 g) = 0.095 mW/g

SAR(10 g) = 0.073 mW/g

Power Drift = 0.19 dB

Maximum value of SAR (measured) = 0.0995 W/kg



Date/Time: 2012-06-23 16:59:47

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:
dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.178 W/kg

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.347 V/m

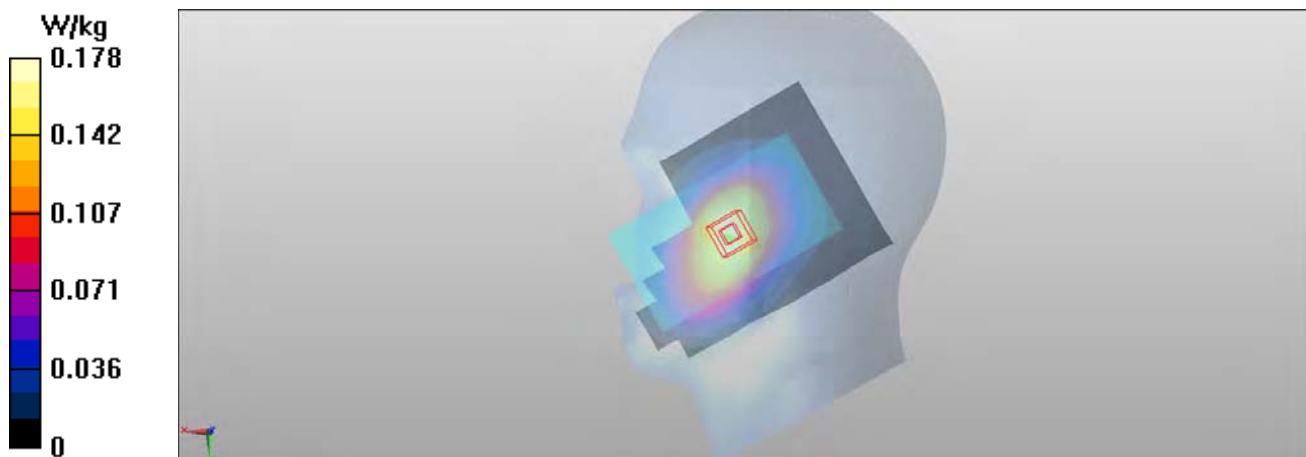
Peak SAR (extrapolated) = 0.207 mW/g

SAR(1 g) = 0.172 mW/g

SAR(10 g) = 0.132 mW/g

Power Drift = 0.35 dB

Maximum value of SAR (measured) = 0.182 W/kg



Date/Time: 2012-06-24 00:12:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx = 1.500$ mm, $dy = 1.500$ mm

Maximum value of SAR (interpolated) = 0.106 W/kg

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.480 V/m

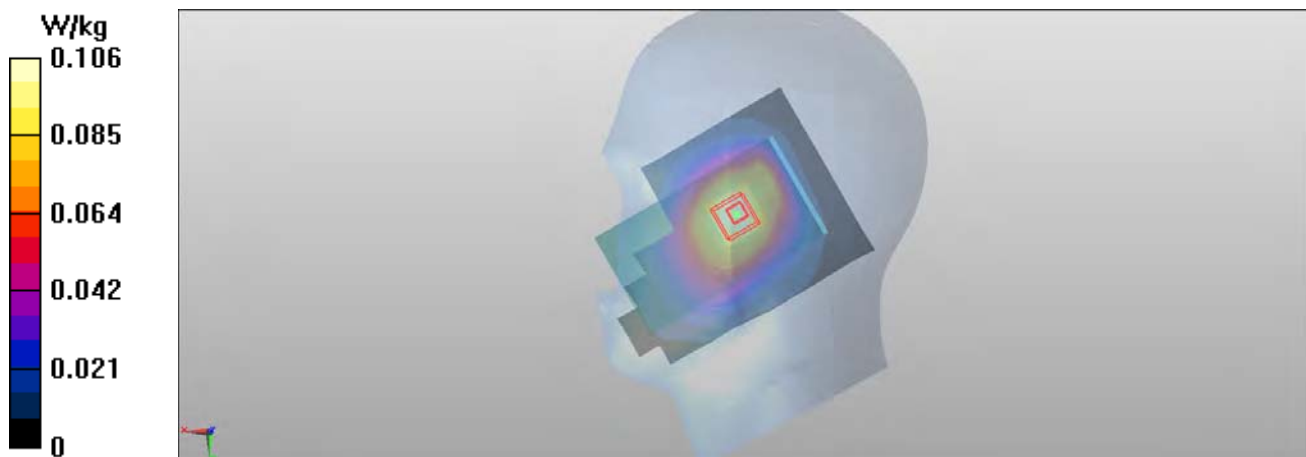
Peak SAR (extrapolated) = 0.120 mW/g

SAR(1 g) = 0.100 mW/g

SAR(10 g) = 0.077 mW/g

Power Drift = -0.18 dB

Maximum value of SAR (measured) = 0.104 W/kg



Date/Time: 2012-06-19 20:40:14

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.203 W/kg

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 4.751 V/m

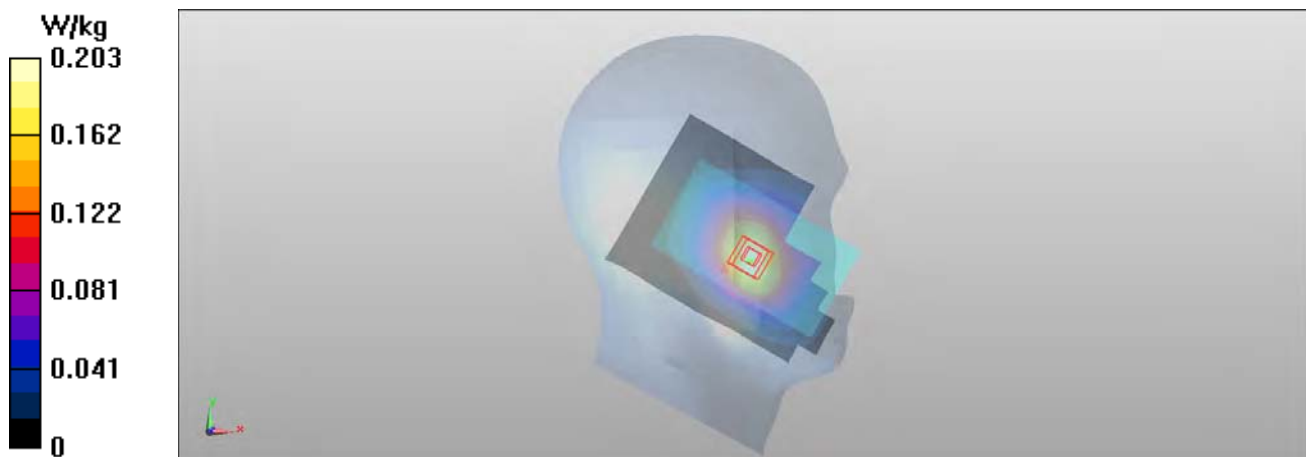
Peak SAR (extrapolated) = 0.229 mW/g

SAR(1 g) = 0.177 mW/g

SAR(10 g) = 0.135 mW/g

Power Drift = 0.33 dB

Maximum value of SAR (measured) = 0.185 W/kg



Date/Time: 2012-06-21 08:31:38

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 40.062$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.118 W/kg

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.625 V/m

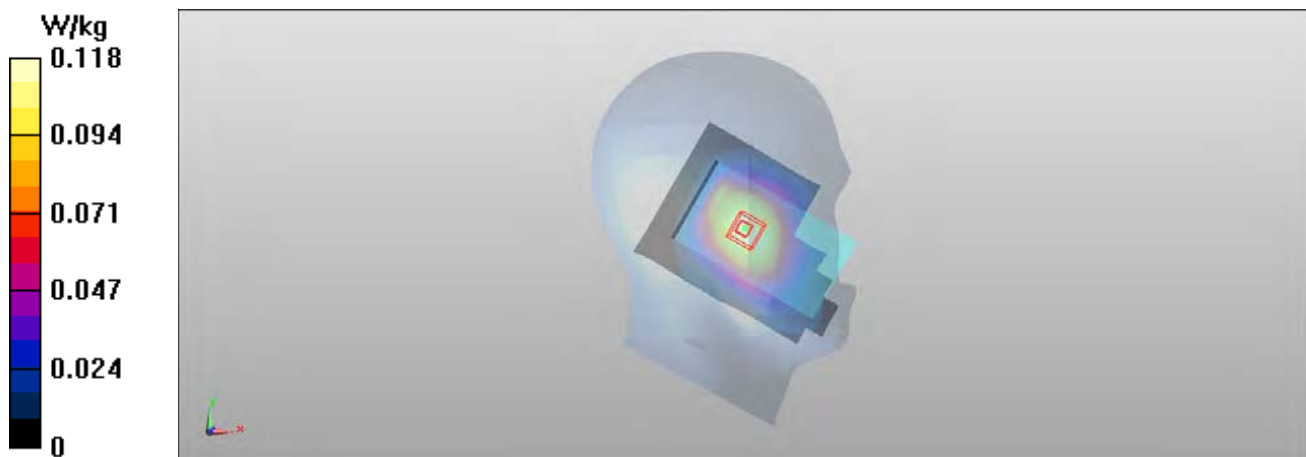
Peak SAR (extrapolated) = 0.140 mW/g

SAR(1 g) = 0.114 mW/g

SAR(10 g) = 0.088 mW/g

Power Drift = 0.27 dB

Maximum value of SAR (measured) = 0.120 W/kg



Date/Time: 2012-06-23 17:13:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.205 W/kg

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.863 V/m

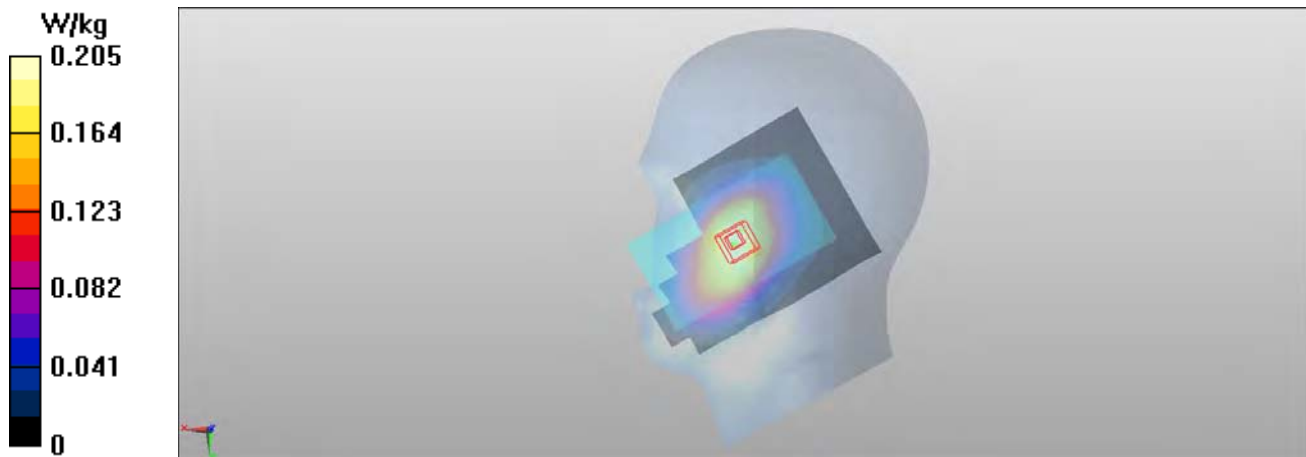
Peak SAR (extrapolated) = 0.252 mW/g

SAR(1 g) = 0.201 mW/g

SAR(10 g) = 0.157 mW/g

Power Drift = 0.26 dB

Maximum value of SAR (measured) = 0.207 W/kg



Date/Time: 2012-06-24 00:27:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: t= 20.8 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.124 W/kg

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.995 V/m

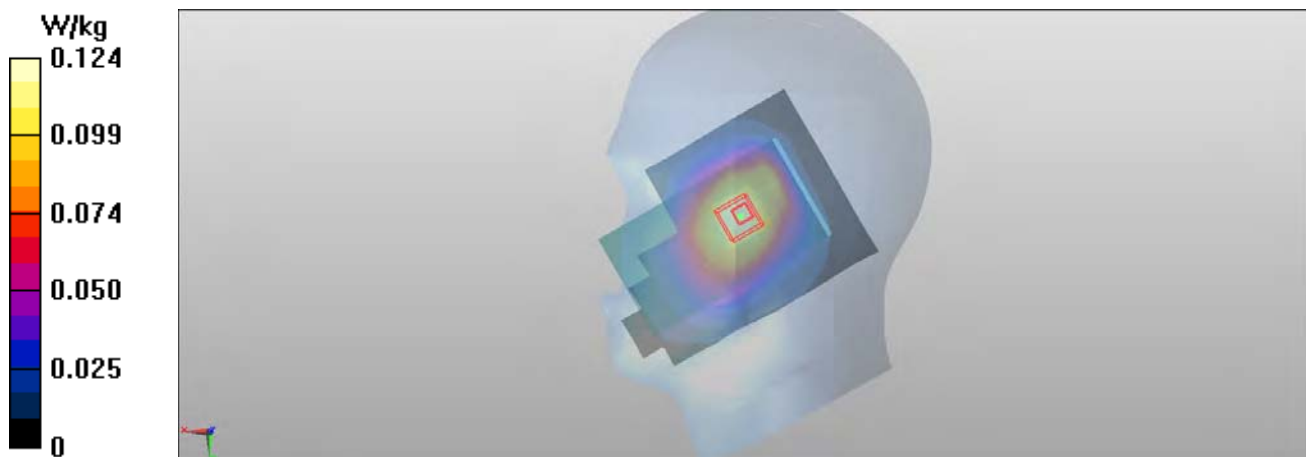
Peak SAR (extrapolated) = 0.152 mW/g

SAR(1 g) = 0.118 mW/g

SAR(10 g) = 0.091 mW/g

Power Drift = -0.07 dB

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



Date/Time: 2012-06-20 08:09:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 40.709$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.240 W/kg

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.475 V/m

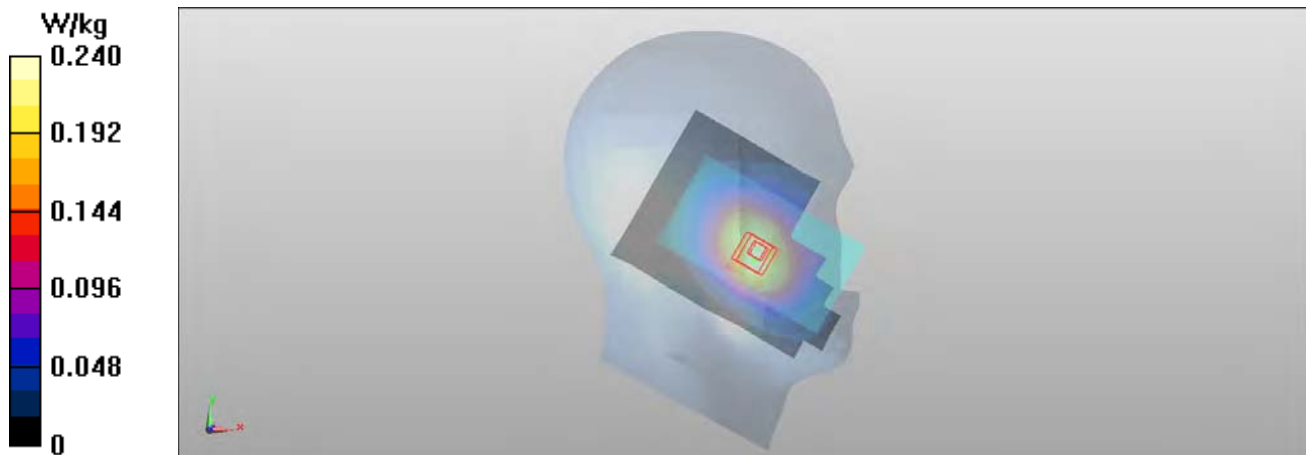
Peak SAR (extrapolated) = 0.316 mW/g

SAR(1 g) = 0.233 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.257 W/kg



Date/Time: 2012-06-21 13:21:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0\text{ }^{\circ}\text{C}$

Medium parameters used (interpolated): $f = 836.5\text{ MHz}$; $\sigma = 0.9\text{ mho/m}$; $\epsilon_r = 40.062$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB -100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.157 W/kg

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB -100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.120 V/m

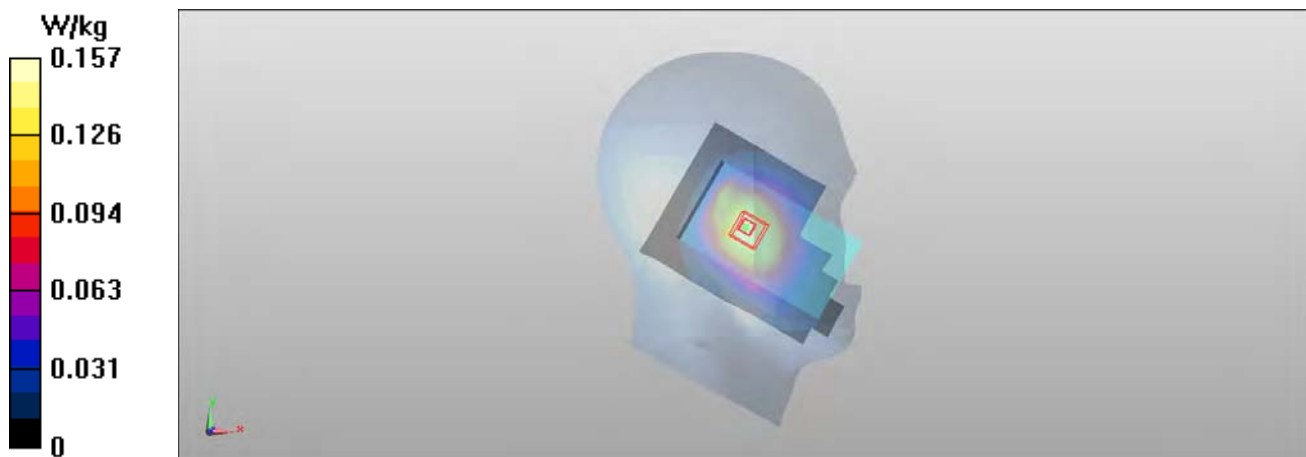
Peak SAR (extrapolated) = 0.180 mW/g

SAR(1 g) = 0.144 mW/g

SAR(10 g) = 0.111 mW/g

Power Drift = 0.29 dB

Maximum value of SAR (measured) = 0.152 W/kg



Date/Time: 2012-06-23 17:32:26

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.280 W/kg

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.749 V/m

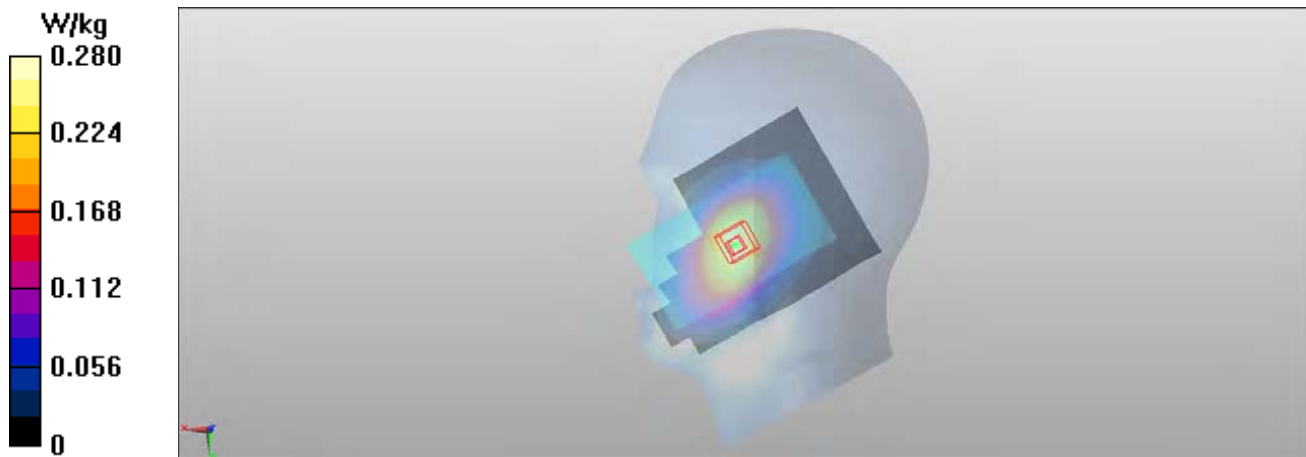
Peak SAR (extrapolated) = 0.318 mW/g

SAR(1 g) = 0.257 mW/g

SAR(10 g) = 0.198 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.275 W/kg



Date/Time: 2012-06-24 00:54:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.163 W/kg

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.071 V/m

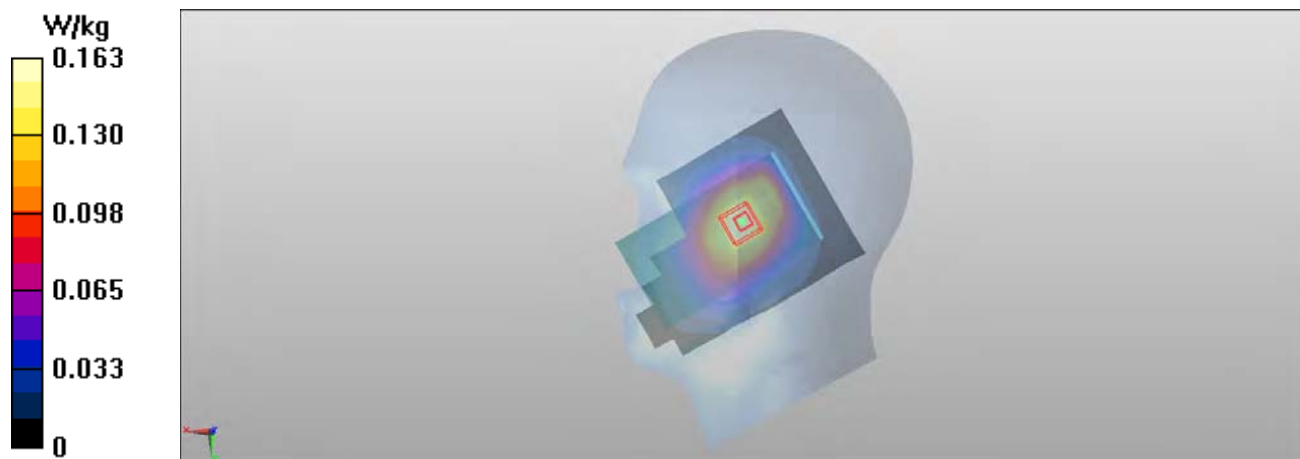
Peak SAR (extrapolated) = 0.183 mW/g

SAR(1 g) = 0.151 mW/g

SAR(10 g) = 0.115 mW/g

Power Drift = -0.15 dB

Maximum value of SAR (measured) = 0.160 W/kg



Date/Time: 2012-06-20 08:34:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 40.709$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.152 W/kg

LTE - Left/Cheek - Middle - 16QAM -10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.028 V/m

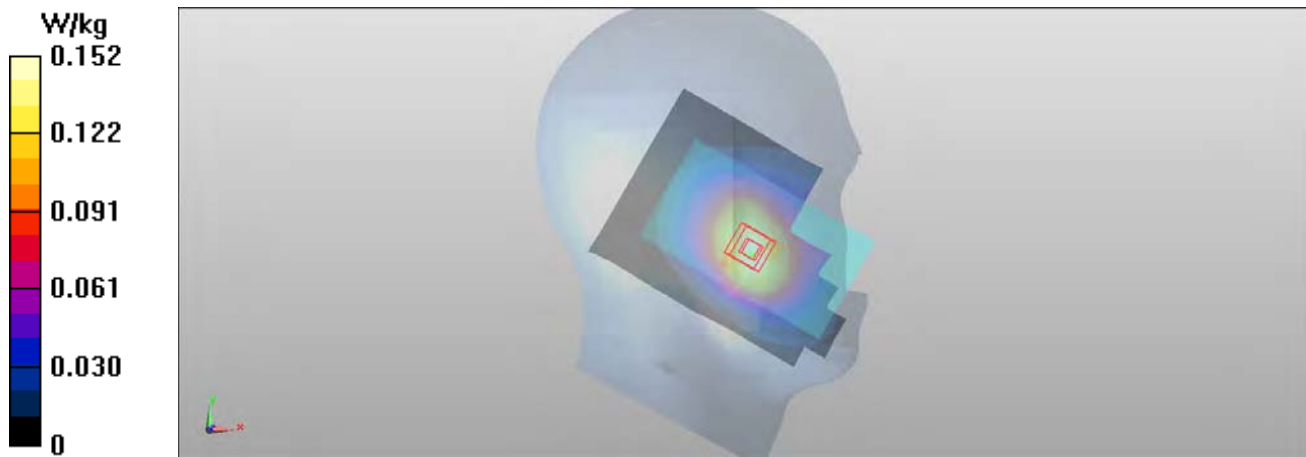
Peak SAR (extrapolated) = 0.203 mW/g

SAR(1 g) = 0.146 mW/g

SAR(10 g) = 0.109 mW/g

Power Drift = 0.44 dB

Maximum value of SAR (measured) = 0.153 W/kg



Date/Time: 2012-06-21 13:48:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 40.062$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB -0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.104 W/kg

LTE - Left/Tilt - Middle - 16QAM -10MHz - 1RB -0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.674 V/m

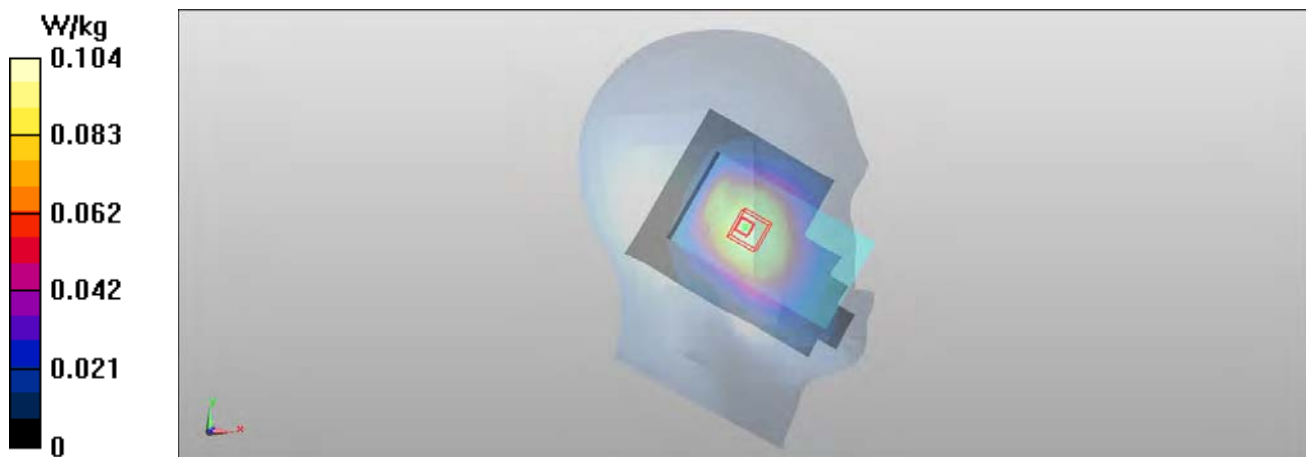
Peak SAR (extrapolated) = 0.120 mW/g

SAR(1 g) = 0.097 mW/g

SAR(10 g) = 0.076 mW/g

Power Drift = -0.07 dB

Maximum value of SAR (measured) = 0.101 W/kg



Date/Time: 2012-06-23 17:45:43

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.186 W/kg

LTE - Right/Cheek - Middle - 16QAM - 10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 5.311 V/m

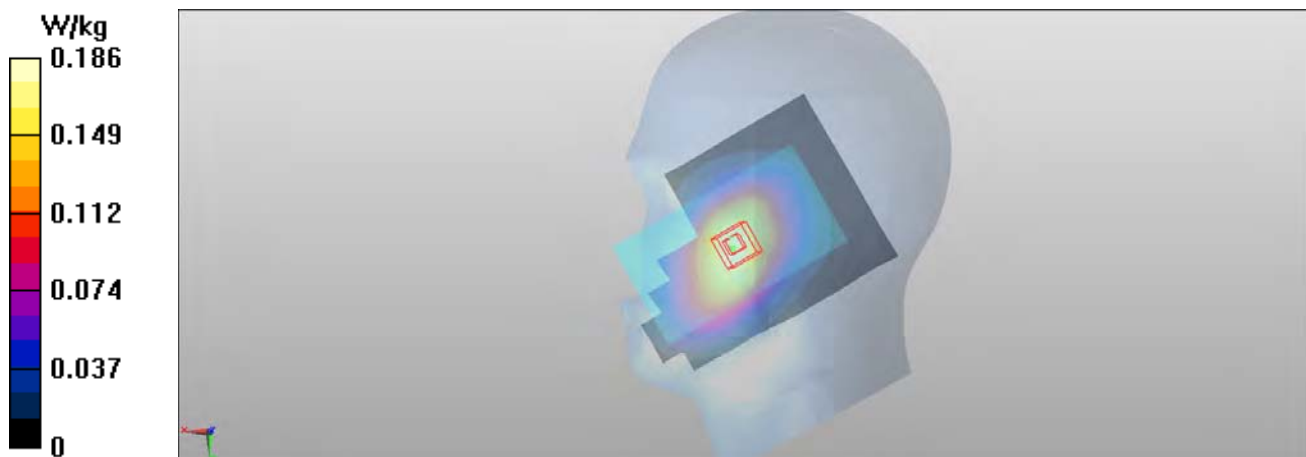
Peak SAR (extrapolated) = 0.213 mW/g

SAR(1 g) = 0.175 mW/g

SAR(10 g) = 0.137 mW/g

Power Drift = 0.40 dB

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



Date/Time: 2012-06-24 01:08:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: HSL835; Medium Notes: $t = 20.8$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.122 W/kg

LTE - Right/Tilt - Middle - 16QAM - 10MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.880 V/m

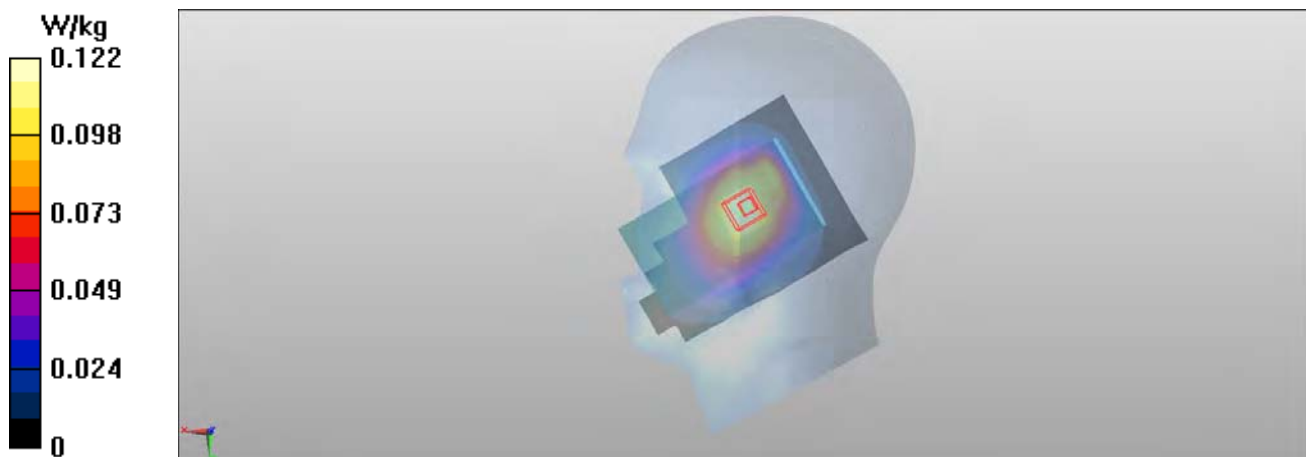
Peak SAR (extrapolated) = 0.137 mW/g

SAR(1 g) = 0.116 mW/g

SAR(10 g) = 0.090 mW/g

Power Drift = 0.05 dB

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



Date/Time: 2012-08-15 14:37:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma = 1.307$ mho/m; $\epsilon_r = 39.229$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM;

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA - Left/Cheek - Low/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

WCDMA - Left/Cheek - Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.231 V/m

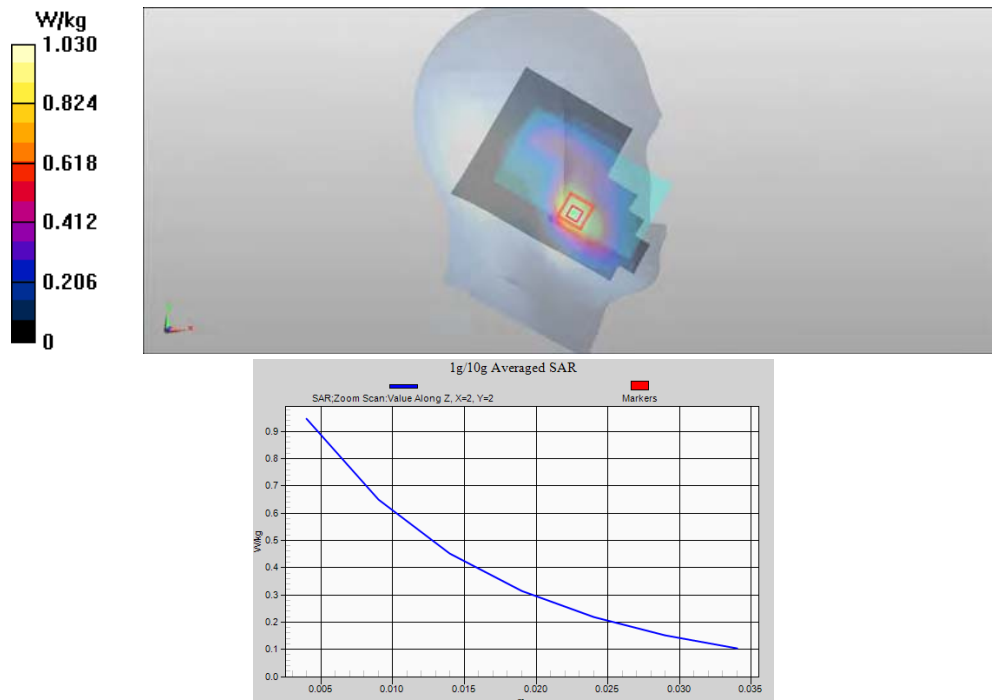
Peak SAR (extrapolated) = 1.297 mW/g

SAR(1 g) = 0.877 mW/g

SAR(10 g) = 0.572 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.946 W/kg



SAR Report

Appendix B.1 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-08-15 10:31:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.326 mho/m; ϵ_r = 39.128; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA - Left/Tilt - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.503 W/kg

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

Reference Value = 15.220 V/m

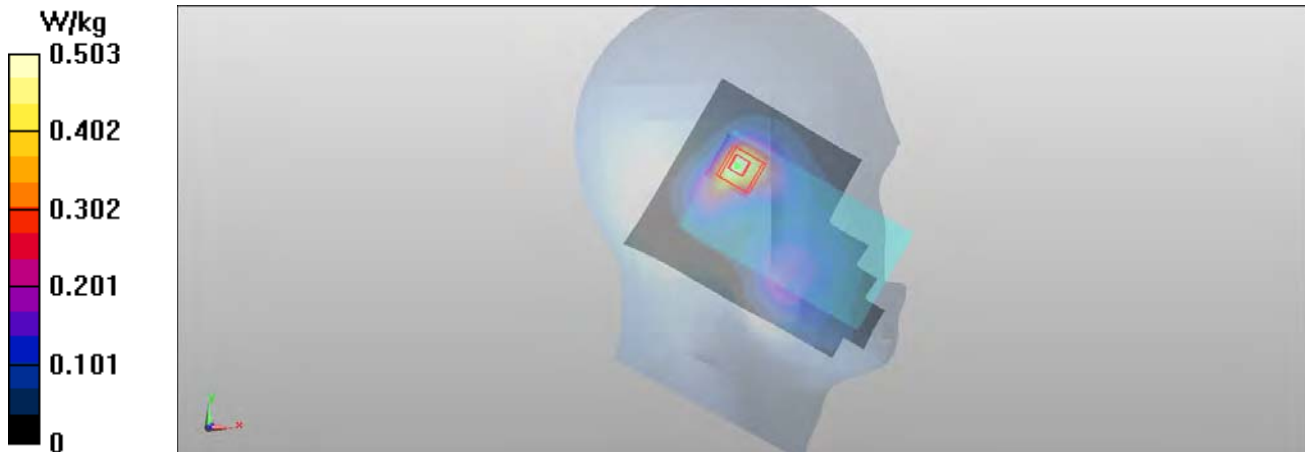
Peak SAR (extrapolated) = 0.611 mW/g

SAR(1 g) = 0.403 mW/g

SAR(10 g) = 0.250 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.432 W/kg



Date/Time: 2012-08-15 13:56:01

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.326 mho/m; ϵ_r = 39.128; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA - Right/Cheek - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.633 W/kg

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

Reference Value = 11.526 V/m

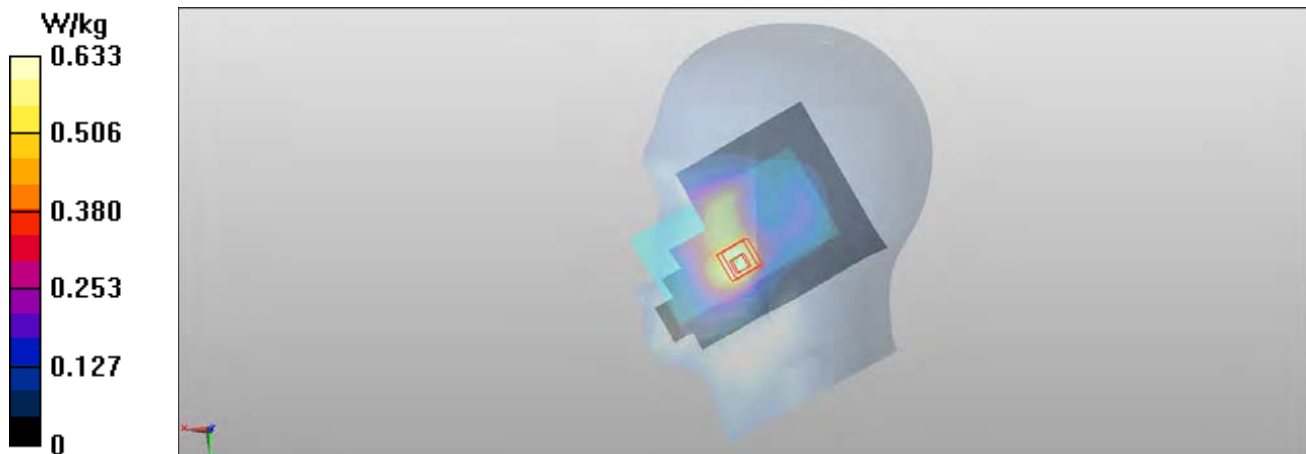
Peak SAR (extrapolated) = 0.811 mW/g

SAR(1 g) = 0.575 mW/g

SAR(10 g) = 0.381 mW/g

Power Drift = 0.41 dB

Maximum value of SAR (measured) = 0.604 W/kg



Date/Time: 2012-08-15 14:18:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.326 mho/m; ϵ_r = 39.128; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA - Right/Tilt - Middle/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.341 W/kg

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

Reference Value = 15.416 V/m

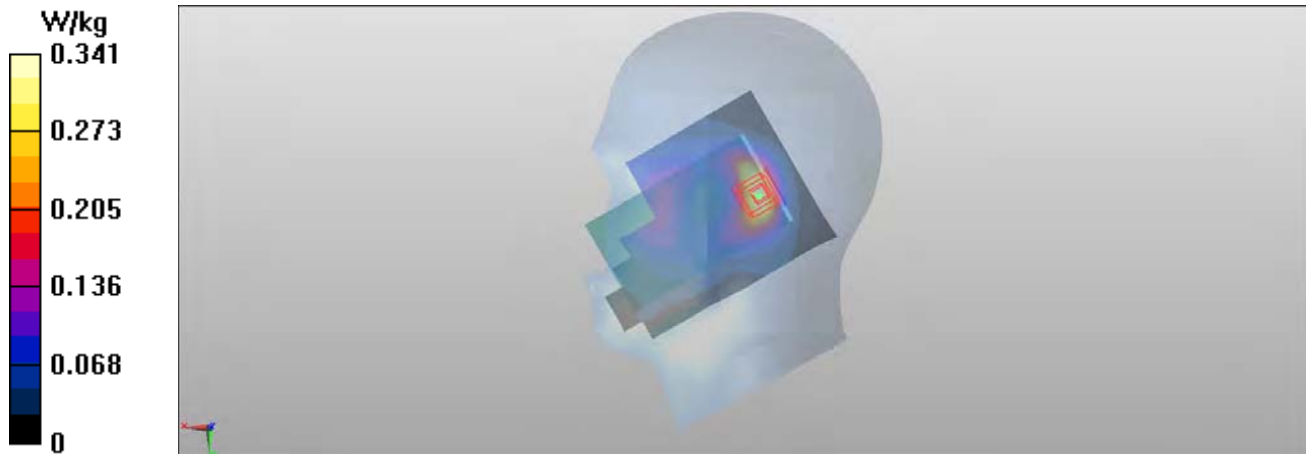
Peak SAR (extrapolated) = 0.428 mW/g

SAR(1 g) = 0.282 mW/g

SAR(10 g) = 0.174 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.305 W/kg



Date/Time: 2012-06-13 13:56:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.321 mho/m; ϵ_r = 39.27; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - QPSK - 20MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.568 mW/g

LTE - Left/Cheek - Middle - QPSK - 20MHz – 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.348 V/m

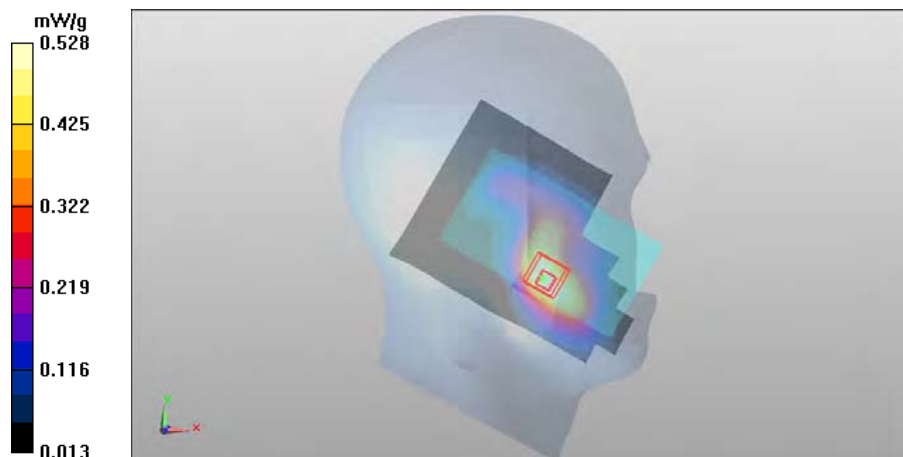
Peak SAR (extrapolated) = 0.731 mW/g

SAR(1 g) = 0.489 mW/g

SAR(10 g) = 0.318 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 0.528 mW/g



Date/Time: 2012-06-14 17:47:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 20MHz – 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.342 mW/g

LTE - Left/Tilt - Middle - QPSK - 20MHz – 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.078 V/m

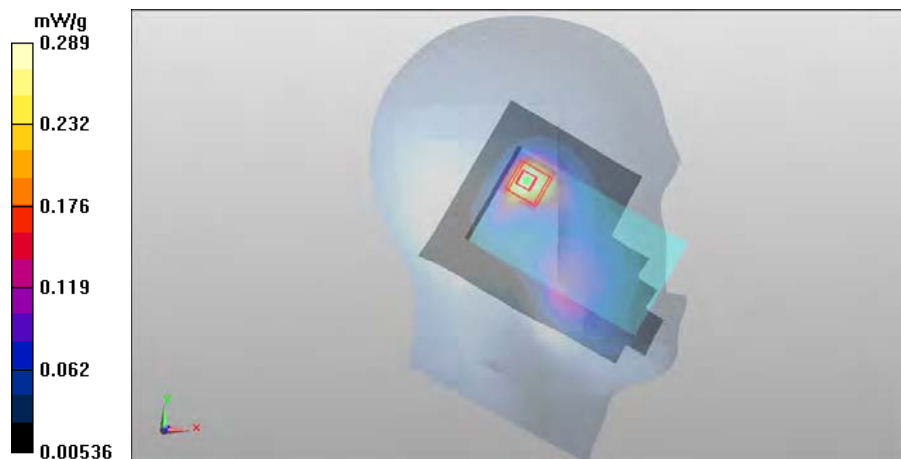
Peak SAR (extrapolated) = 0.391 mW/g

SAR(1 g) = 0.265 mW/g

SAR(10 g) = 0.160 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.289 mW/g



Date/Time: 2012-06-14 20:25:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 20MHz – 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.353 mW/g

LTE - Right/Cheek - Middle - QPSK - 20MHz – 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.686 V/m

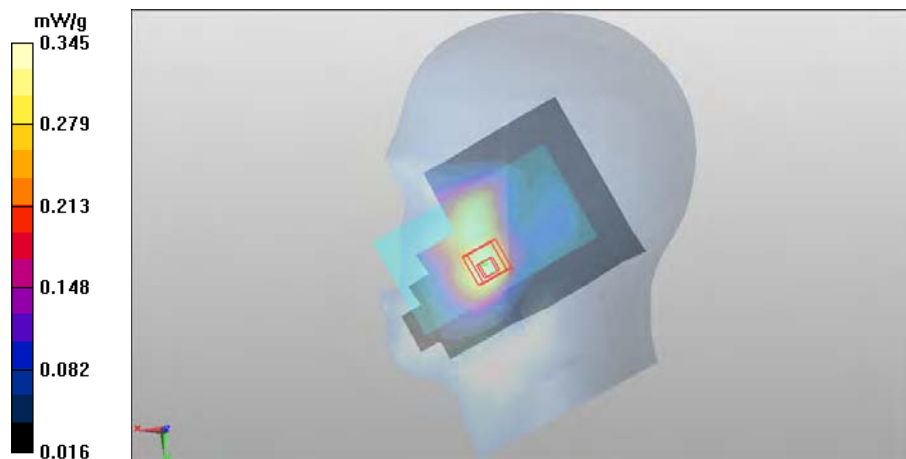
Peak SAR (extrapolated) = 0.454 mW/g

SAR(1 g) = 0.327 mW/g

SAR(10 g) = 0.220 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.345 mW/g



Date/Time: 2012-06-15 22:01:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 20MHz – 100% RB /Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.215 mW/g

LTE - Right/Tilt - Middle - QPSK - 20MHz – 100% RB /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.527 V/m

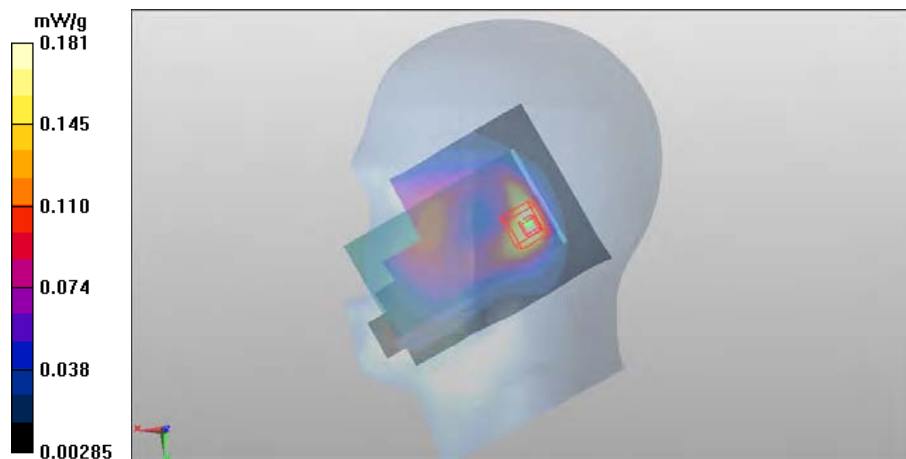
Peak SAR (extrapolated) = 0.250 mW/g

SAR(1 g) = 0.168 mW/g

SAR(10 g) = 0.103 mW/g

Power Drift = 0.18 dB

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



Date/Time: 2012-06-13 14:18:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.321 mho/m; ϵ_r = 39.27; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - QPSK - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.566 mW/g

LTE - Left/Cheek - Middle - QPSK - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.390 V/m

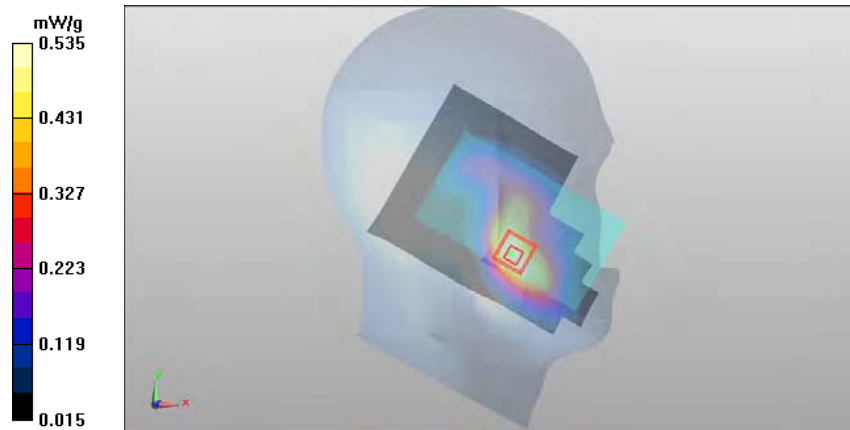
Peak SAR (extrapolated) = 0.734 mW/g

SAR(1 g) = 0.497 mW/g

SAR(10 g) = 0.324 mW/g

Power Drift = 0.32 dB

Maximum value of SAR (measured) = 0.535 mW/g



Date/Time: 2012-06-14 18:03:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.348 mW/g

LTE - Left/Tilt - Middle - QPSK - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.038 V/m

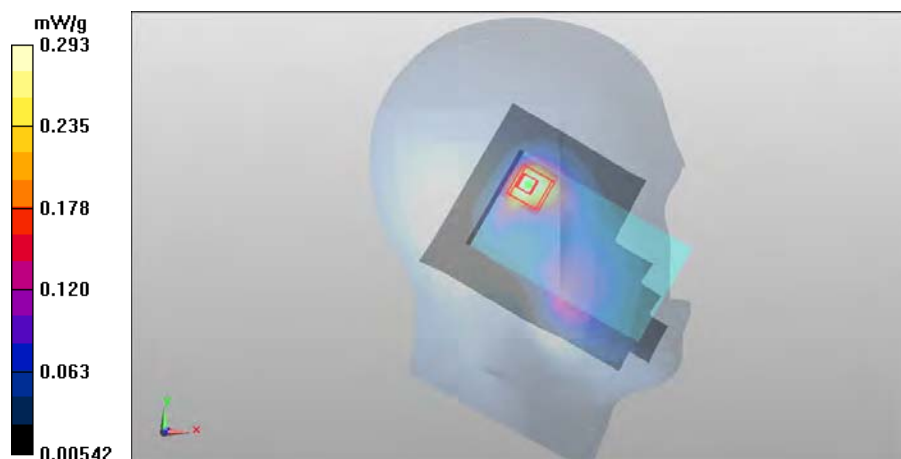
Peak SAR (extrapolated) = 0.411 mW/g

SAR(1 g) = 0.270 mW/g

SAR(10 g) = 0.163 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.293 mW/g



Date/Time: 2012-06-14 20:45:40

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.363 mW/g

LTE - Right/Cheek - Middle - QPSK - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.653 V/m

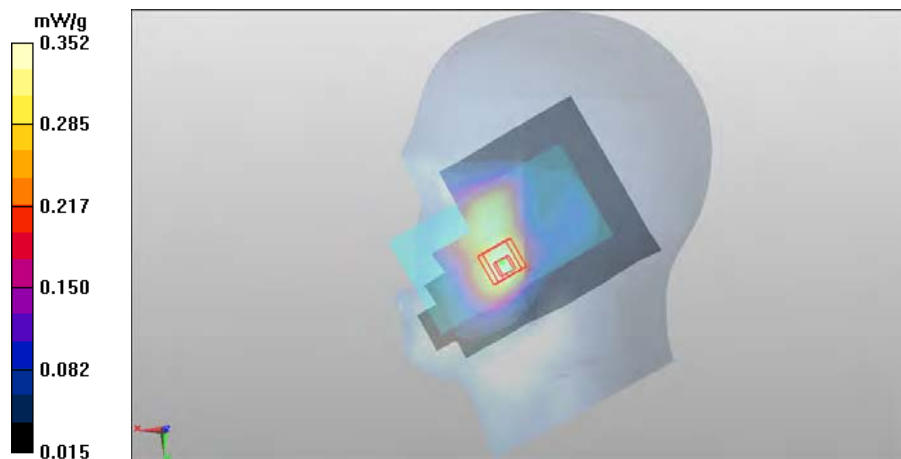
Peak SAR (extrapolated) = 0.464 mW/g

SAR(1 g) = 0.331 mW/g

SAR(10 g) = 0.224 mW/g

Power Drift = 0.27 dB

Maximum value of SAR (measured) = 0.352 mW/g



Date/Time: 2012-06-15 19:11:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Right/Tilt - Middle - QPSK - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.846 V/m

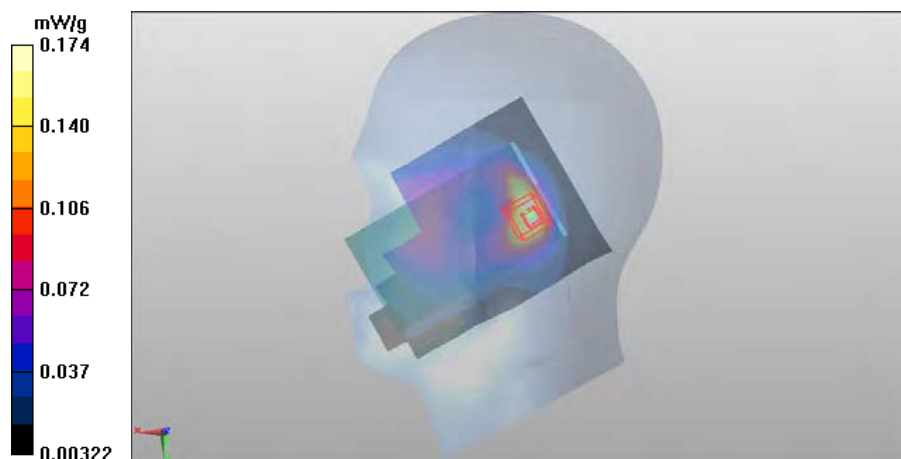
Peak SAR (extrapolated) = 0.242 mW/g

SAR(1 g) = 0.160 mW/g

SAR(10 g) = 0.098 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.174 mW/g



Date/Time: 2012-06-13 14:37:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.321$ mho/m; $\epsilon_r = 39.27$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - QPSK - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.673 mW/g

LTE - Left/Cheek - Middle - QPSK - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.286 V/m

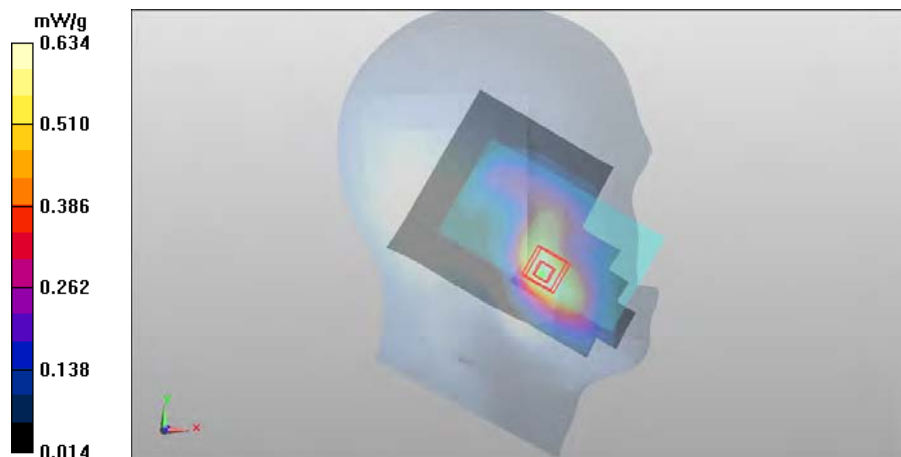
Peak SAR (extrapolated) = 0.879 mW/g

SAR(1 g) = 0.587 mW/g

SAR(10 g) = 0.383 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.634 mW/g



Date/Time: 2012-06-14 18:19:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.413 mW/g

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 12.070 V/m

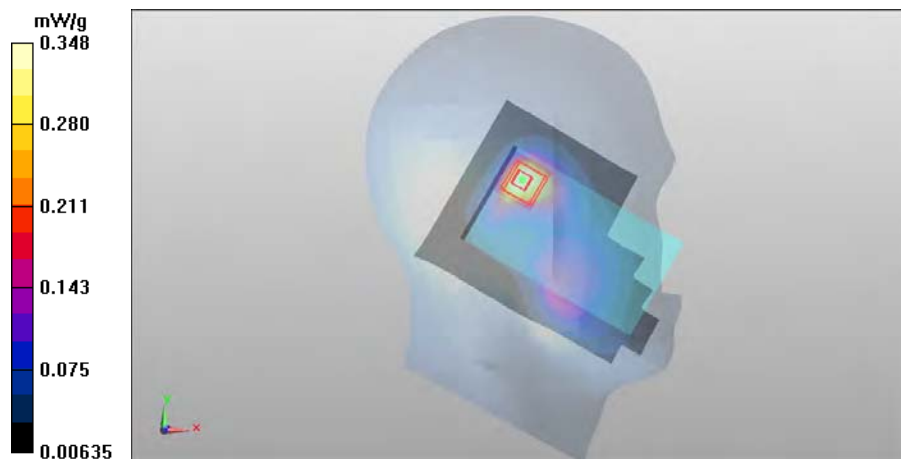
Peak SAR (extrapolated) = 0.484 mW/g

SAR(1 g) = 0.322 mW/g

SAR(10 g) = 0.194 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.348 mW/g



Date/Time: 2012-06-14 21:01:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.430 mW/g

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.381 V/m

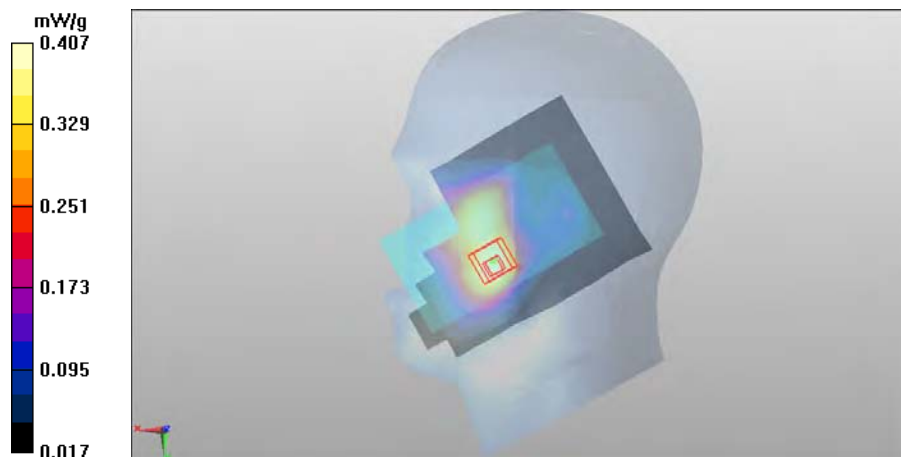
Peak SAR (extrapolated) = 0.537 mW/g

SAR(1 g) = 0.387 mW/g

SAR(10 g) = 0.262 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.407 mW/g



Date/Time: 2012-06-15 18:54:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.231 mW/g

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.614 V/m

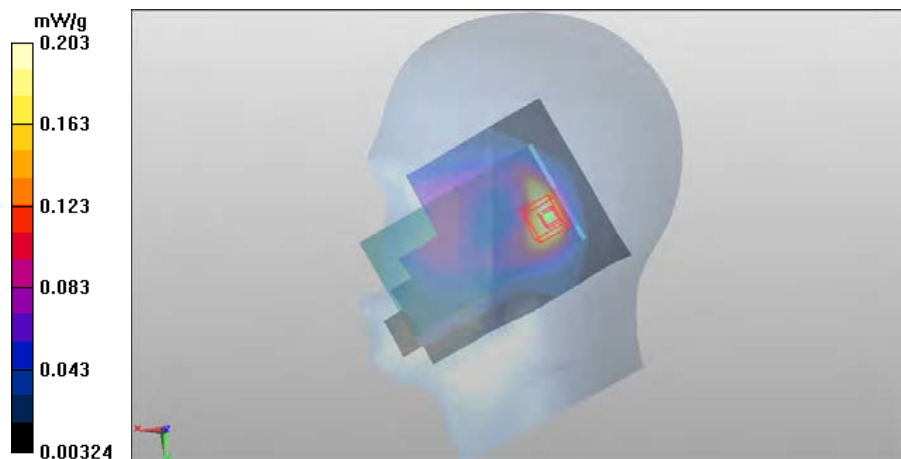
Peak SAR (extrapolated) = 0.284 mW/g

SAR(1 g) = 0.186 mW/g

SAR(10 g) = 0.113 mW/g

Power Drift = 0.14 dB

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



Date/Time: 2012-06-13 17:00:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.321 mho/m; ϵ_r = 39.27; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.657 mW/g

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.568 V/m

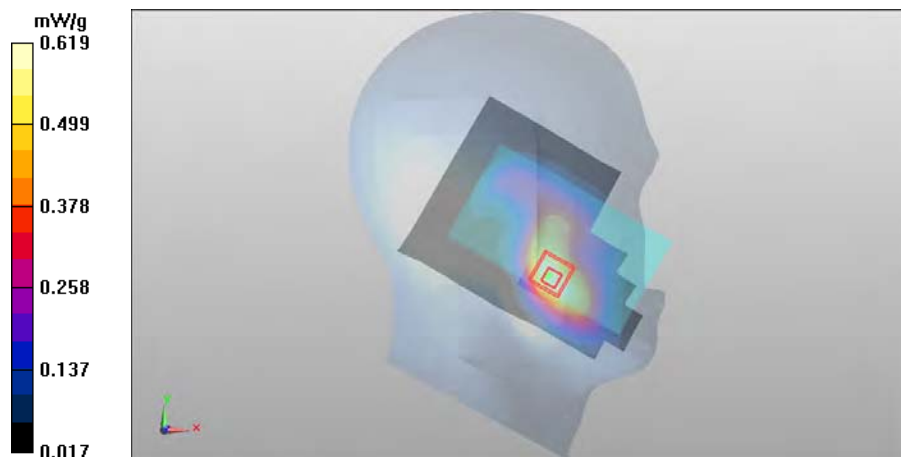
Peak SAR (extrapolated) = 0.862 mW/g

SAR(1 g) = 0.572 mW/g

SAR(10 g) = 0.372 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.619 mW/g



Date/Time: 2012-06-13 17:58:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.321 mho/m; ϵ_r = 39.27; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.370 mW/g

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.760 V/m

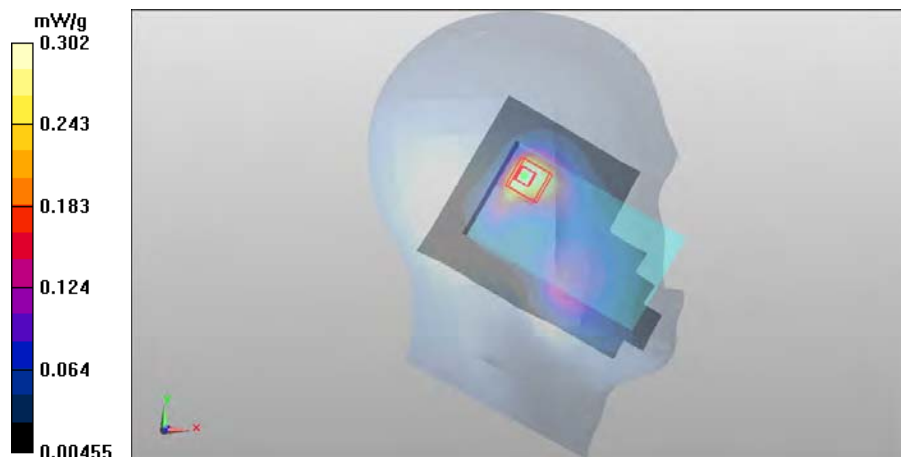
Peak SAR (extrapolated) = 0.415 mW/g

SAR(1 g) = 0.281 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.302 mW/g



Date/Time: 2012-06-14 21:19:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.426 mW/g

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.044 V/m

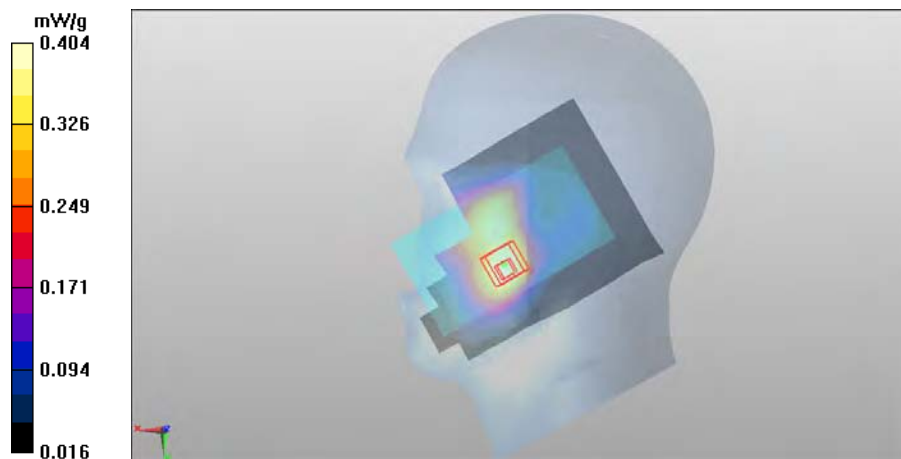
Peak SAR (extrapolated) = 0.537 mW/g

SAR(1 g) = 0.386 mW/g

SAR(10 g) = 0.260 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.404 mW/g



Date/Time: 2012-06-15 18:38:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.216 mW/g

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.088 V/m

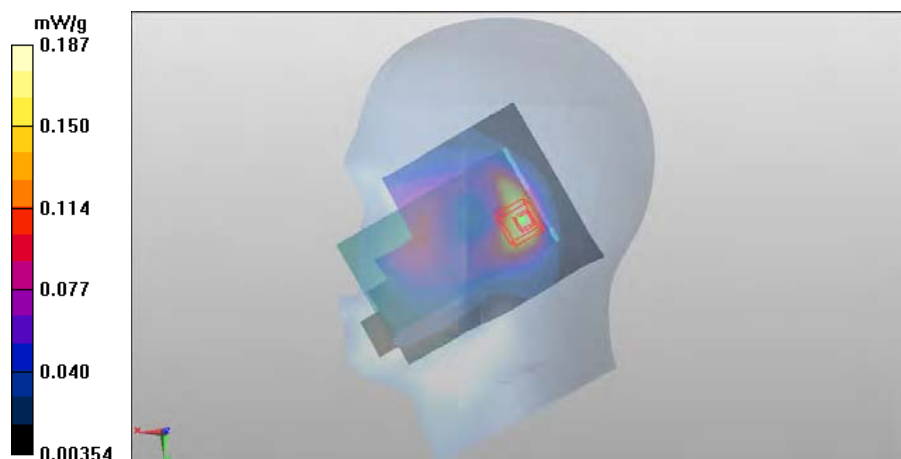
Peak SAR (extrapolated) = 0.264 mW/g

SAR(1 g) = 0.173 mW/g

SAR(10 g) = 0.104 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 0.187 mW/g



Date/Time: 2012-06-15 22:46:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1720 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used: f = 1720 MHz; $\sigma = 1.3$ mho/m; $\epsilon_r = 38.756$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Low - QPSK - 20MHz - 1 RB - 0% offset 2/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.745 mW/g

LTE - Left/Cheek - Low - QPSK - 20MHz - 1 RB - 0% offset 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.284 V/m

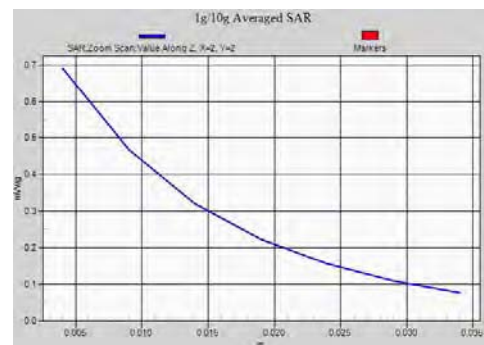
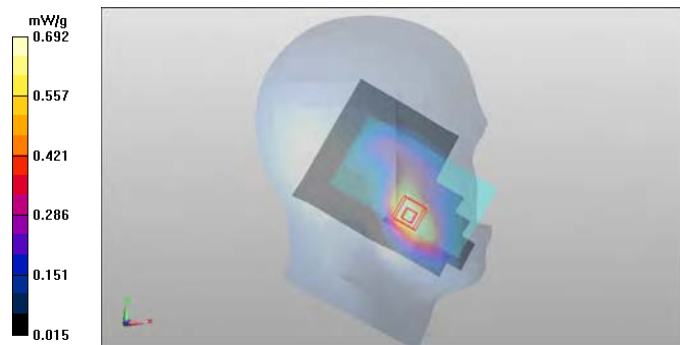
Peak SAR (extrapolated) = 0.956 mW/g

SAR(1 g) = 0.644 mW/g

SAR(10 g) = 0.418 mW/g

Power Drift = 0.32 dB

Maximum value of SAR (measured) = 0.692 mW/g



Date/Time: 2012-06-13 17:42:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.321 mho/m; ϵ_r = 39.27; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.404 mW/g

LTE - Left/Tilt - Middle - QPSK - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 12.629 V/m

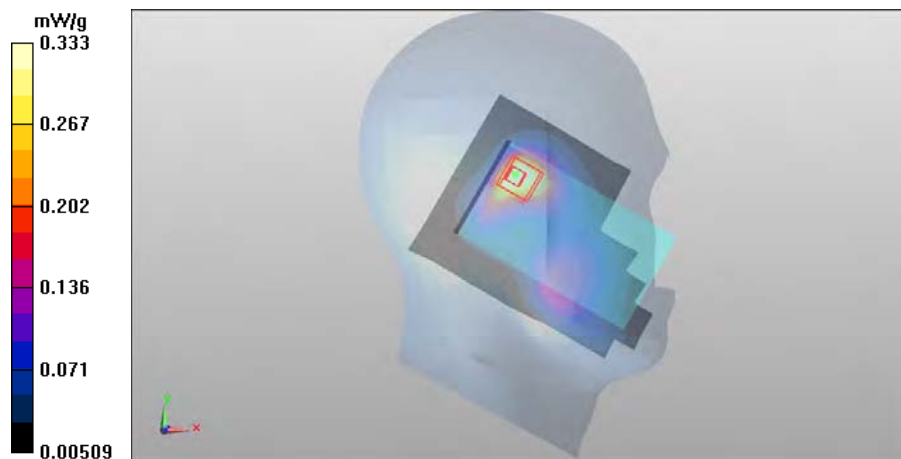
Peak SAR (extrapolated) = 0.453 mW/g

SAR(1 g) = 0.309 mW/g

SAR(10 g) = 0.192 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.333 mW/g



Date/Time: 2012-06-14 21:34:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.444 mW/g

LTE - Right/Cheek - Middle - QPSK - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.898 V/m

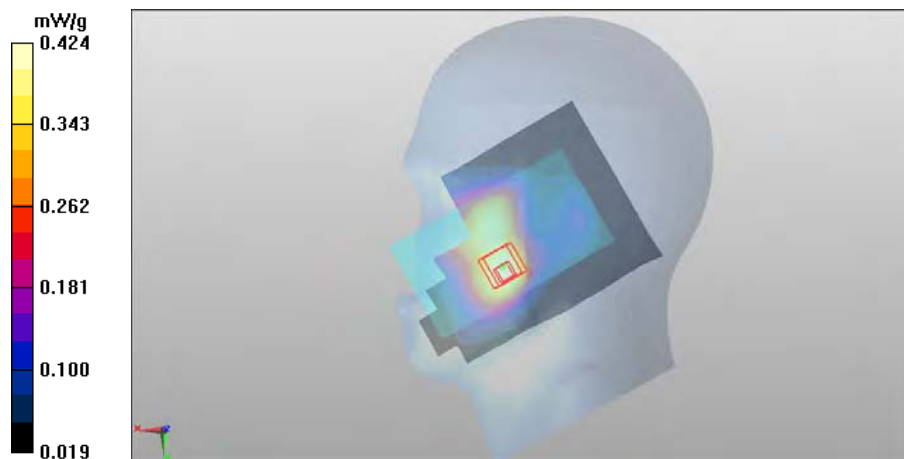
Peak SAR (extrapolated) = 0.556 mW/g

SAR(1 g) = 0.404 mW/g

SAR(10 g) = 0.274 mW/g

Power Drift = 0.16 dB

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



Date/Time: 2012-06-15 18:18:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.238 mW/g

LTE - Right/Tilt - Middle - QPSK - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.783 V/m

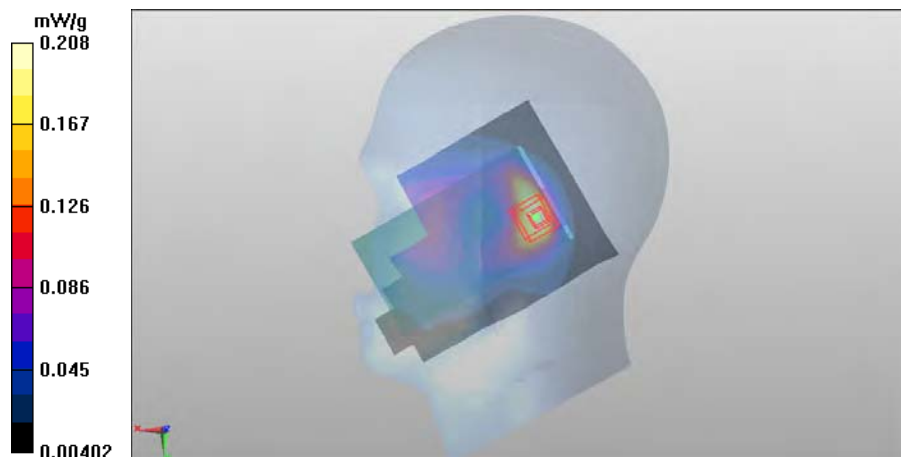
Peak SAR (extrapolated) = 0.288 mW/g

SAR(1 g) = 0.189 mW/g

SAR(10 g) = 0.115 mW/g

Power Drift = 0.18 dB

Maximum value of SAR (measured) = 0.208 mW/g



Date/Time: 2012-06-14 08:01:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.455 mW/g

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.710 V/m

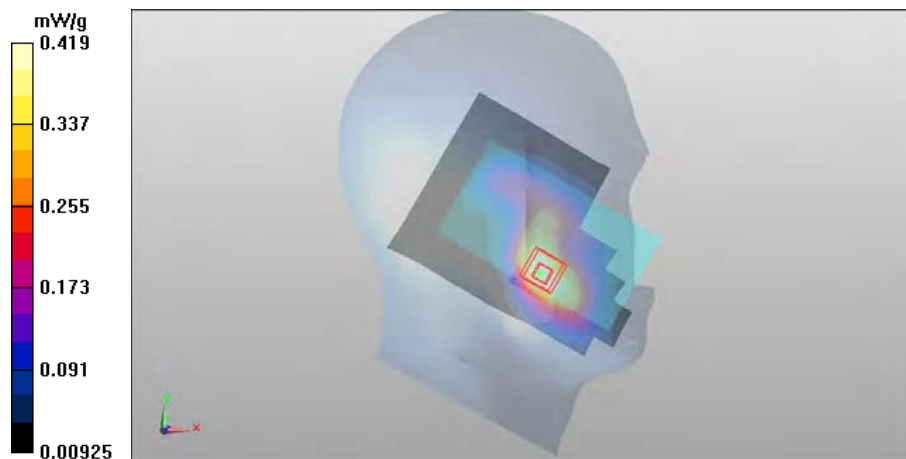
Peak SAR (extrapolated) = 0.578 mW/g

SAR(1 g) = 0.389 mW/g

SAR(10 g) = 0.254 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.419 mW/g



Date/Time: 2012-06-14 12:37:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.247 mW/g

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.021 V/m

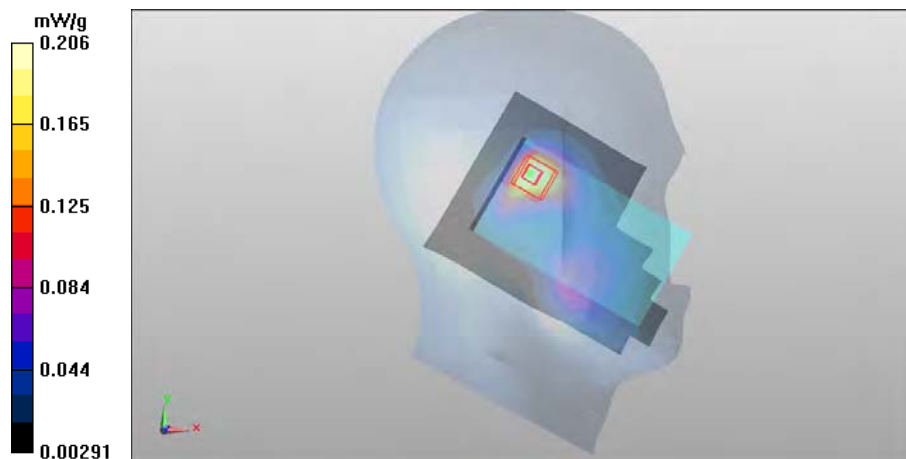
Peak SAR (extrapolated) = 0.286 mW/g

SAR(1 g) = 0.191 mW/g

SAR(10 g) = 0.117 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.206 mW/g



Date/Time: 2012-06-15 09:36:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.280 mW/g

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.051 V/m

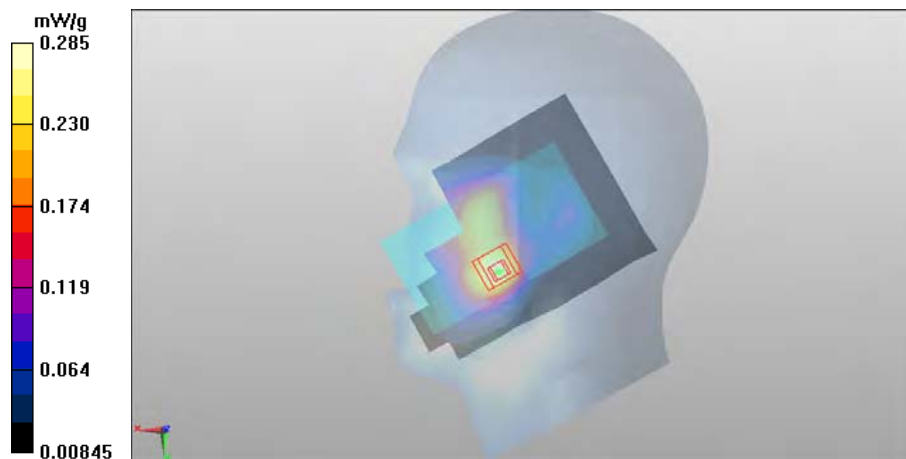
Peak SAR (extrapolated) = 0.381 mW/g

SAR(1 g) = 0.264 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = 0.45 dB

Maximum value of SAR (measured) = 0.285 mW/g



Date/Time: 2012-06-15 13:13:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 100% RB/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.163 mW/g

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.176 V/m

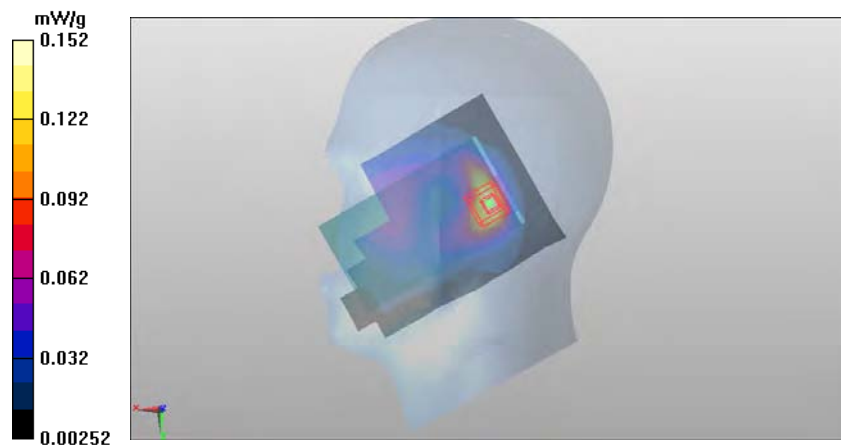
Peak SAR (extrapolated) = 0.211 mW/g

SAR(1 g) = 0.136 mW/g

SAR(10 g) = 0.081 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.152 mW/g



Date/Time: 2012-06-14 08:21:01

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.455 mW/g

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.509 V/m

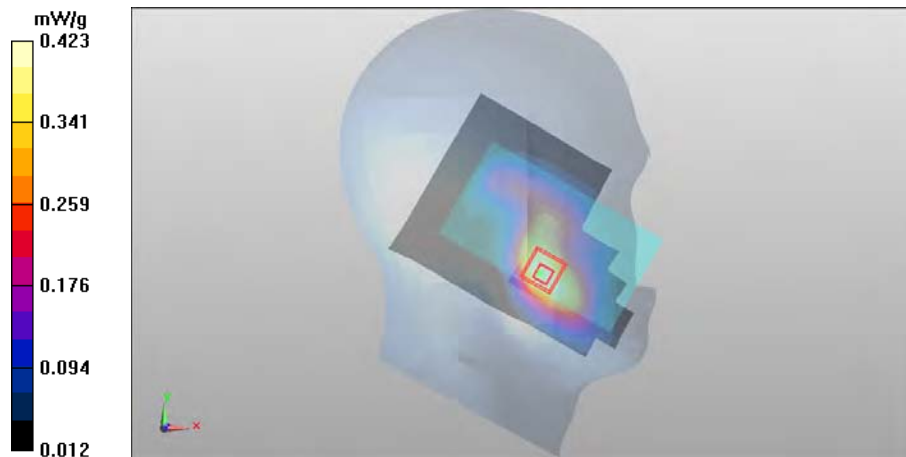
Peak SAR (extrapolated) = 0.579 mW/g

SAR(1 g) = 0.392 mW/g

SAR(10 g) = 0.256 mW/g

Power Drift = 0.31 dB

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



Date/Time: 2012-06-14 12:57:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.258 mW/g

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.869 V/m

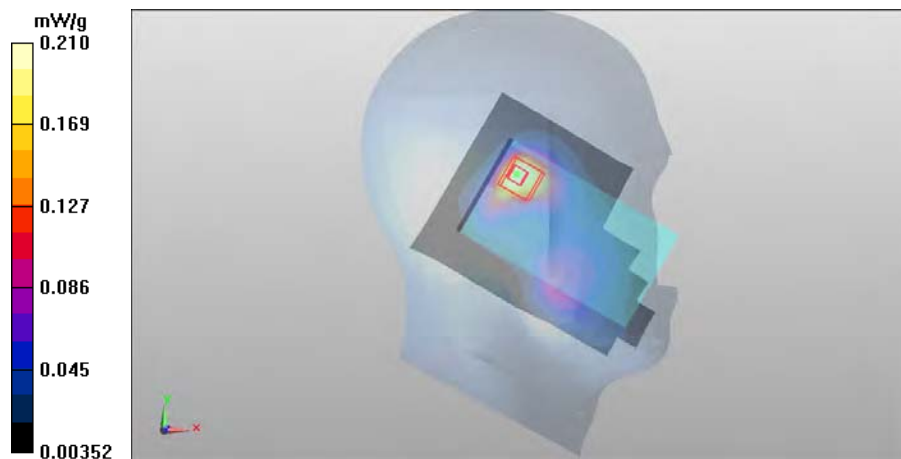
Peak SAR (extrapolated) = 0.288 mW/g

SAR(1 g) = 0.194 mW/g

SAR(10 g) = 0.119 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 0.210 mW/g



Date/Time: 2012-06-15 09:56:14

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:
dx=15mm, dy=15mm

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

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.380 V/m

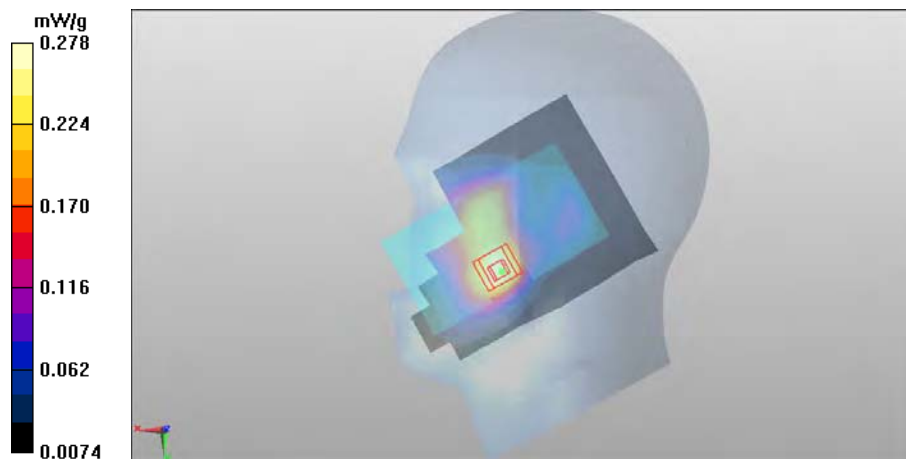
Peak SAR (extrapolated) = 0.371 mW/g

SAR(1 g) = 0.261 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.278 mW/g



Date/Time: 2012-06-15 13:29:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.171 mW/g

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 50 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.159 V/m

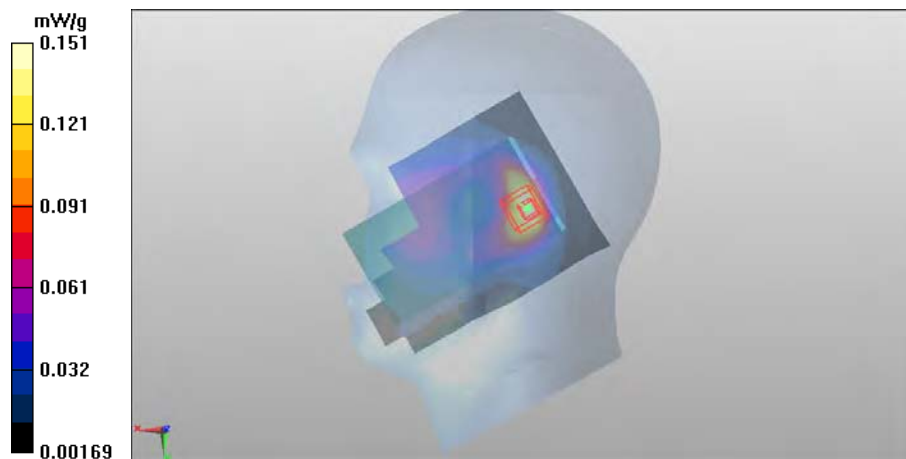
Peak SAR (extrapolated) = 0.208 mW/g

SAR(1 g) = 0.138 mW/g

SAR(10 g) = 0.084 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.151 mW/g



Date/Time: 2012-06-14 08:36:40

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.527 mW/g

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.978 V/m

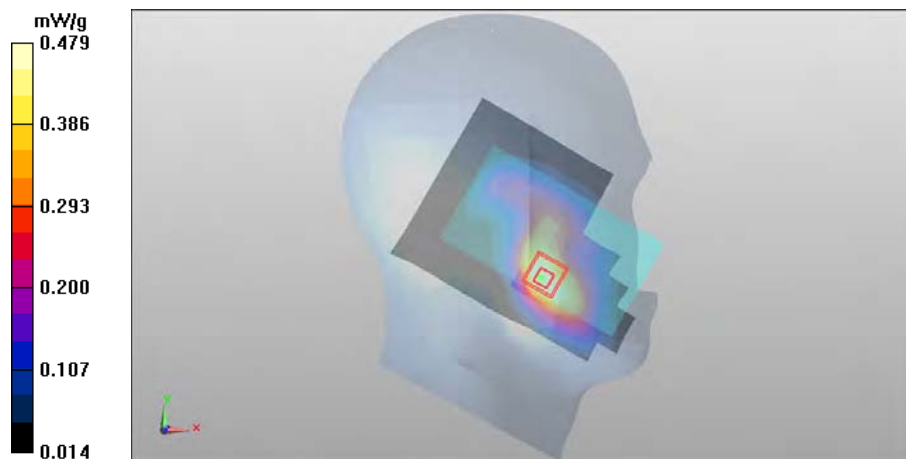
Peak SAR (extrapolated) = 0.629 mW/g

SAR(1 g) = 0.441 mW/g

SAR(10 g) = 0.291 mW/g

Power Drift = 0.17 dB

Maximum value of SAR (measured) = 0.479 mW/g



Date/Time: 2012-06-14 13:13:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #1 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.769 V/m

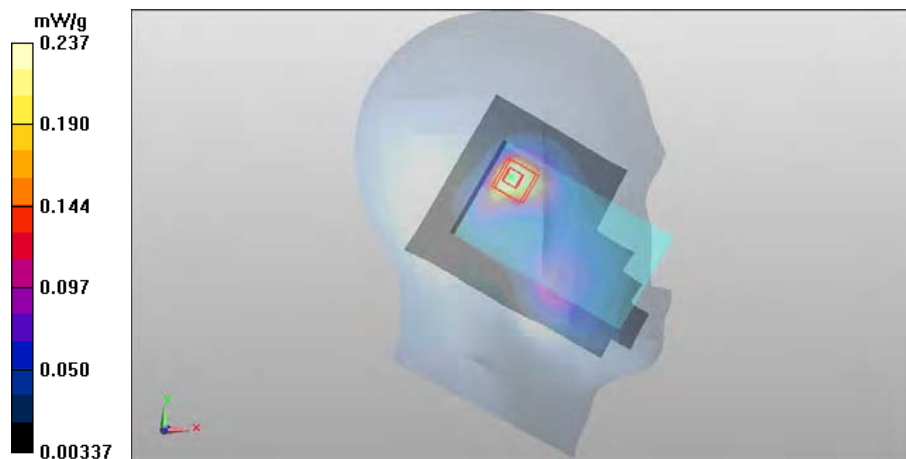
Peak SAR (extrapolated) = 0.323 mW/g

SAR(1 g) = 0.219 mW/g

SAR(10 g) = 0.133 mW/g

Power Drift = -0.14 dB

Maximum value of SAR (measured) = 0.237 mW/g



Date/Time: 2012-06-15 10:11:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.323 mW/g

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.815 V/m

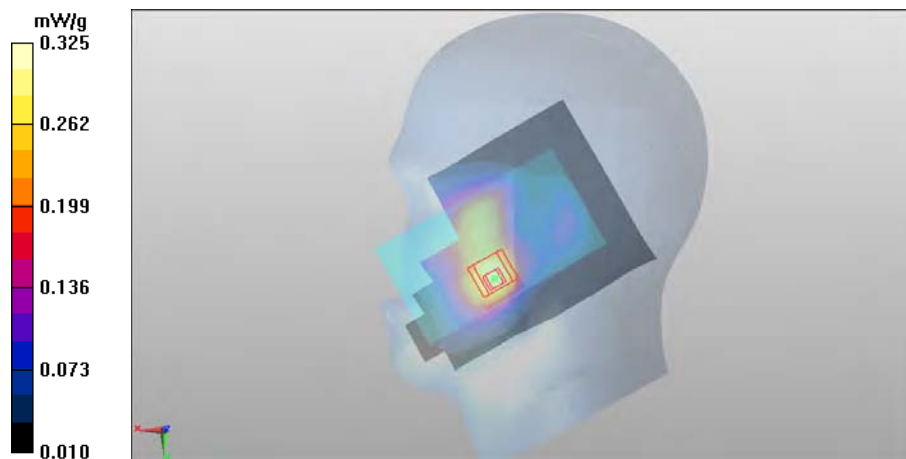
Peak SAR (extrapolated) = 0.435 mW/g

SAR(1 g) = 0.296 mW/g

SAR(10 g) = 0.194 mW/g

Power Drift = 0.17 dB

Maximum value of SAR (measured) = 0.325 mW/g



Date/Time: 2012-06-15 13:44:53

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.191 mW/g

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.876 V/m

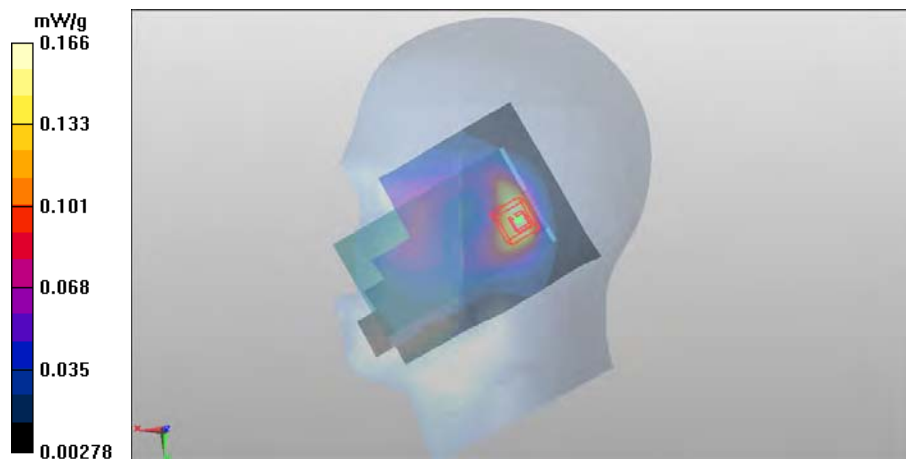
Peak SAR (extrapolated) = 0.248 mW/g

SAR(1 g) = 0.154 mW/g

SAR(10 g) = 0.093 mW/g

Power Drift = -0.22 dB

Maximum value of SAR (measured) = 0.166 mW/g



Date/Time: 2012-06-14 08:52:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.775 V/m

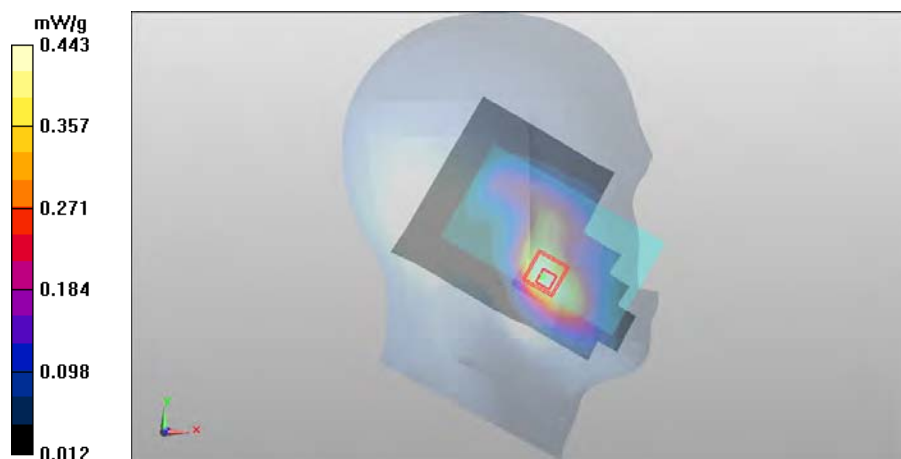
Peak SAR (extrapolated) = 0.602 mW/g

SAR(1 g) = 0.413 mW/g

SAR(10 g) = 0.271 mW/g

Power Drift = 0.04 dB

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



Date/Time: 2012-06-14 13:28:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

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

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.334 V/m

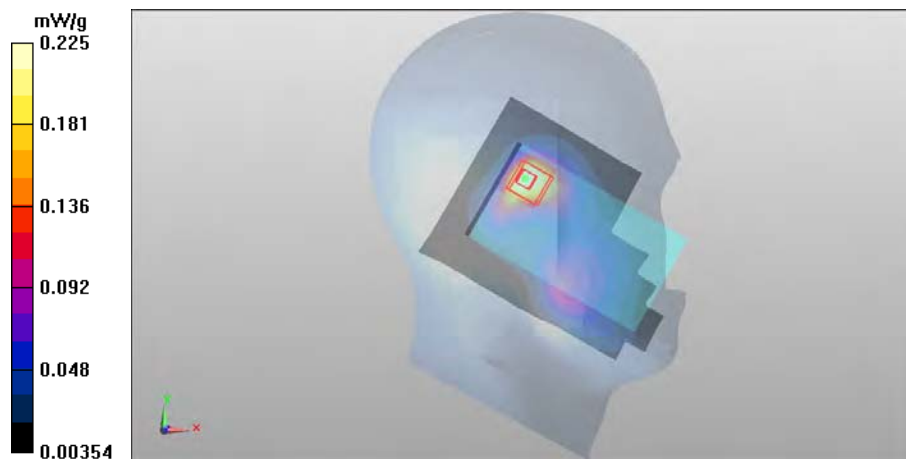
Peak SAR (extrapolated) = 0.311 mW/g

SAR(1 g) = 0.210 mW/g

SAR(10 g) = 0.128 mW/g

Power Drift = 0.06 dB

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



Date/Time: 2012-06-15 10:28:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:
dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.330 mW/g

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.418 V/m

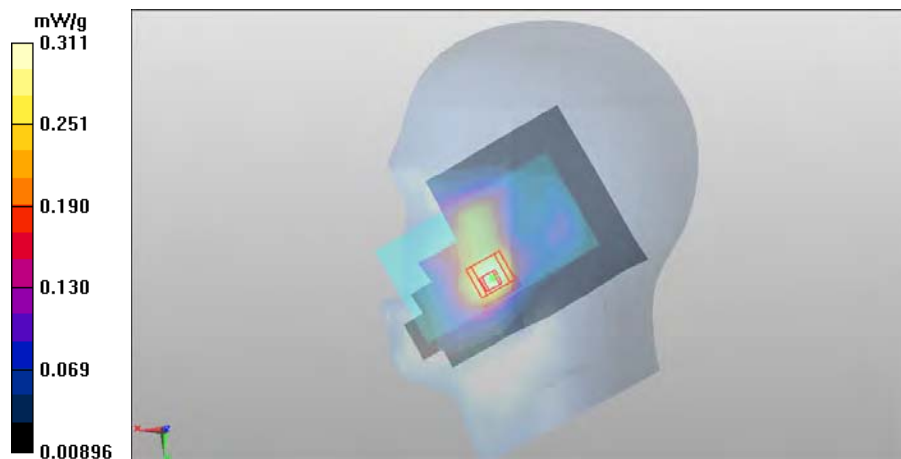
Peak SAR (extrapolated) = 0.432 mW/g

SAR(1 g) = 0.293 mW/g

SAR(10 g) = 0.193 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.311 mW/g



Date/Time: 2012-06-15 14:00:09

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.177 mW/g

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.927 V/m

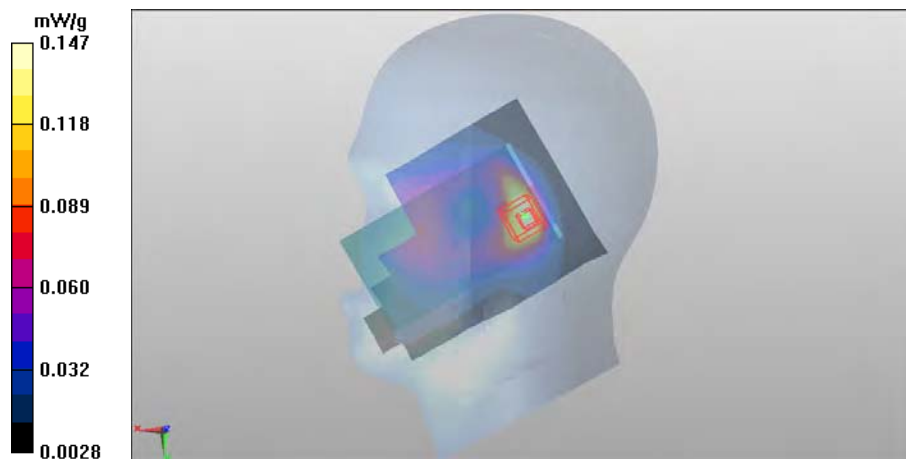
Peak SAR (extrapolated) = 0.208 mW/g

SAR(1 g) = 0.136 mW/g

SAR(10 g) = 0.083 mW/g

Power Drift = 0.16 dB

Maximum value of SAR (measured) = 0.147 mW/g



Date/Time: 2012-06-14 12:11:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.536 mW/g

LTE - Left/Cheek - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.008 V/m

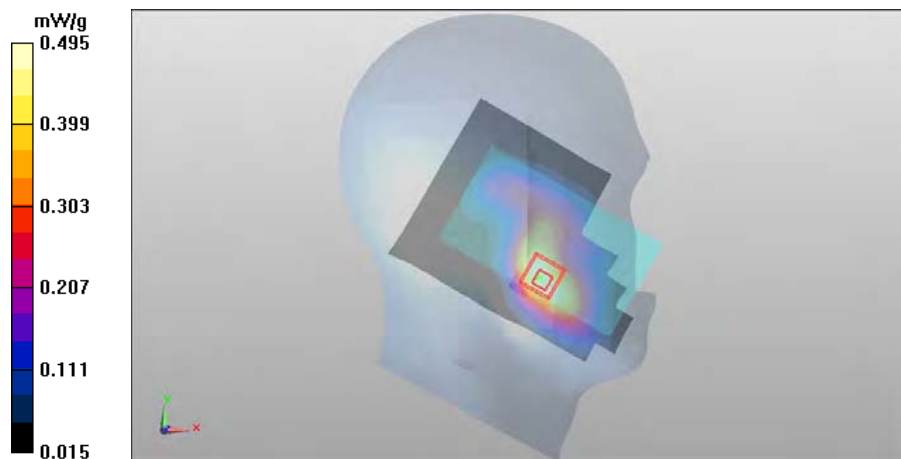
Peak SAR (extrapolated) = 0.719 mW/g

SAR(1 g) = 0.466 mW/g

SAR(10 g) = 0.304 mW/g

Power Drift = -0.08 dB

Maximum value of SAR (measured) = 0.495 mW/g



Date/Time: 2012-06-14 17:31:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.322 mho/m; ϵ_r = 39.147; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.320 mW/g

LTE - Left/Tilt - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.933 V/m

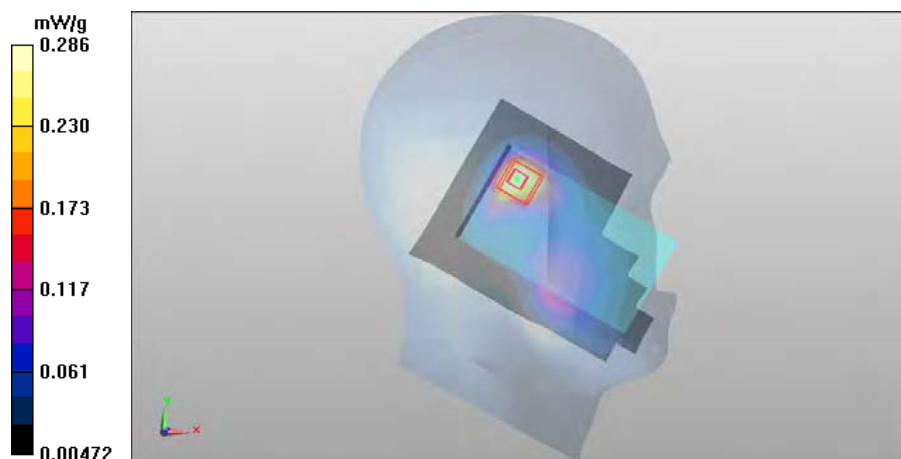
Peak SAR (extrapolated) = 0.379 mW/g

SAR(1 g) = 0.260 mW/g

SAR(10 g) = 0.158 mW/g

Power Drift = 0.06 dB

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



Date/Time: 2012-06-15 10:43:36

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.336 mW/g

LTE - Right/Cheek - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.261 V/m

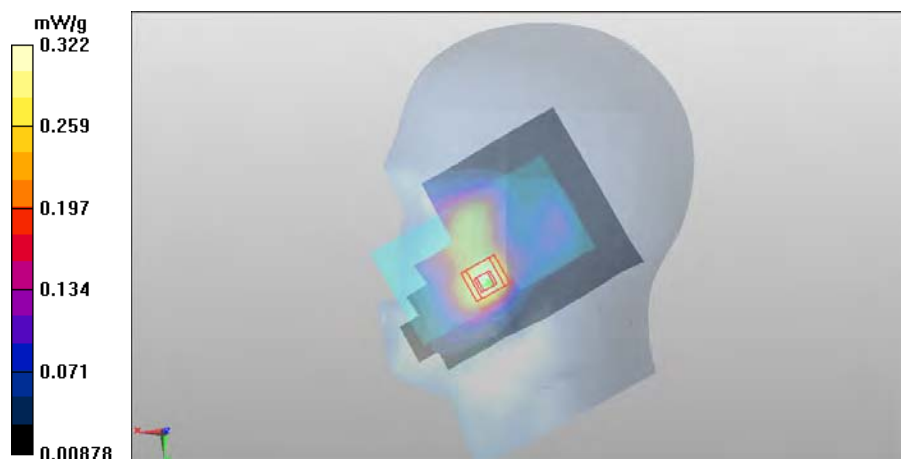
Peak SAR (extrapolated) = 0.419 mW/g

SAR(1 g) = 0.303 mW/g

SAR(10 g) = 0.202 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.322 mW/g



Date/Time: 2012-06-15 14:17:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: HSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.312 mho/m; ϵ_r = 38.707; ρ = 1000 kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #1 CRP; Type: SAM; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Area Scan (81x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.191 mW/g

LTE - Right/Tilt - Middle - 16QAM - 20MHz – 1 RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.745 V/m

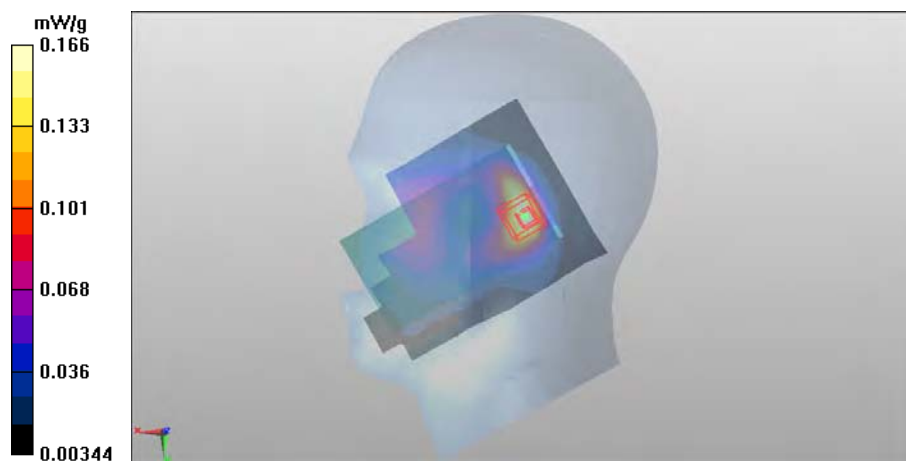
Peak SAR (extrapolated) = 0.229 mW/g

SAR(1 g) = 0.154 mW/g

SAR(10 g) = 0.095 mW/g

Power Drift = 0.22 dB

Maximum value of SAR (measured) = 0.166 mW/g



Date/Time: 2012-06-12 18:11:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: GSM1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.405$ mho/m; $\epsilon_r = 39.394$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

GSM - Left/Cheek - Middle/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.463 mW/g

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

Reference Value = 5.314 V/m

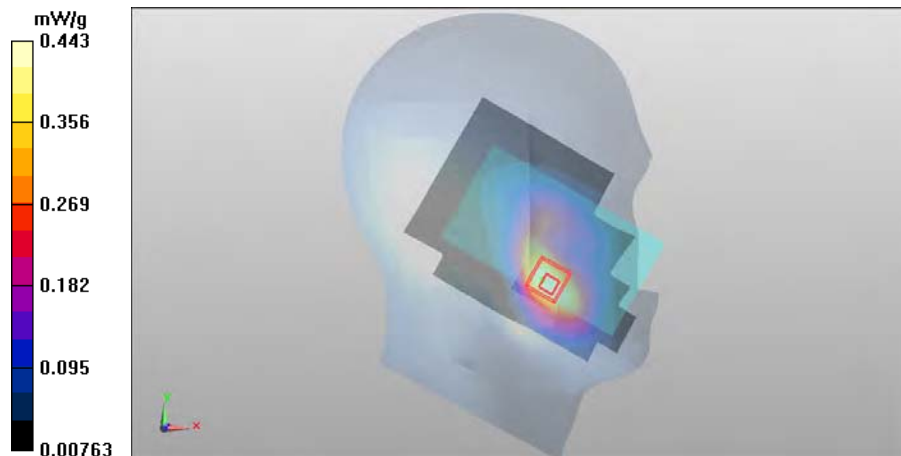
Peak SAR (extrapolated) = 0.619 mW/g

SAR(1 g) = 0.412 mW/g

SAR(10 g) = 0.262 mW/g

Power Drift = -0.48 dB

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



Date/Time: 2012-06-12 19:47:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.436$ mho/m; $\epsilon_r = 39.268$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Left/Cheek - High/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.916 mW/g

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

Reference Value = 8.406 V/m

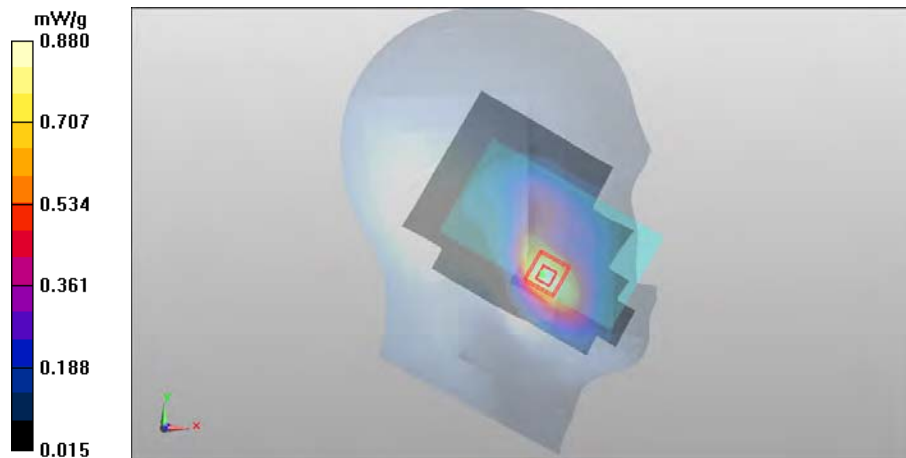
Peak SAR (extrapolated) = 1.227 mW/g

SAR(1 g) = 0.815 mW/g

SAR(10 g) = 0.515 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.880 mW/g



Date/Time: 2012-06-13 08:05:43

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.382$ mho/m; $\epsilon_r = 39.647$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Left/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.184 mW/g

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

Reference Value = 7.562 V/m

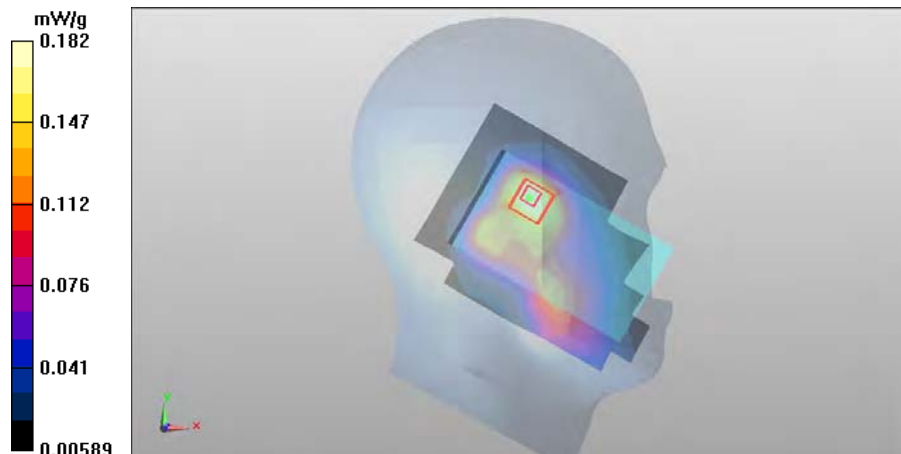
Peak SAR (extrapolated) = 0.257 mW/g

SAR(1 g) = 0.171 mW/g

SAR(10 g) = 0.110 mW/g

Power Drift = 0.38 dB

Maximum value of SAR (measured) = 0.182 mW/g



Date/Time: 2012-06-13 08:29:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.382$ mho/m; $\epsilon_r = 39.647$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Right/Cheek - Middle/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.536 mW/g

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

Reference Value = 6.531 V/m

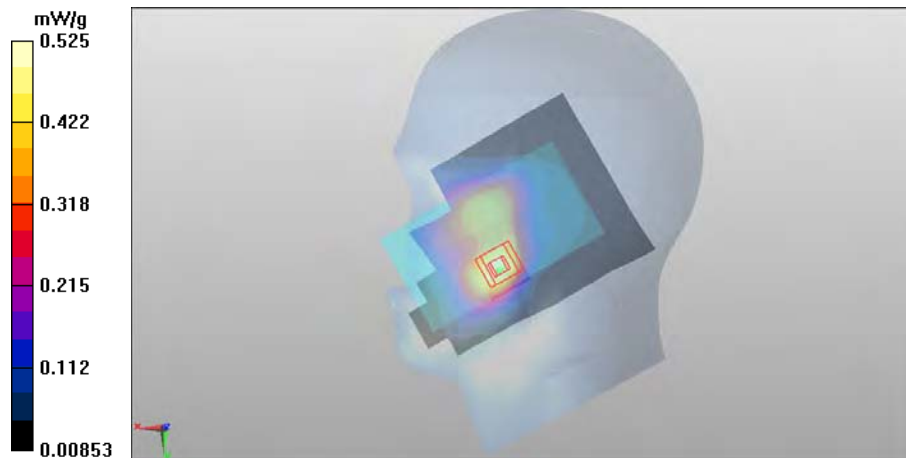
Peak SAR (extrapolated) = 0.720 mW/g

SAR(1 g) = 0.490 mW/g

SAR(10 g) = 0.315 mW/g

Power Drift = 0.29 dB

Maximum value of SAR (measured) = 0.525 mW/g



Date/Time: 2012-06-13 08:51:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.382$ mho/m; $\epsilon_r = 39.647$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS - Right/Tilt - Middle/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.186 mW/g

2-slot GPRS - Right/Tilt - Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.220 V/m

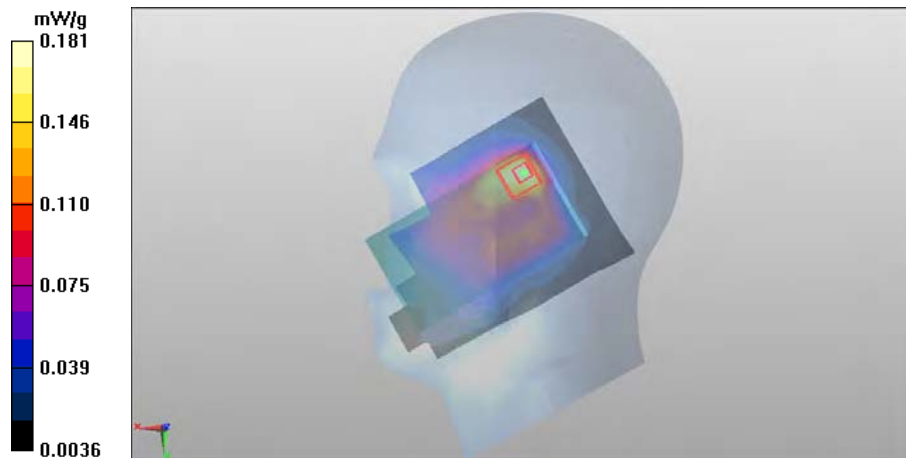
Peak SAR (extrapolated) = 0.266 mW/g

SAR(1 g) = 0.168 mW/g

SAR(10 g) = 0.103 mW/g

Power Drift = 0.47 dB

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



Date/Time: 2012-06-13 13:19:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot 8PSK EGPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:4.2

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.414$ mho/m; $\epsilon_r = 39.555$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot 8PSK EGPRS - Left/Cheek - High/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

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

2-slot 8PSK EGPRS - Left/Cheek - High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.307 V/m

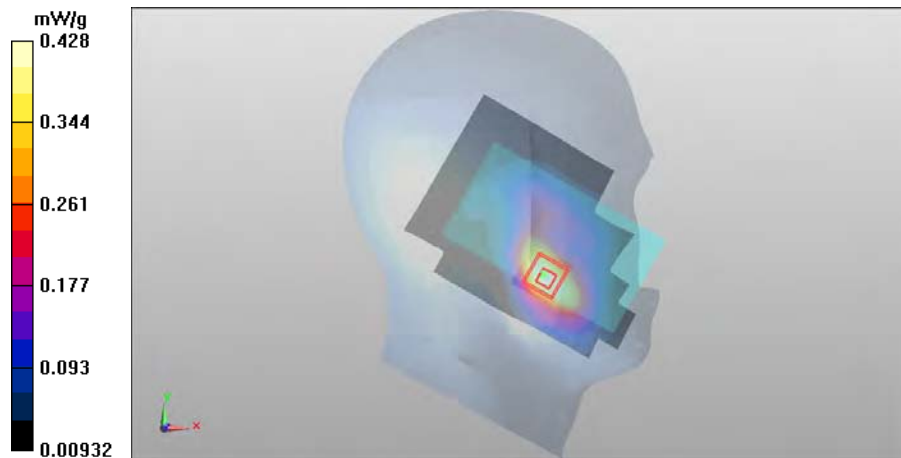
Peak SAR (extrapolated) = 0.599 mW/g

SAR(1 g) = 0.396 mW/g

SAR(10 g) = 0.250 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.428 mW/g



Date/Time: 2012-06-19 16:25:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: t= 21.3 C

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; ϵ_r = 39.342; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA - Left/Cheek - Low/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.06 mW/g

WCDMA - Left/Cheek - Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.683 V/m

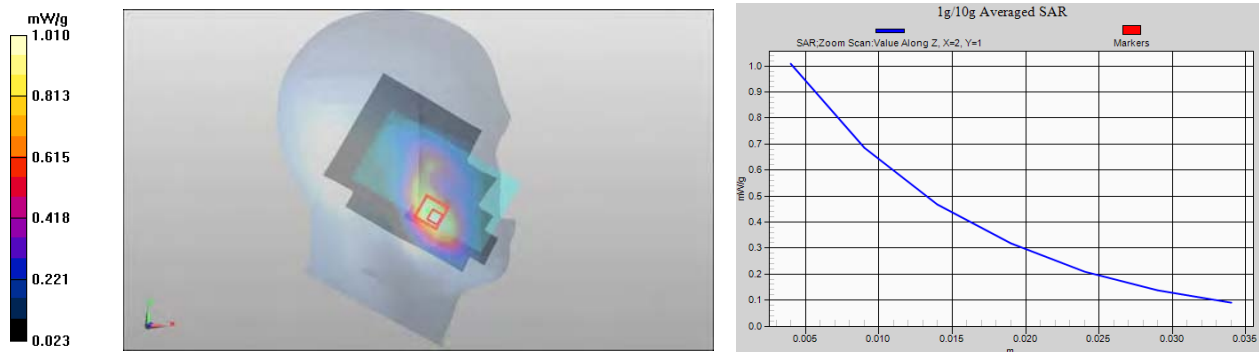
Peak SAR (extrapolated) = 1.409 mW/g

SAR(1 g) = 0.939 mW/g

SAR(10 g) = 0.603 mW/g

Power Drift = 0.16 dB

Maximum value of SAR (measured) = 1.01 mW/g



Date/Time: 2012-06-19 16:56:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA - Left/Tilt - Middle/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.283 mW/g

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

Reference Value = 10.866 V/m

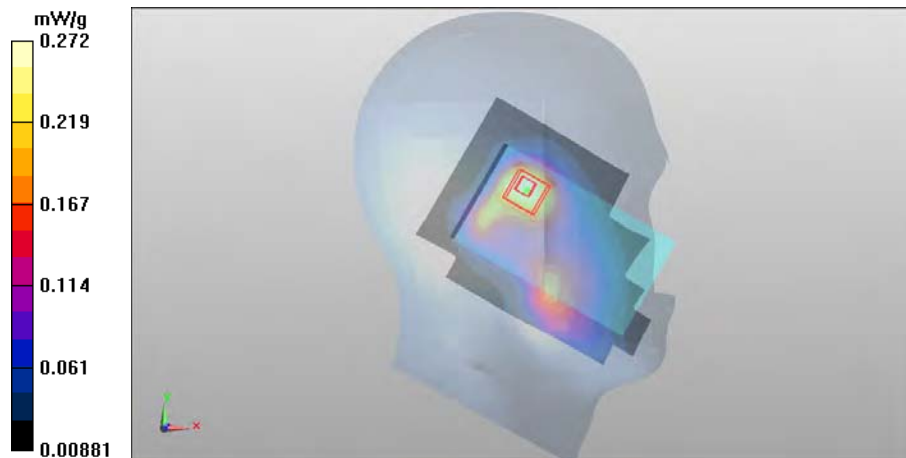
Peak SAR (extrapolated) = 0.387 mW/g

SAR(1 g) = 0.255 mW/g

SAR(10 g) = 0.160 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.272 mW/g



Date/Time: 2012-06-19 17:19:25

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA - Right/Cheek - Middle/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.657 mW/g

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

Reference Value = 8.391 V/m

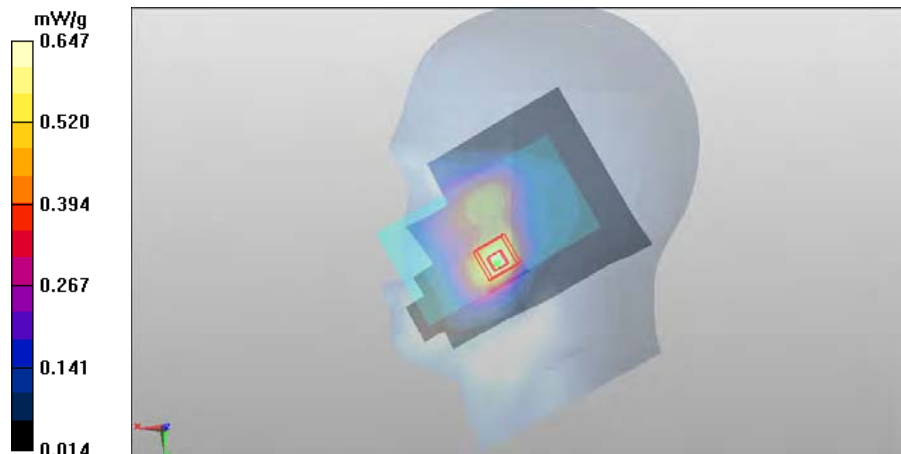
Peak SAR (extrapolated) = 0.887 mW/g

SAR(1 g) = 0.596 mW/g

SAR(10 g) = 0.380 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.647 mW/g



Date/Time: 2012-06-19 19:45:22

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA - Right/Tilt - Middle/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 10.118 V/m

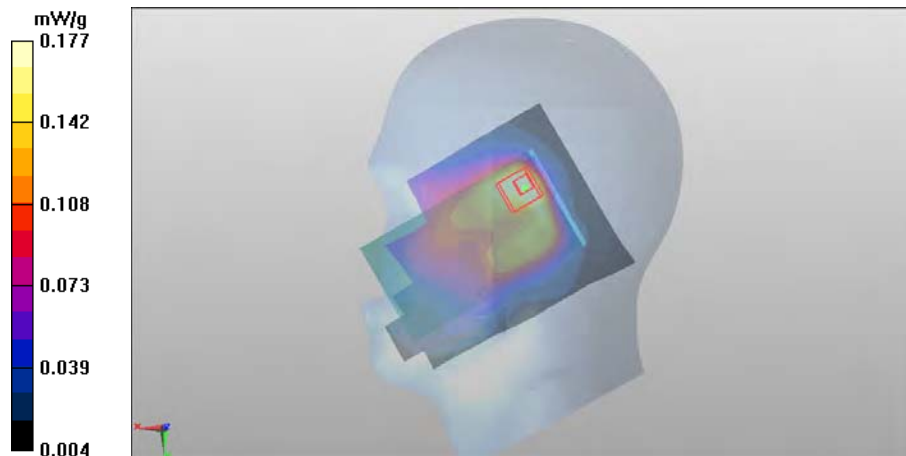
Peak SAR (extrapolated) = 0.258 mW/g

SAR(1 g) = 0.166 mW/g

SAR(10 g) = 0.104 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.177 mW/g



Date/Time: 2012-06-15 11:37:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.688 W/kg

LTE - Left/Cheek - Middle - QPSK - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.135 V/m

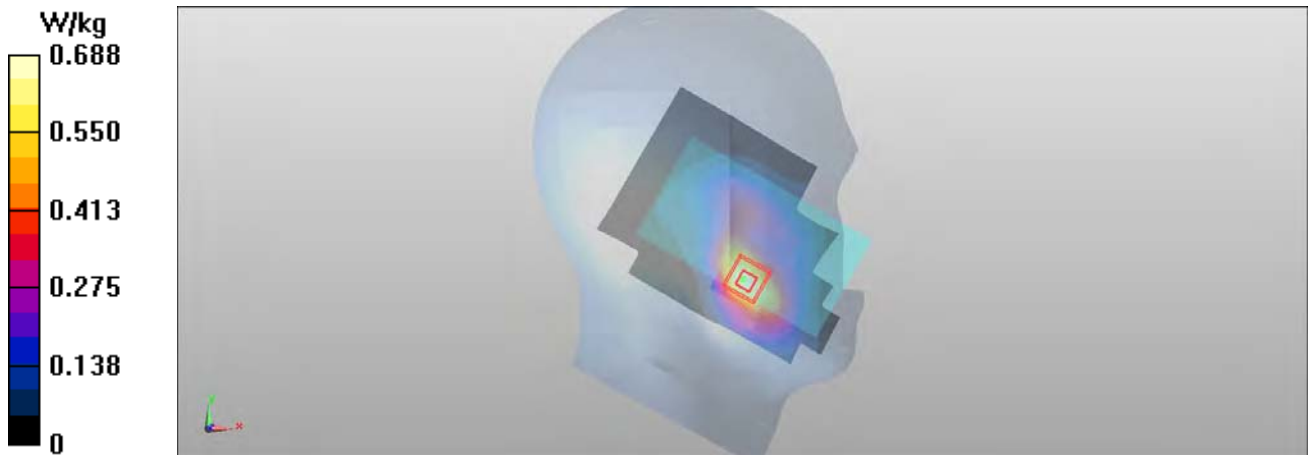
Peak SAR (extrapolated) = 0.880 mW/g

SAR(1 g) = 0.584 mW/g

SAR(10 g) = 0.374 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.634 W/kg



Date/Time: 2012-06-16 13:13:19

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.369\text{ mho/m}$; $\epsilon_r = 39.085$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.160 W/kg

/

LTE - Left/Tilt - Middle - QPSK - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.814 V/m

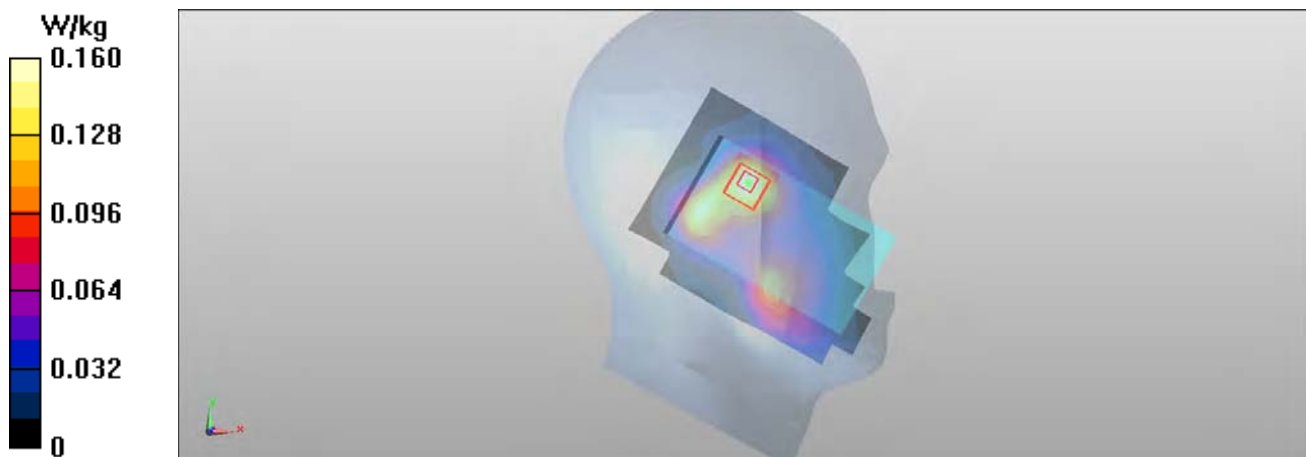
Peak SAR (extrapolated) = 0.214 mW/g

SAR(1 g) = 0.143 mW/g

SAR(10 g) = 0.092 mW/g

Power Drift = 0.30 dB

Maximum value of SAR (measured) = 0.152 W/kg



Date/Time: 2012-06-19 07:18:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.434 W/kg

LTE - Right/Cheek - Middle - QPSK - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.721 V/m

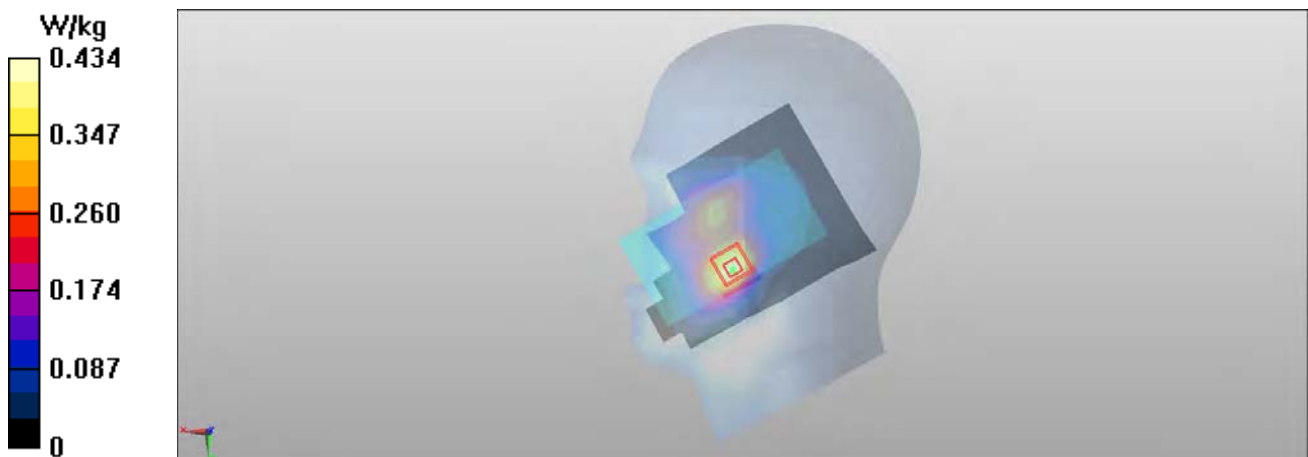
Peak SAR (extrapolated) = 0.575 mW/g

SAR(1 g) = 0.386 mW/g

SAR(10 g) = 0.247 mW/g

Power Drift = -0.21 dB

Maximum value of SAR (measured) = 0.418 W/kg



Date/Time: 2012-06-19 11:37:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.164 W/kg

LTE - Right/Tilt - Middle - QPSK - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.627 V/m

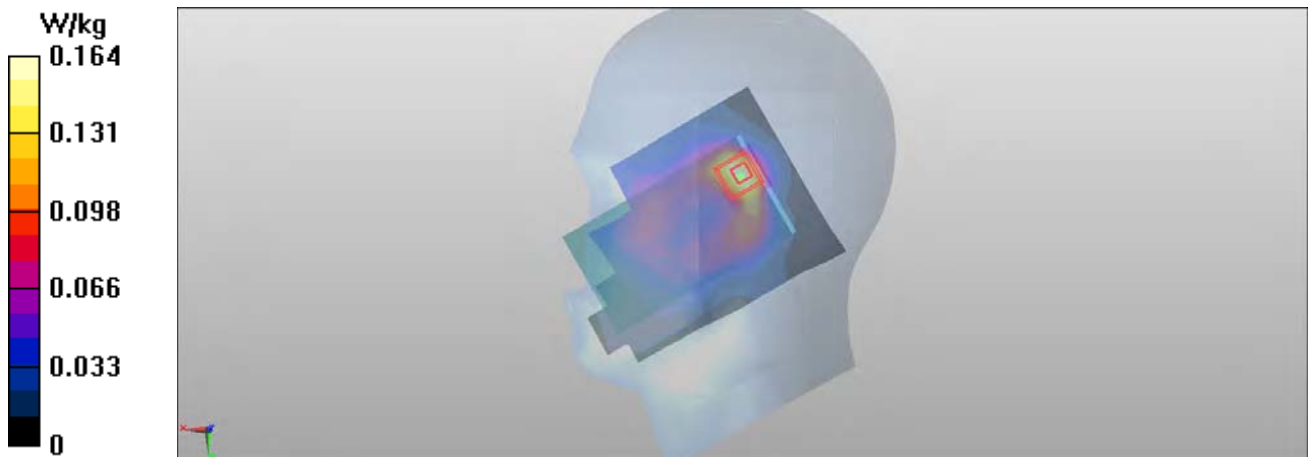
Peak SAR (extrapolated) = 0.228 mW/g

SAR(1 g) = 0.141 mW/g

SAR(10 g) = 0.084 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 0.151 W/kg



Date/Time: 2012-06-15 12:04:48

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.669 W/kg

LTE - Left/Cheek - Middle - QPSK - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.025 V/m

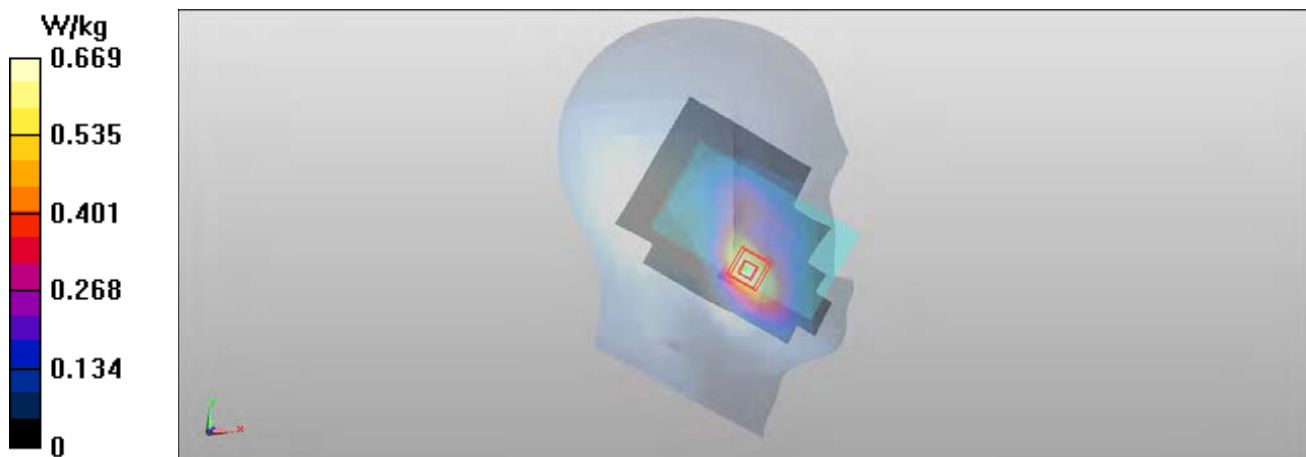
Peak SAR (extrapolated) = 0.872 mW/g

SAR(1 g) = 0.575 mW/g

SAR(10 g) = 0.369 mW/g

Power Drift = 0.45 dB

Maximum value of SAR (measured) = 0.622 W/kg



Date/Time: 2012-06-16 13:28:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.369\text{ mho/m}$; $\epsilon_r = 39.085$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.156 W/kg

LTE - Left/Tilt - Middle - QPSK - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{ mm}$, $dy=7.5\text{ mm}$, $dz=5\text{ mm}$

Reference Value = 8.916 V/m

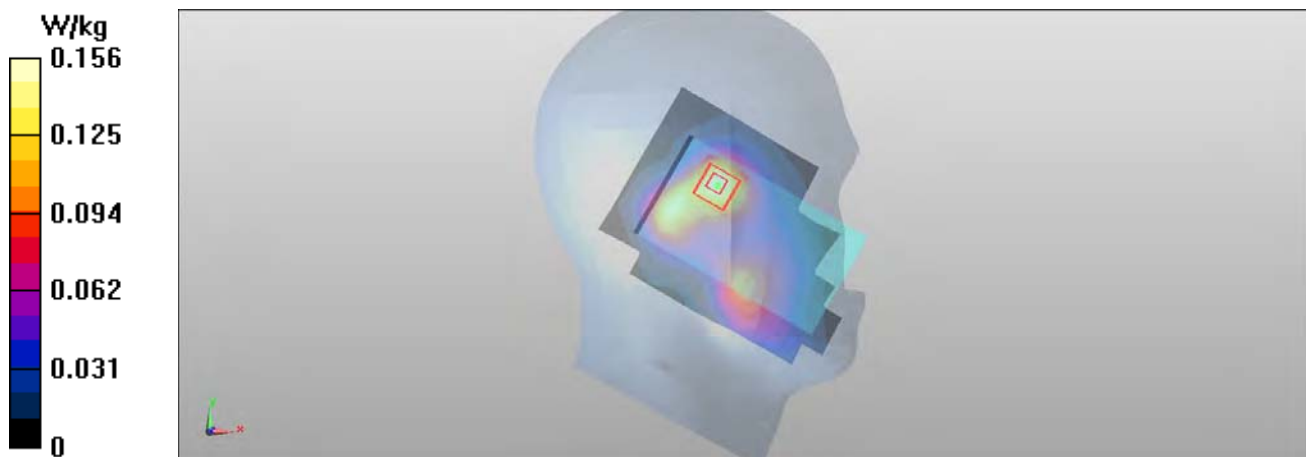
Peak SAR (extrapolated) = 0.210 mW/g

SAR(1 g) = 0.142 mW/g

SAR(10 g) = 0.090 mW/g

Power Drift = 0.17 dB

Maximum value of SAR (measured) = 0.153 W/kg



Date/Time: 2012-06-19 07:38:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:
dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.416 W/kg

LTE - Right/Cheek - Middle - QPSK - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.288 V/m

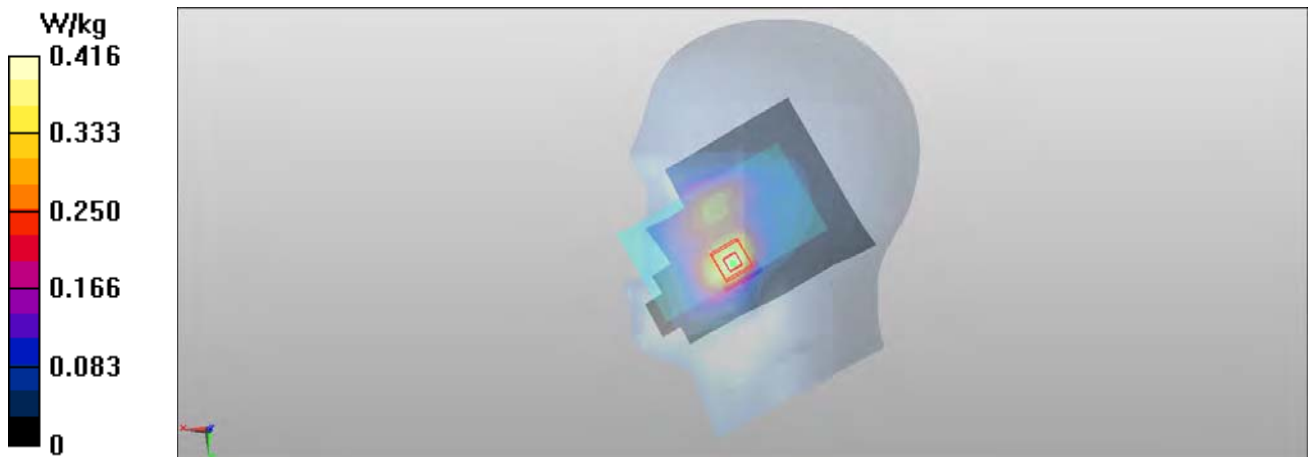
Peak SAR (extrapolated) = 0.557 mW/g

SAR(1 g) = 0.378 mW/g

SAR(10 g) = 0.241 mW/g

Power Drift = 0.34 dB

Maximum value of SAR (measured) = 0.413 W/kg



Date/Time: 2012-06-19 12:01:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.166 W/kg

LTE - Right/Tilt - Middle - QPSK - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.575 V/m

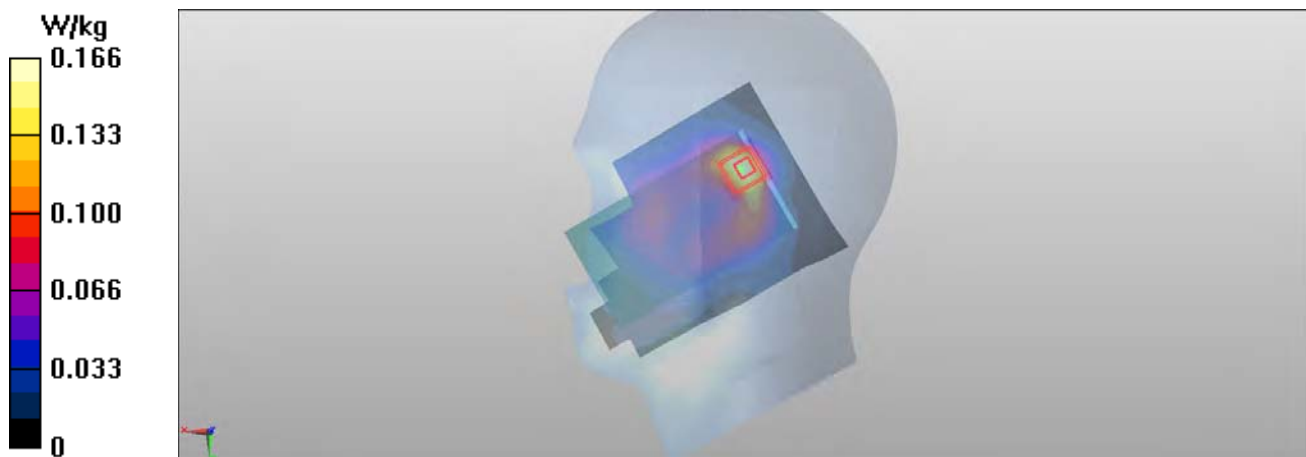
Peak SAR (extrapolated) = 0.220 mW/g

SAR(1 g) = 0.137 mW/g

SAR(10 g) = 0.081 mW/g

Power Drift = 0.13 dB

Maximum value of SAR (measured) = 0.145 W/kg



Date/Time: 2012-06-15 12:28:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.769 W/kg

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.546 V/m

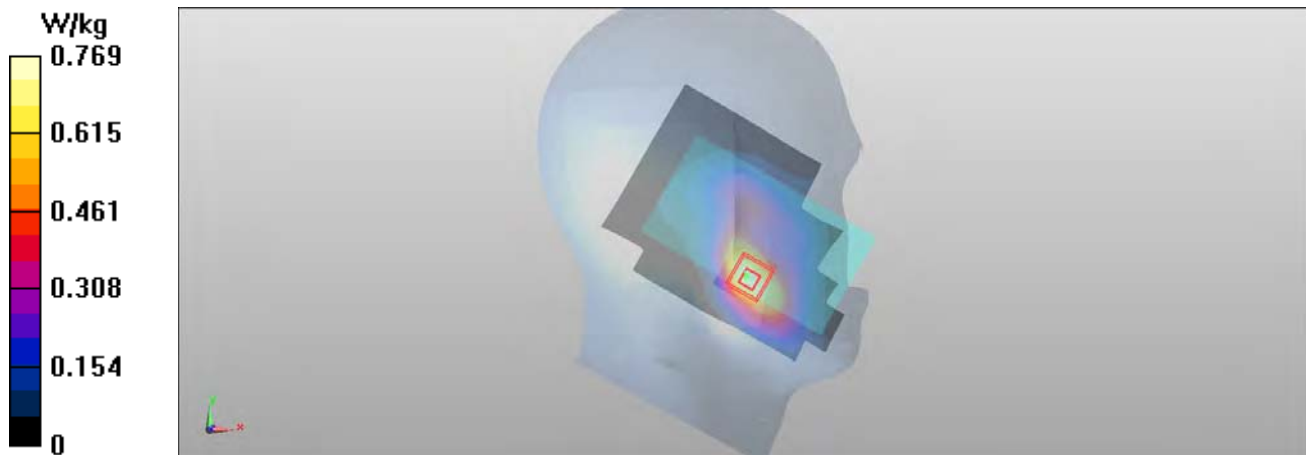
Peak SAR (extrapolated) = 0.996 mW/g

SAR(1 g) = 0.661 mW/g

SAR(10 g) = 0.423 mW/g

Power Drift = 0.34 dB

Maximum value of SAR (measured) = 0.712 W/kg



Date/Time: 2012-06-16 13:44:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.085$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

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

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.499 V/m

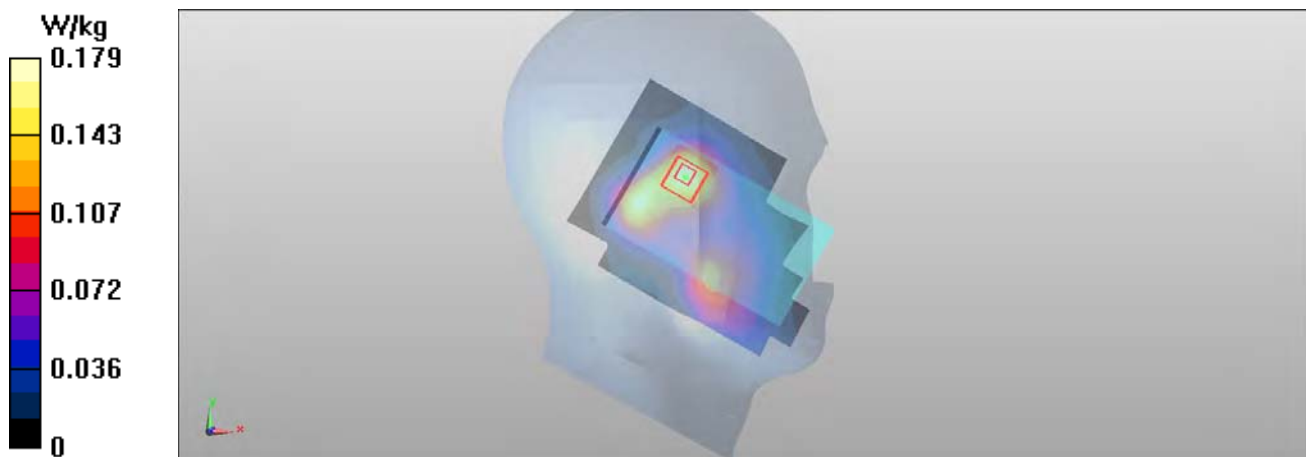
Peak SAR (extrapolated) = 0.247 mW/g

SAR(1 g) = 0.163 mW/g

SAR(10 g) = 0.104 mW/g

Power Drift = 0.19 dB

Maximum value of SAR (measured) = 0.178 W/kg



Date/Time: 2012-06-19 07:53:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.491 W/kg

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.781 V/m

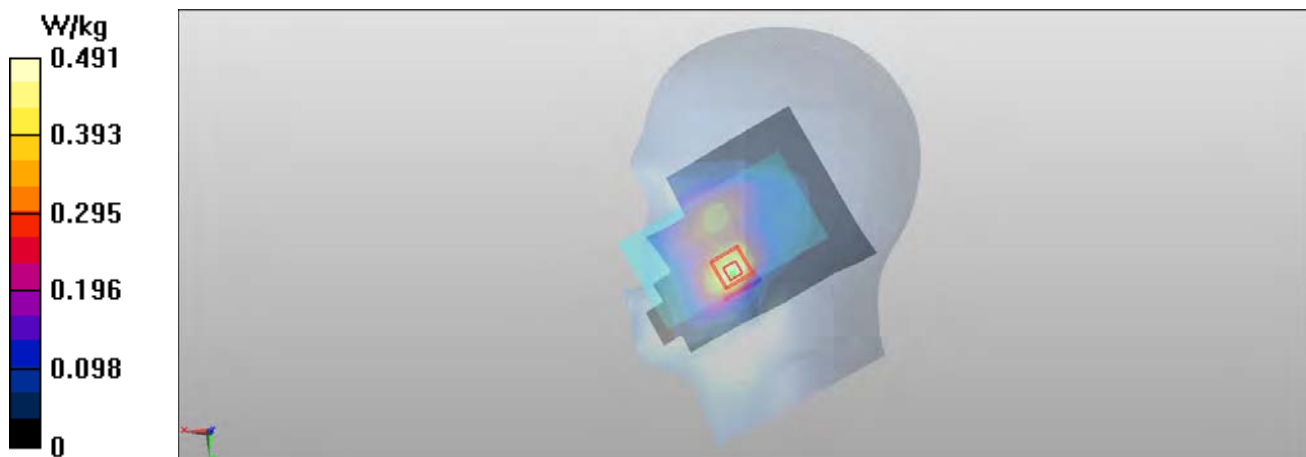
Peak SAR (extrapolated) = 0.643 mW/g

SAR(1 g) = 0.435 mW/g

SAR(10 g) = 0.278 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.473 W/kg



Date/Time: 2012-06-19 18:14:21

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.176 W/kg

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.670 V/m

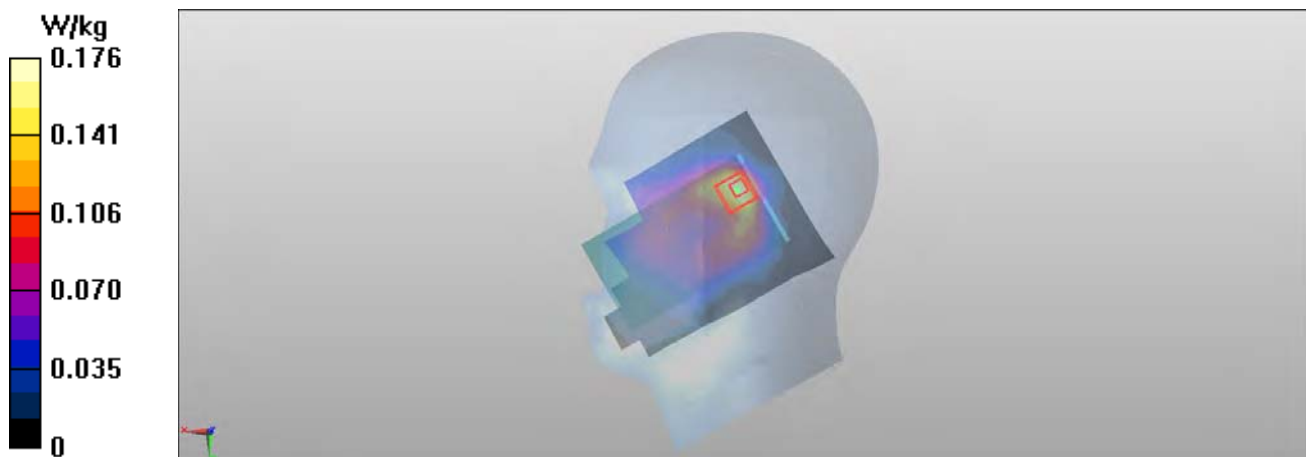
Peak SAR (extrapolated) = 0.235 mW/g

SAR(1 g) = 0.146 mW/g

SAR(10 g) = 0.089 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.155 W/kg



Date/Time: 2012-06-19 22:27:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.366$ mho/m; $\epsilon_r = 39.326$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Low - QPSK - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.885 W/kg

LTE - Left/Cheek - Low - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.146 V/m

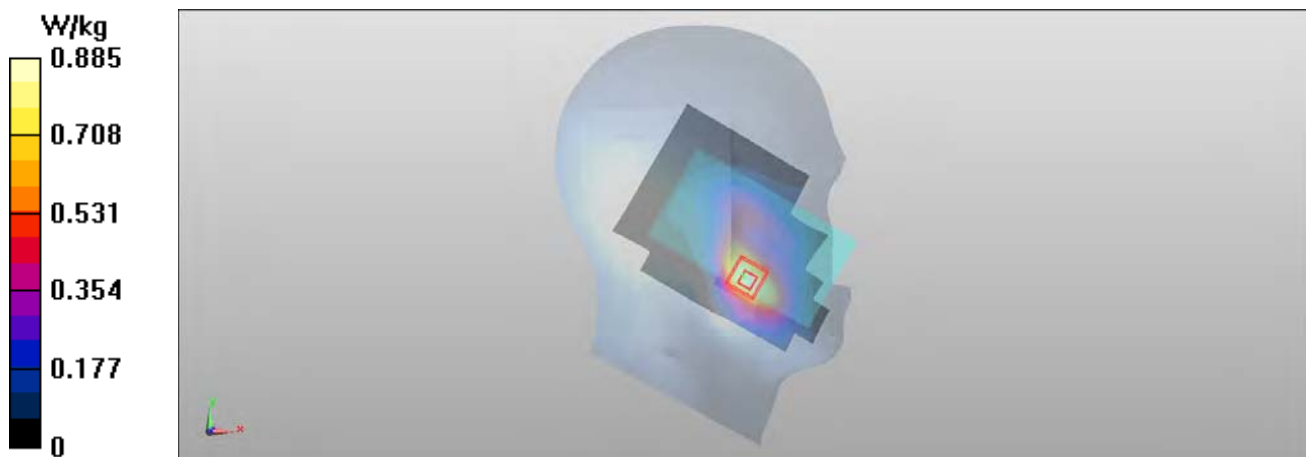
Peak SAR (extrapolated) = 1.163 mW/g

SAR(1 g) = 0.772 mW/g

SAR(10 g) = 0.496 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.828 W/kg



Date/Time: 2012-06-16 14:00:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.085$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.236 W/kg

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.160 V/m

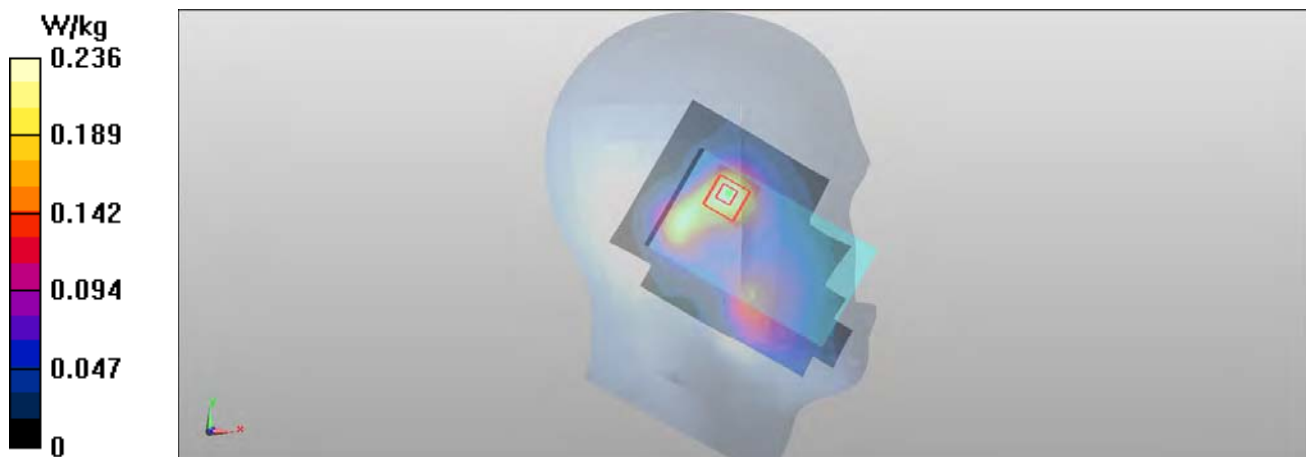
Peak SAR (extrapolated) = 0.313 mW/g

SAR(1 g) = 0.212 mW/g

SAR(10 g) = 0.135 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.226 W/kg



Date/Time: 2012-06-19 08:08:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.574 W/kg

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.071 V/m

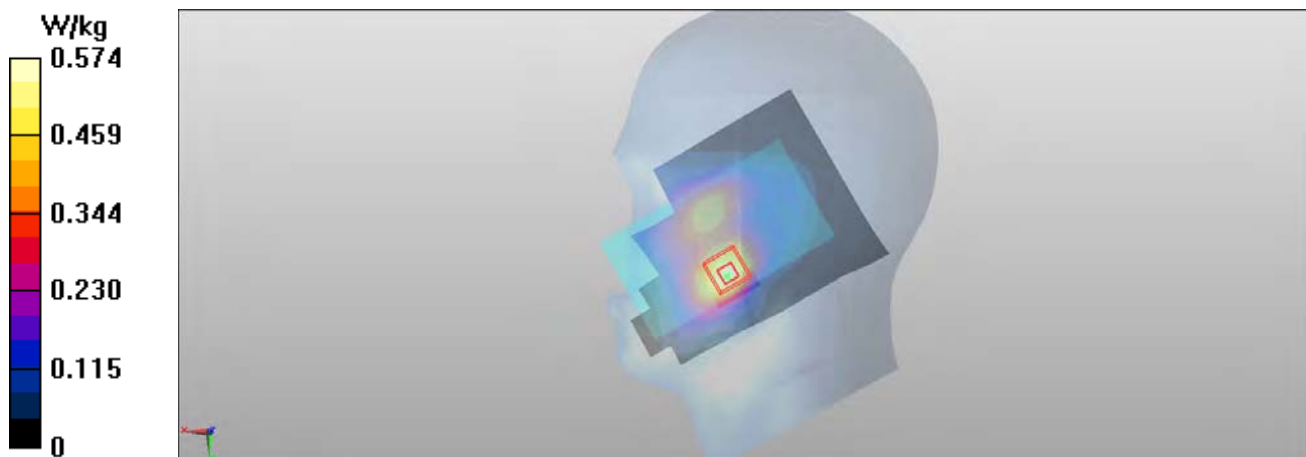
Peak SAR (extrapolated) = 0.759 mW/g

SAR(1 g) = 0.511 mW/g

SAR(10 g) = 0.327 mW/g

Power Drift = 0.24 dB

Maximum value of SAR (measured) = 0.556 W/kg



Date/Time: 2012-06-19 18:28:29

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.225 W/kg

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 11.399 V/m

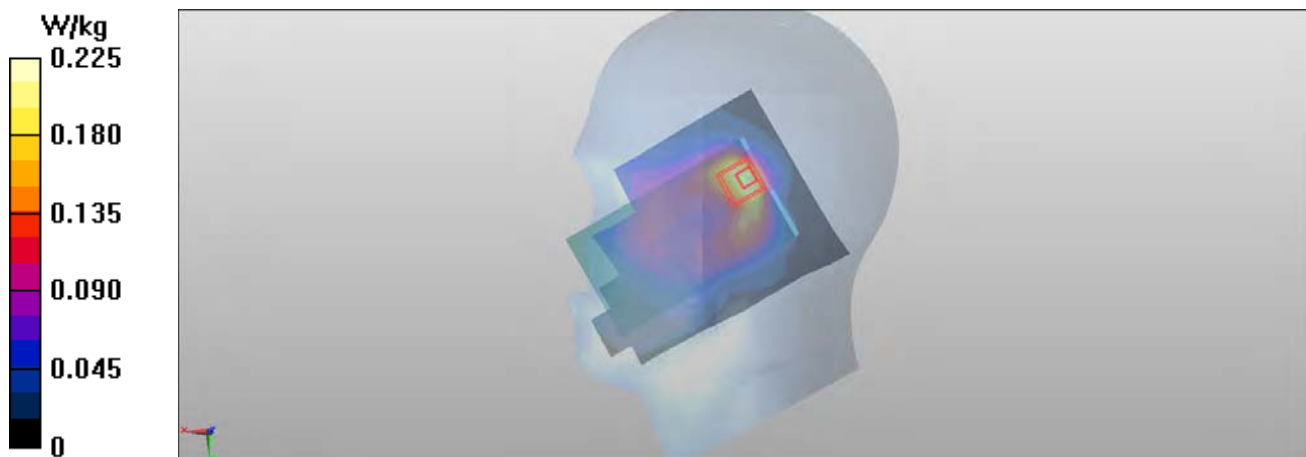
Peak SAR (extrapolated) = 0.305 mW/g

SAR(1 g) = 0.188 mW/g

SAR(10 g) = 0.113 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.195 W/kg



Date/Time: 2012-06-16 09:13:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.369\text{ mho/m}$; $\epsilon_r = 39.085$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.807 W/kg

LTE - Left/Cheek - Middle - QPSK - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.071 V/m

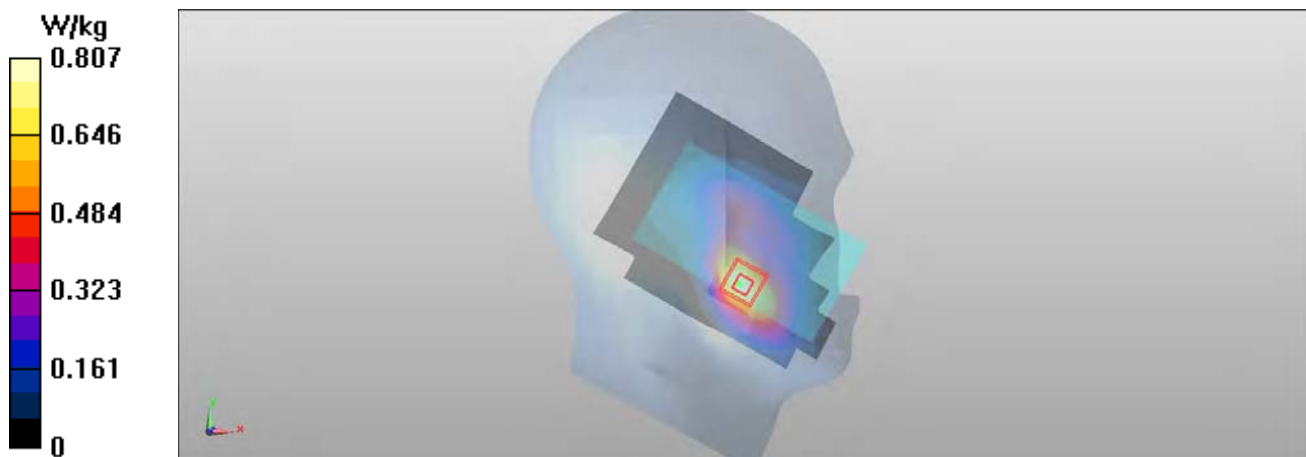
Peak SAR (extrapolated) = 1.073 mW/g

SAR(1 g) = 0.702 mW/g

SAR(10 g) = 0.446 mW/g

Power Drift = 0.34 dB

Maximum value of SAR (measured) = 0.758 W/kg



Date/Time: 2012-06-16 14:16:22

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.369\text{ mho/m}$; $\epsilon_r = 39.085$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.186 W/kg

LTE - Left/Tilt - Middle - QPSK - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.080 V/m

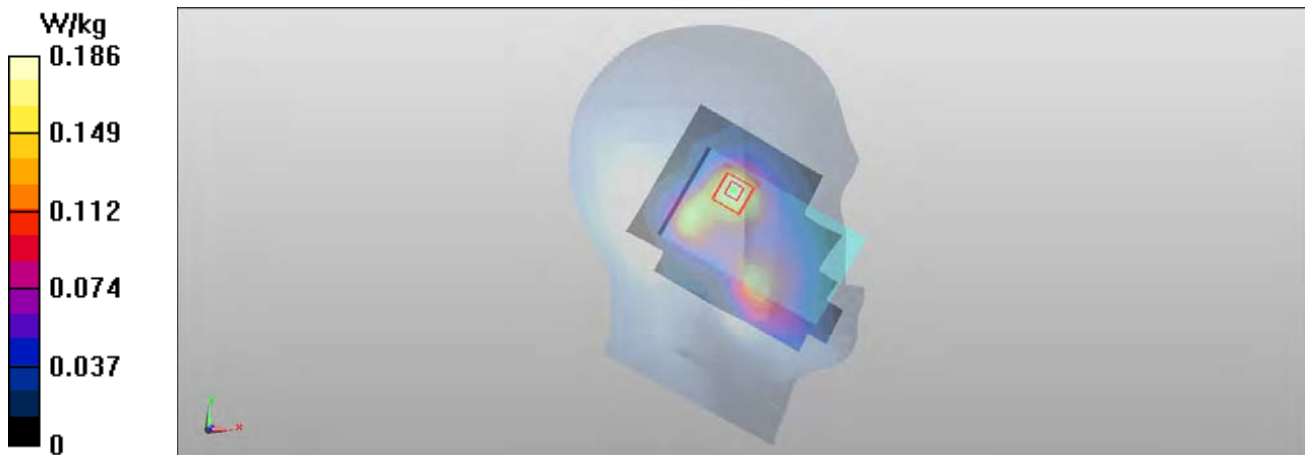
Peak SAR (extrapolated) = 0.256 mW/g

SAR(1 g) = 0.170 mW/g

SAR(10 g) = 0.109 mW/g

Power Drift = 0.22 dB

Maximum value of SAR (measured) = 0.184 W/kg



Date/Time: 2012-06-19 08:23:21

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.552 W/kg

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.702 V/m

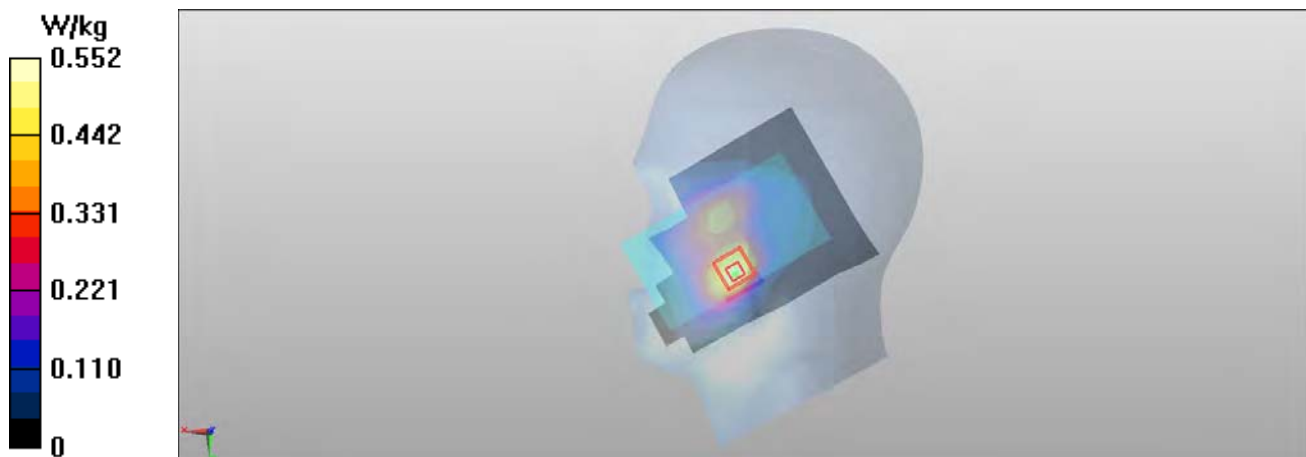
Peak SAR (extrapolated) = 0.729 mW/g

SAR(1 g) = 0.494 mW/g

SAR(10 g) = 0.316 mW/g

Power Drift = 0.31 dB

Maximum value of SAR (measured) = 0.537 W/kg



Date/Time: 2012-06-19 12:56:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.201 W/kg

LTE - Right/Tilt - Middle - QPSK - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 10.389 V/m

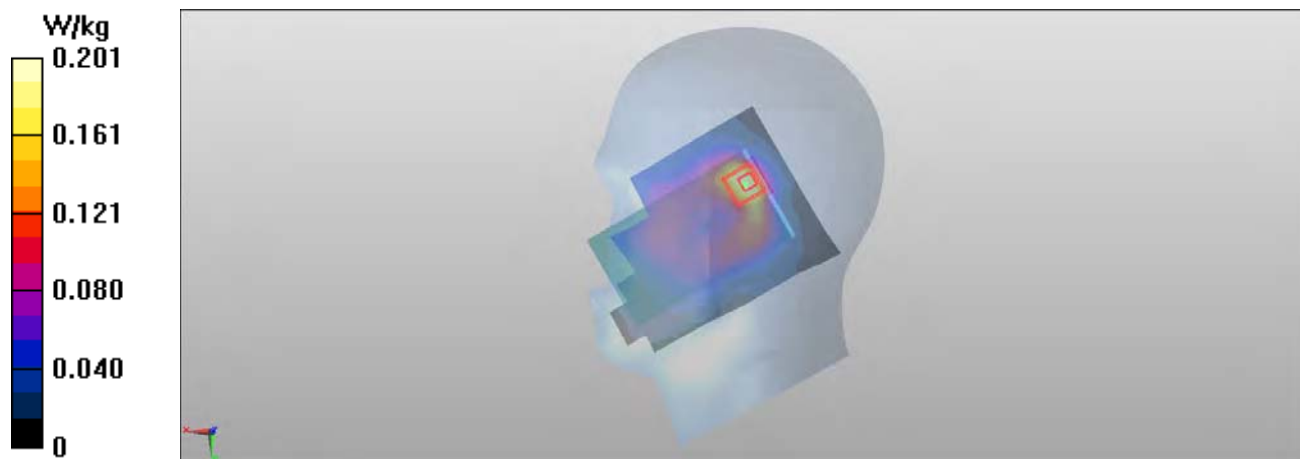
Peak SAR (extrapolated) = 0.265 mW/g

SAR(1 g) = 0.168 mW/g

SAR(10 g) = 0.101 mW/g

Power Drift = 0.13 dB

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



Date/Time: 2012-06-15 19:59:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.521 W/kg

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.585 V/m

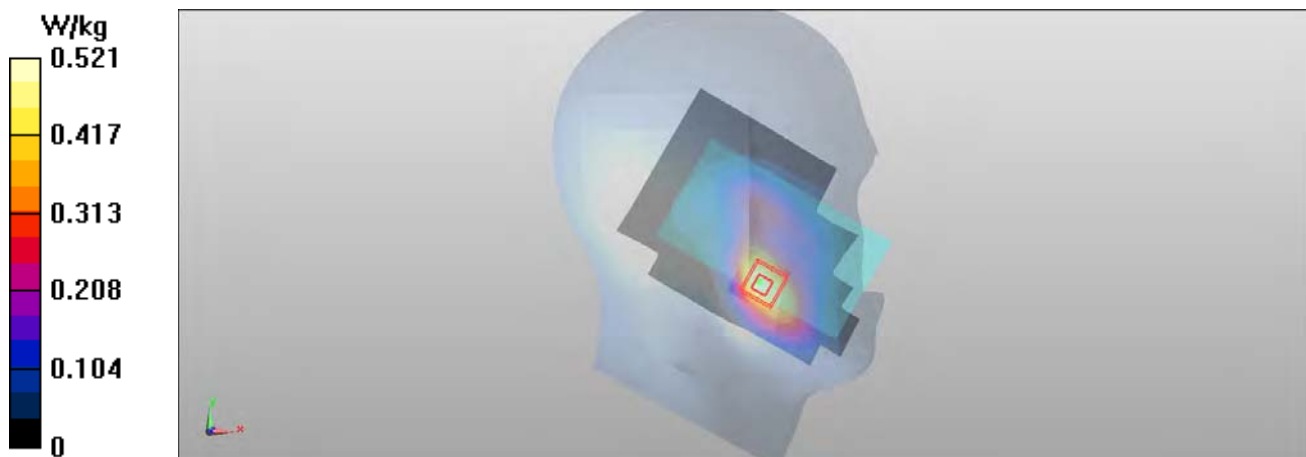
Peak SAR (extrapolated) = 0.691 mW/g

SAR(1 g) = 0.452 mW/g

SAR(10 g) = 0.287 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.490 W/kg



Date/Time: 2012-06-18 12:45:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.129 W/kg

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.520 V/m

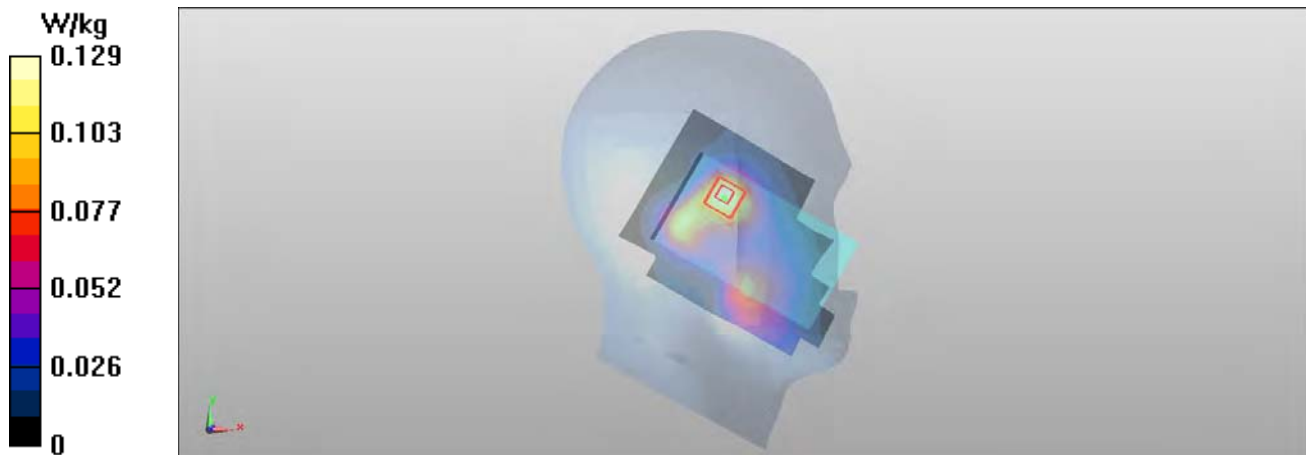
Peak SAR (extrapolated) = 0.169 mW/g

SAR(1 g) = 0.117 mW/g

SAR(10 g) = 0.074 mW/g

Power Drift = 0.38 dB

Maximum value of SAR (measured) = 0.124 W/kg



Date/Time: 2012-06-18 17:53:36

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 100% RB /Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.350 W/kg

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.418 V/m

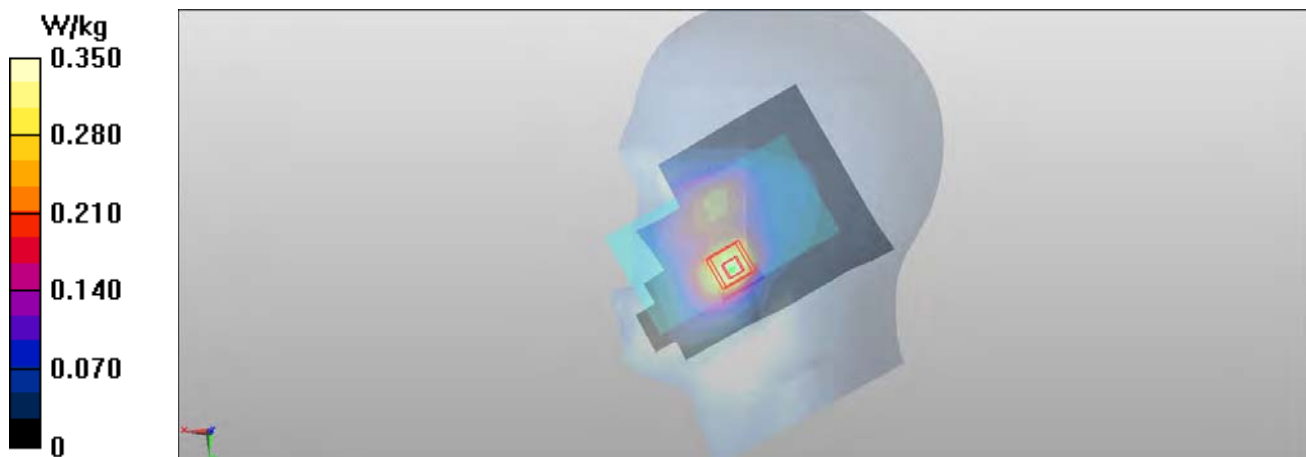
Peak SAR (extrapolated) = 0.467 mW/g

SAR(1 g) = 0.314 mW/g

SAR(10 g) = 0.200 mW/g

Power Drift = 0.47 dB

Maximum value of SAR (measured) = 0.342 W/kg



Date/Time: 2012-06-19 18:44:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 100% RB/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

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

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 100% RB/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.093 V/m

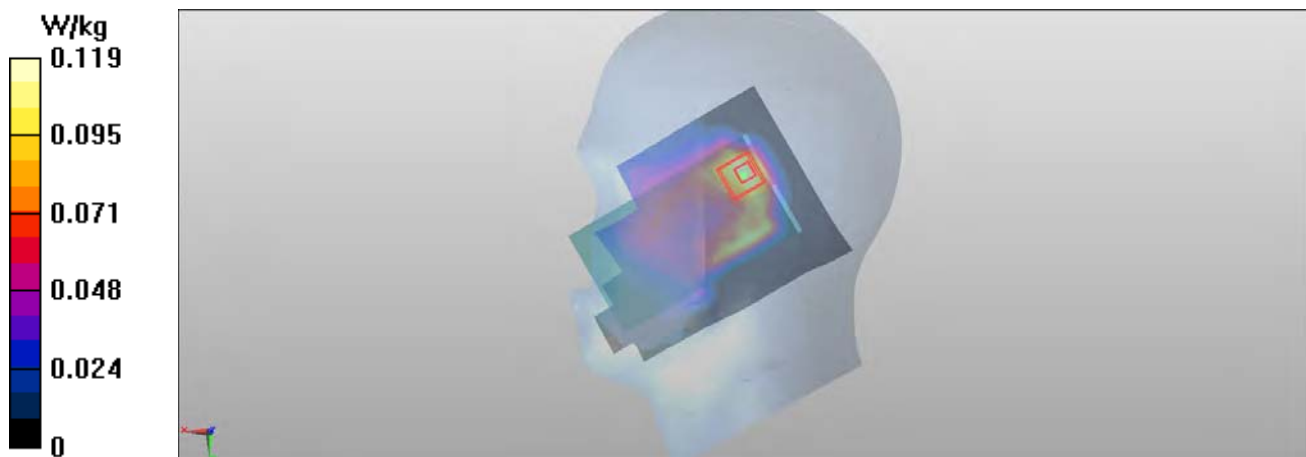
Peak SAR (extrapolated) = 0.161 mW/g

SAR(1 g) = 0.098 mW/g

SAR(10 g) = 0.060 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 0.104 W/kg



Date/Time: 2012-06-15 20:18:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.513 W/kg

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement

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

Reference Value = 6.460 V/m

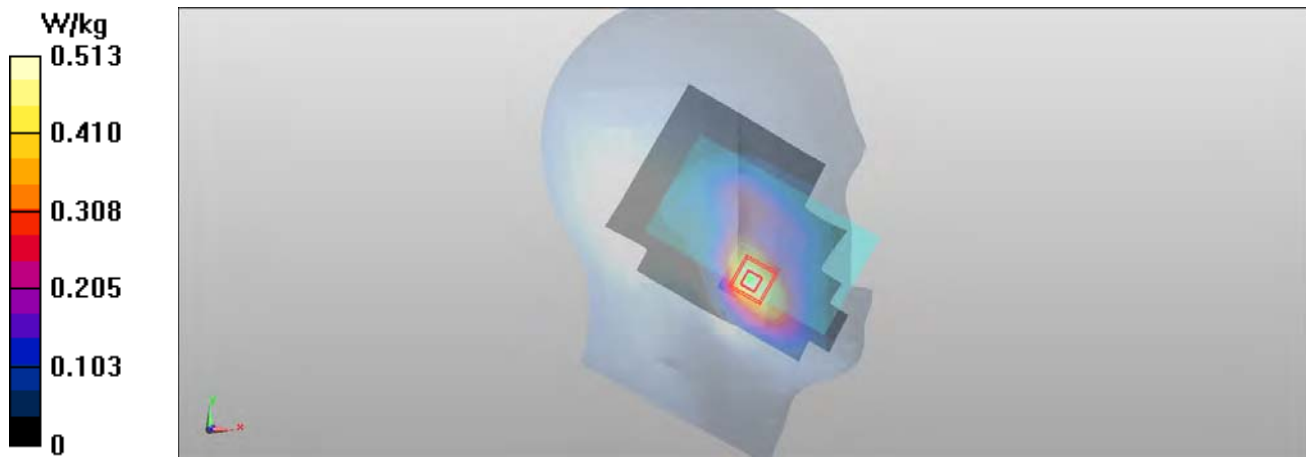
Peak SAR (extrapolated) = 0.681 mW/g

SAR(1 g) = 0.451 mW/g

SAR(10 g) = 0.287 mW/g

Power Drift = 0.25 dB

Maximum value of SAR (measured) = 0.494 W/kg



Date/Time: 2012-06-18 13:03:53

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.132 W/kg

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.588 V/m

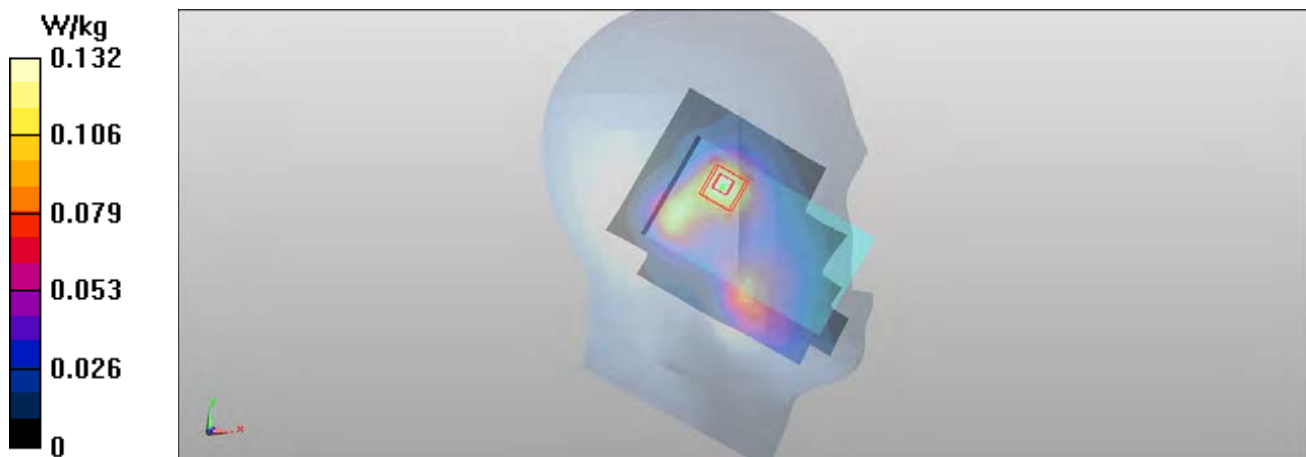
Peak SAR (extrapolated) = 0.169 mW/g

SAR(1 g) = 0.114 mW/g

SAR(10 g) = 0.073 mW/g

Power Drift = 0.41 dB

Maximum value of SAR (measured) = 0.122 W/kg



Date/Time: 2012-06-18 18:20:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.347 W/kg

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement
grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.422 V/m

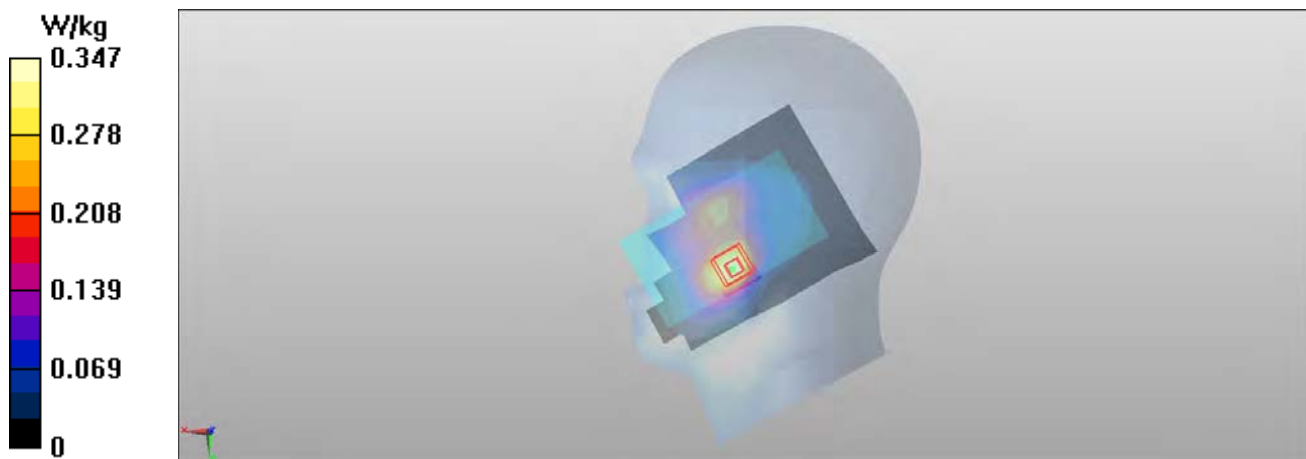
Peak SAR (extrapolated) = 0.463 mW/g

SAR(1 g) = 0.311 mW/g

SAR(10 g) = 0.197 mW/g

Power Drift = 0.41 dB

Maximum value of SAR (measured) = 0.338 W/kg



Date/Time: 2012-06-19 18:59:21

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.118 W/kg

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 50% RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.024 V/m

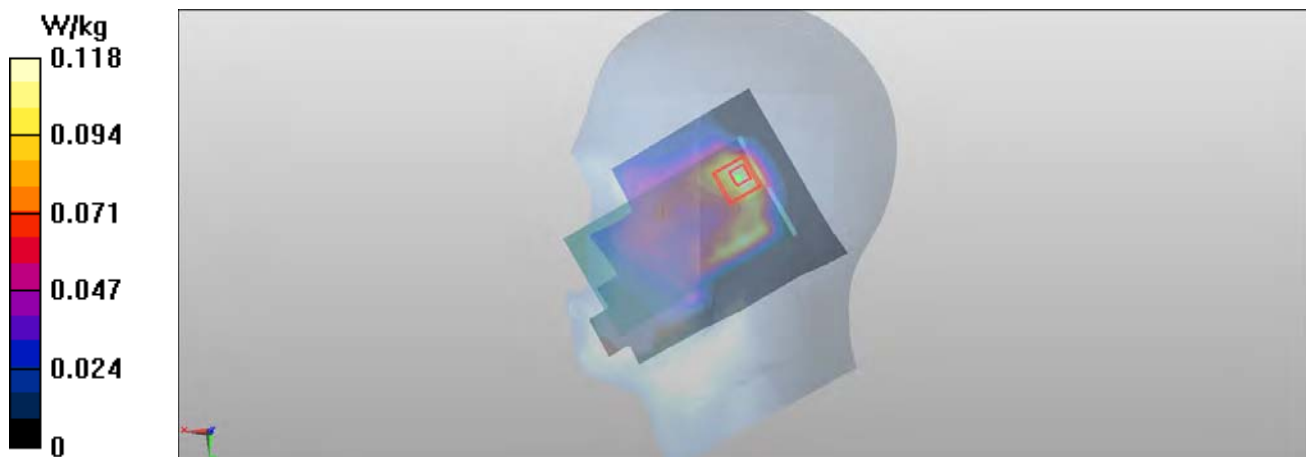
Peak SAR (extrapolated) = 0.152 mW/g

SAR(1 g) = 0.095 mW/g

SAR(10 g) = 0.058 mW/g

Power Drift = 0.23 dB

Maximum value of SAR (measured) = 0.101 W/kg



Date/Time: 2012-06-15 20:35:19

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.517 W/kg

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.460 V/m

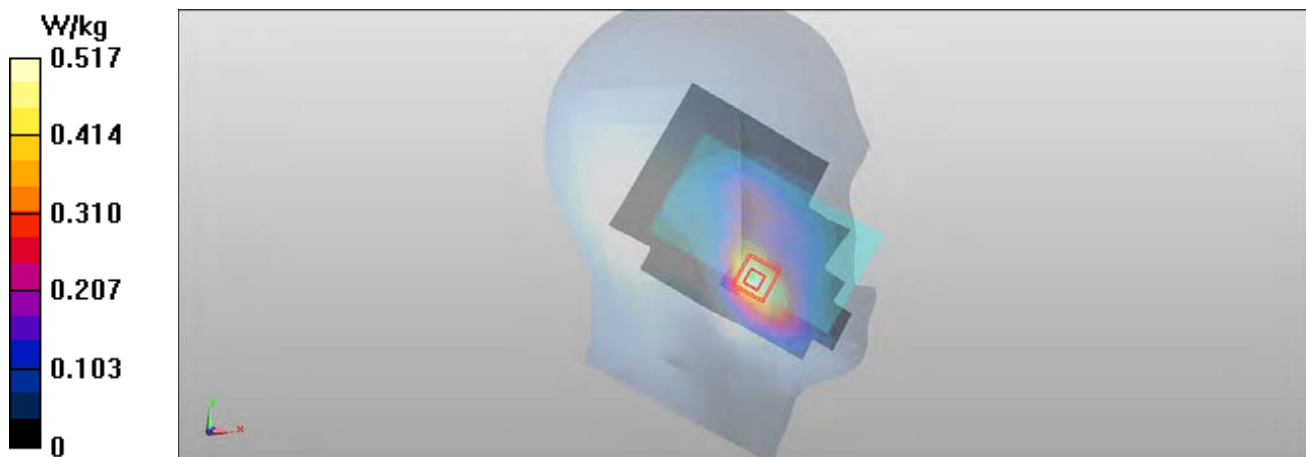
Peak SAR (extrapolated) = 0.672 mW/g

SAR(1 g) = 0.451 mW/g

SAR(10 g) = 0.287 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.486 W/kg



SAR Report

Appendix B.1 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-18 13:19:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.146 W/kg

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.126 V/m

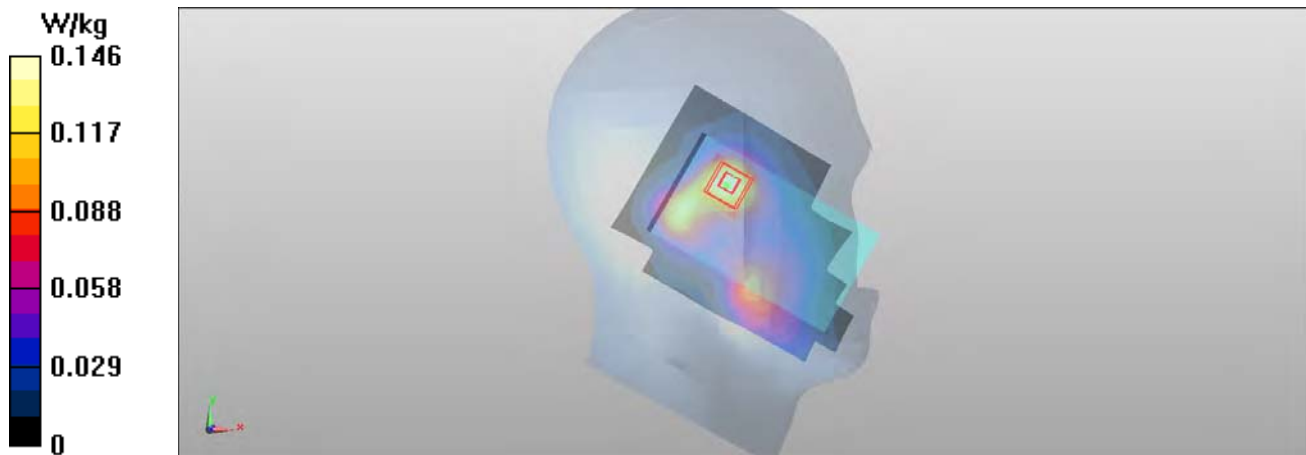
Peak SAR (extrapolated) = 0.183 mW/g

SAR(1 g) = 0.126 mW/g

SAR(10 g) = 0.081 mW/g

Power Drift = 0.23 dB

Maximum value of SAR (measured) = 0.133 W/kg



Date/Time: 2012-06-18 18:38:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid:

$dx = 1.500$ mm, $dy = 1.500$ mm

Maximum value of SAR (interpolated) = 0.387 W/kg

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.725 V/m

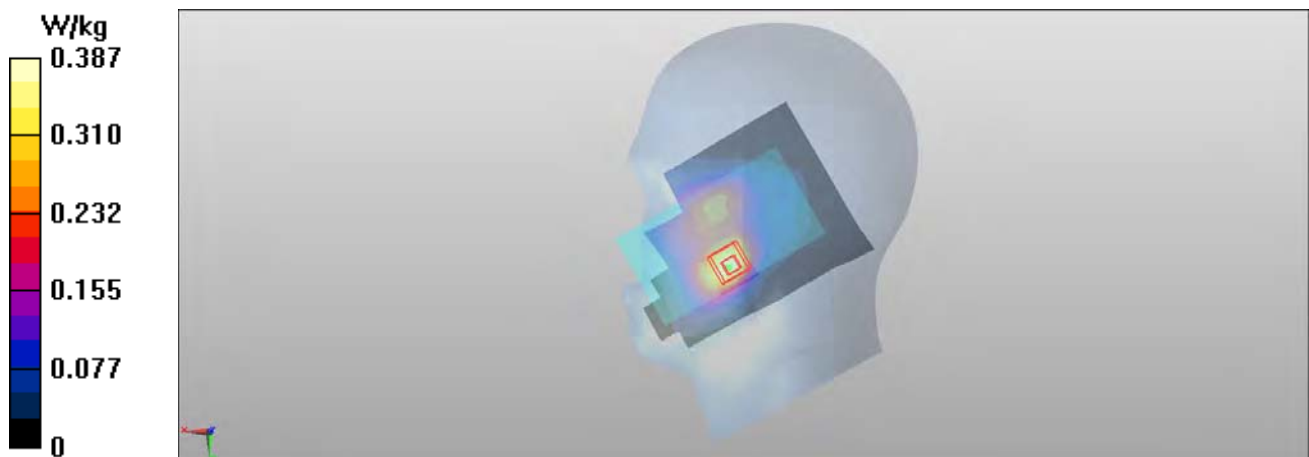
Peak SAR (extrapolated) = 0.516 mW/g

SAR(1 g) = 0.351 mW/g

SAR(10 g) = 0.223 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.379 W/kg



Date/Time: 2012-06-19 19:13:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 50% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.133 W/kg

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 50% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.556 V/m

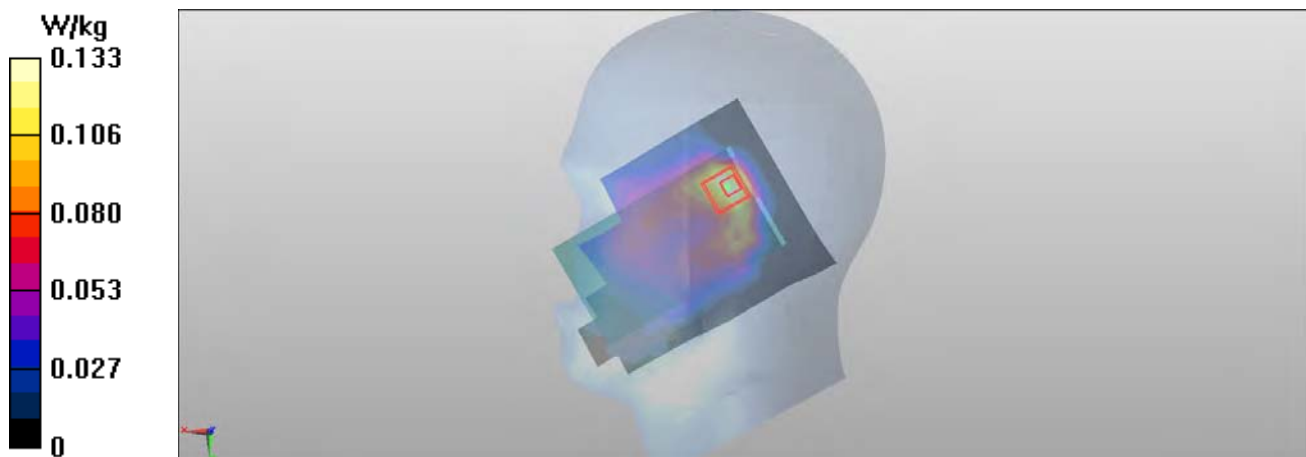
Peak SAR (extrapolated) = 0.176 mW/g

SAR(1 g) = 0.106 mW/g

SAR(10 g) = 0.065 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.111 W/kg



Date/Time: 2012-06-15 21:07:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ mho/m; $\epsilon_r = 38.995$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.651 W/kg

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.252 V/m

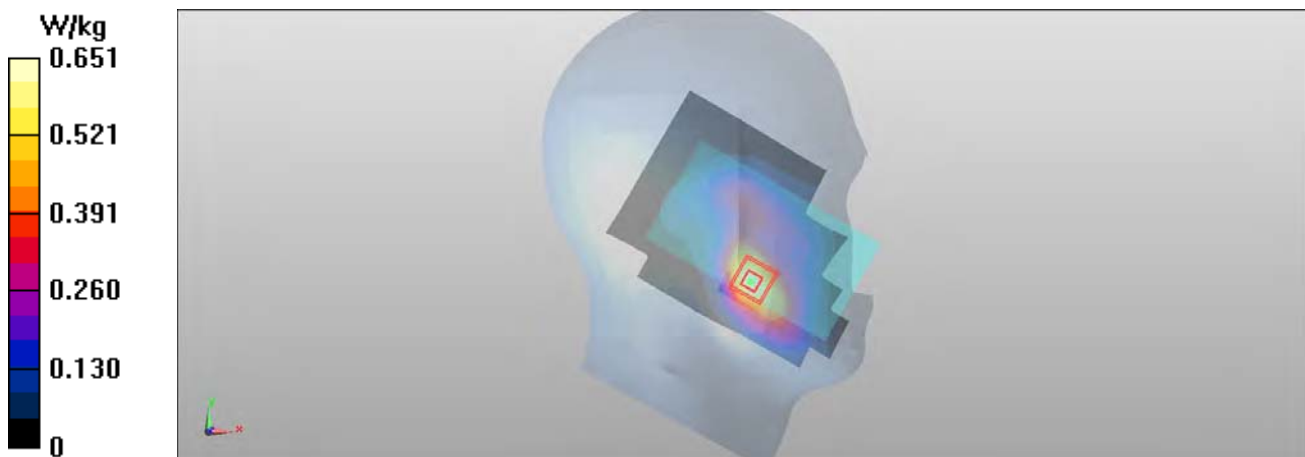
Peak SAR (extrapolated) = 0.860 mW/g

SAR(1 g) = 0.567 mW/g

SAR(10 g) = 0.359 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.616 W/kg



Date/Time: 2012-06-18 13:35:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.192 W/kg

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.647 V/m

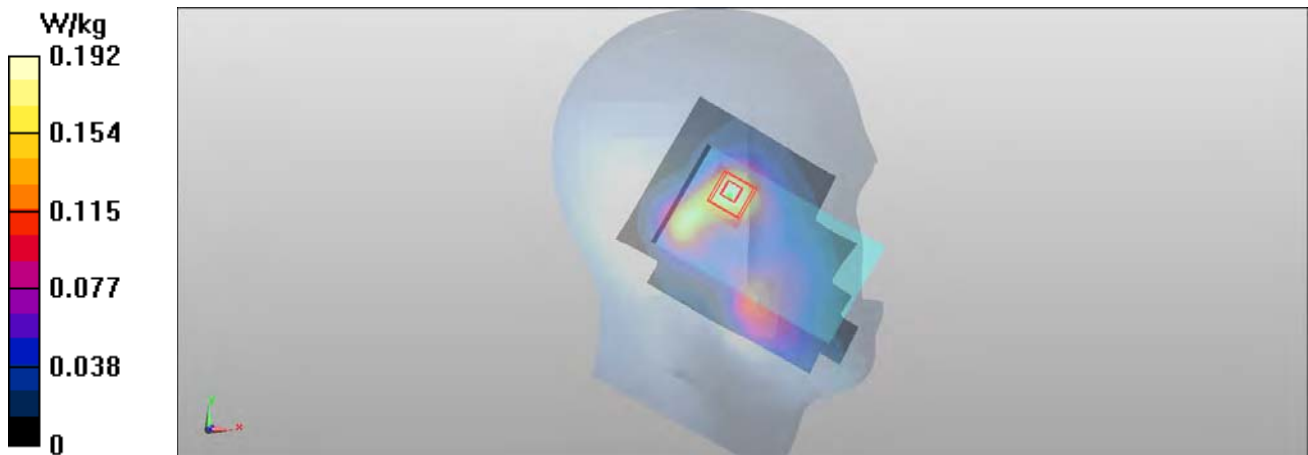
Peak SAR (extrapolated) = 0.246 mW/g

SAR(1 g) = 0.169 mW/g

SAR(10 g) = 0.106 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.178 W/kg



Date/Time: 2012-06-18 18:54:25

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx = 1.500$ mm, $dy = 1.500$ mm

Maximum value of SAR (interpolated) = 0.466 W/kg

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 8.063 V/m

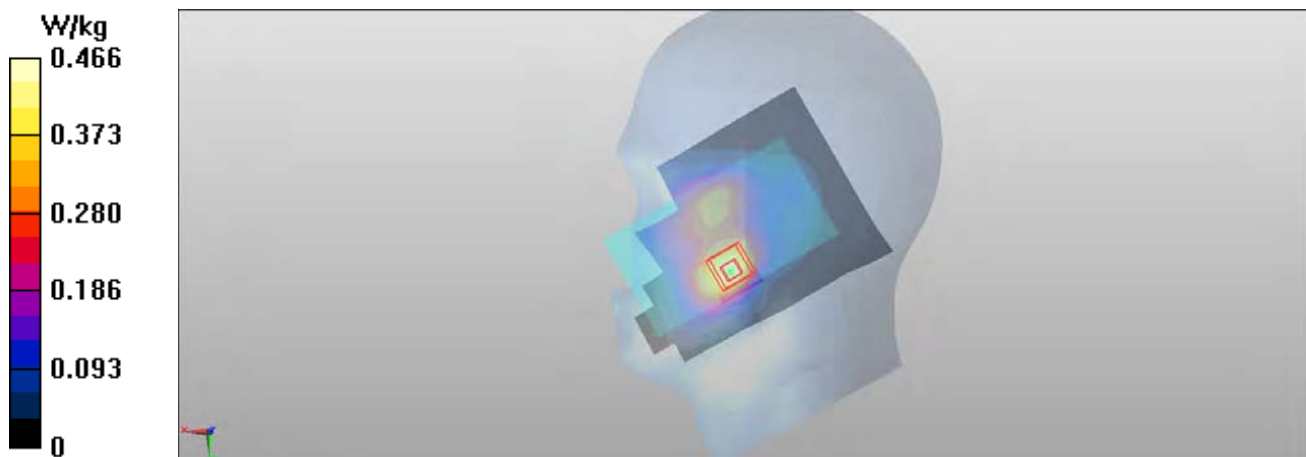
Peak SAR (extrapolated) = 0.627 mW/g

SAR(1 g) = 0.423 mW/g

SAR(10 g) = 0.269 mW/g

Power Drift = 0.15 dB

Maximum value of SAR (measured) = 0.458 W/kg



Date/Time: 2012-06-19 21:50:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 100% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.170 W/kg

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 100% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 9.933 V/m

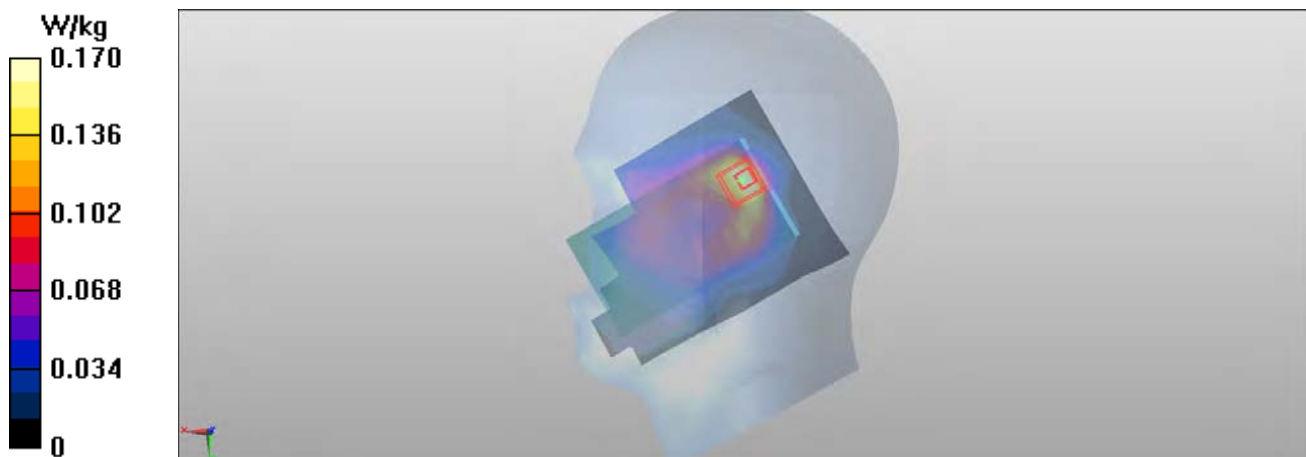
Peak SAR (extrapolated) = 0.233 mW/g

SAR(1 g) = 0.144 mW/g

SAR(10 g) = 0.087 mW/g

Power Drift = 0.12 dB

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



Date/Time: 2012-06-16 09:31:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.5$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.369$ mho/m; $\epsilon_r = 39.085$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.691 W/kg

LTE - Left/Cheek - Middle - 16QAM - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.545 V/m

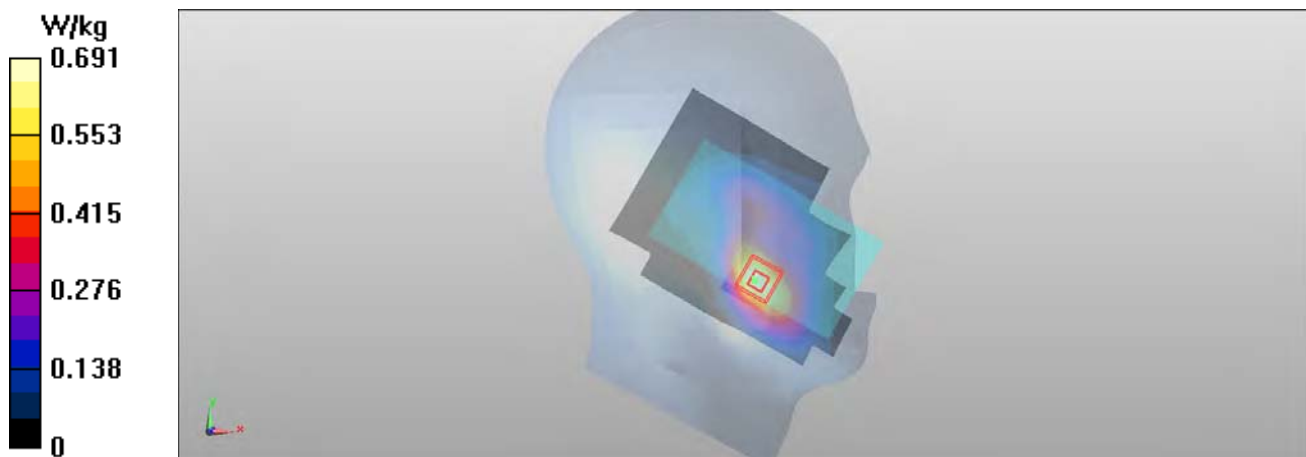
Peak SAR (extrapolated) = 0.885 mW/g

SAR(1 g) = 0.592 mW/g

SAR(10 g) = 0.376 mW/g

Power Drift = 0.26 dB

Maximum value of SAR (measured) = 0.636 W/kg



Date/Time: 2012-06-18 13:48:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.154 W/kg

LTE - Left/Tilt - Middle - 16QAM - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 7.868 V/m

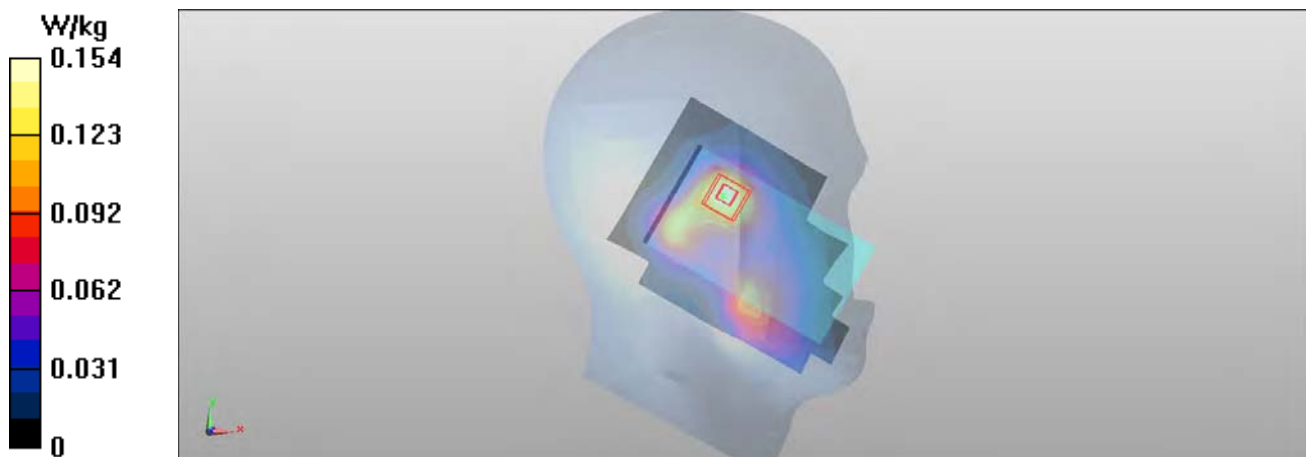
Peak SAR (extrapolated) = 0.200 mW/g

SAR(1 g) = 0.136 mW/g

SAR(10 g) = 0.087 mW/g

Power Drift = 0.35 dB

Maximum value of SAR (measured) = 0.145 W/kg



Date/Time: 2012-06-18 19:09:41

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.385$ mho/m; $\epsilon_r = 39.34$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.433 W/kg

LTE - Right/Cheek - Middle - 16QAM - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

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

Reference Value = 6.695 V/m

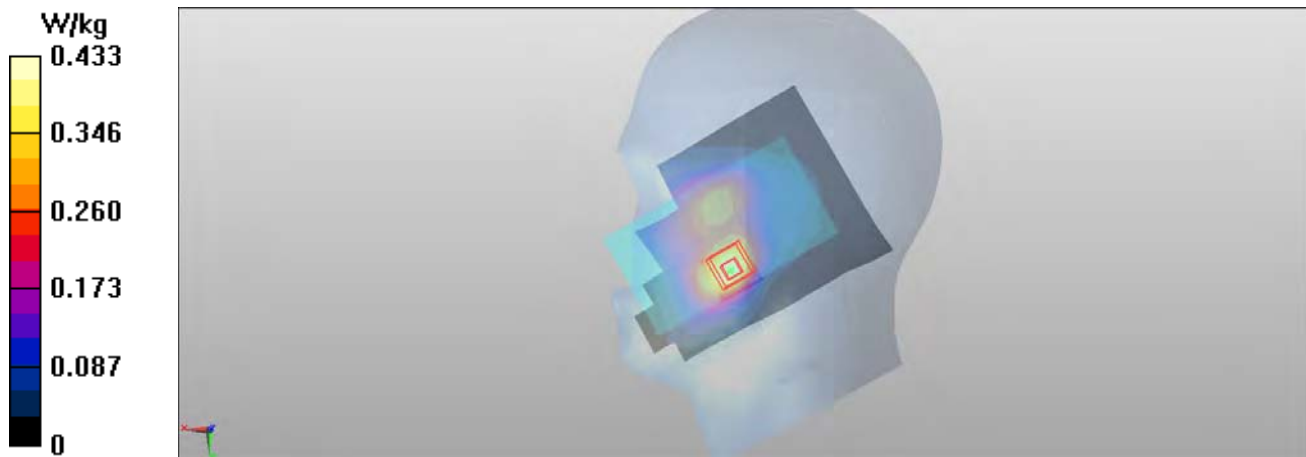
Peak SAR (extrapolated) = 0.586 mW/g

SAR(1 g) = 0.396 mW/g

SAR(10 g) = 0.252 mW/g

Power Drift = 0.38 dB

Maximum value of SAR (measured) = 0.432 W/kg



Date/Time: 2012-06-19 22:04:31

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL1900; Medium Notes: $t = 21.3$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.381$ mho/m; $\epsilon_r = 39.274$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 0% offset/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.139 W/kg

LTE - Right/Tilt - Middle - 16QAM - 20MHz - 1RB - 0% offset/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.593 V/m

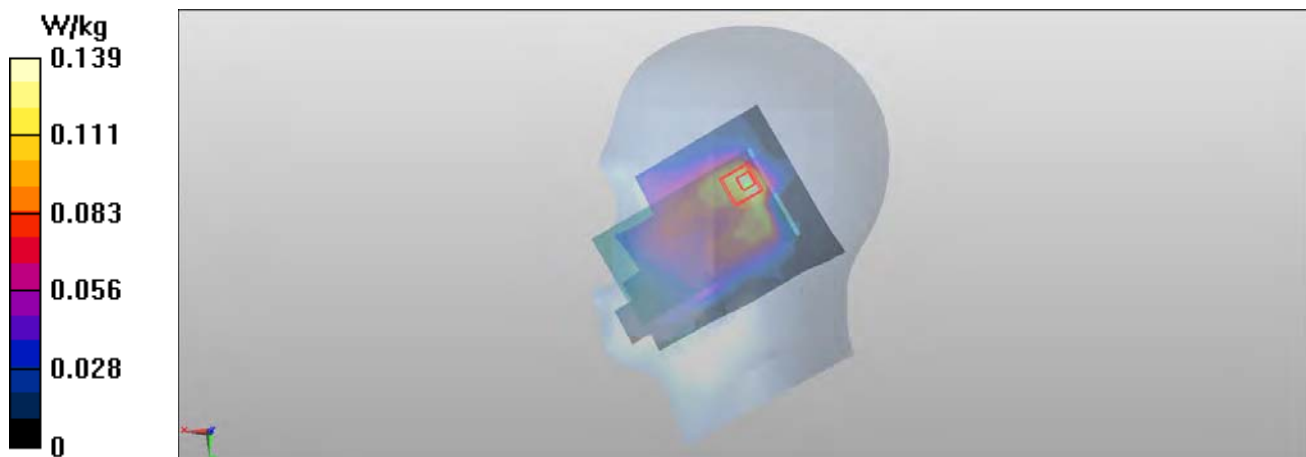
Peak SAR (extrapolated) = 0.178 mW/g

SAR(1 g) = 0.115 mW/g

SAR(10 g) = 0.072 mW/g

Power Drift = 0.17 dB

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



Date/Time: 2012-06-21 16:30:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 20.5\text{ C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.755\text{ mho/m}$; $\epsilon_r = 38.199$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Left/Cheek - Middle/Area Scan (121x181x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0580 mW/g

WLAN - Left/Cheek - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.824 V/m

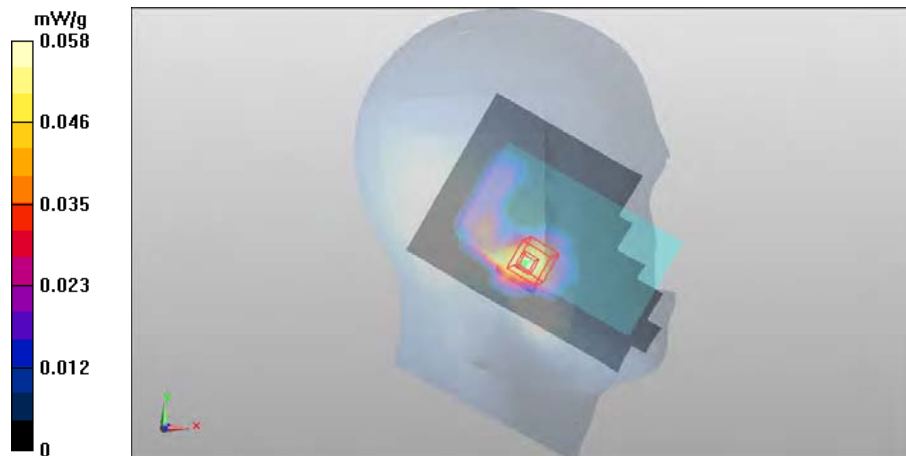
Peak SAR (extrapolated) = 0.105 mW/g

SAR(1 g) = 0.052 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = 0.40 dB

Maximum value of SAR (measured) = 0.0575 mW/g



Date/Time: 2012-06-22 07:24:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: t= 21.2 C

Medium parameters used: f = 2437 MHz; σ = 1.831 mho/m; ϵ_r = 38.755; ρ = 1000 kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Left/Tilt - Middle/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0429 mW/g

WLAN - Left/Tilt - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.029 V/m

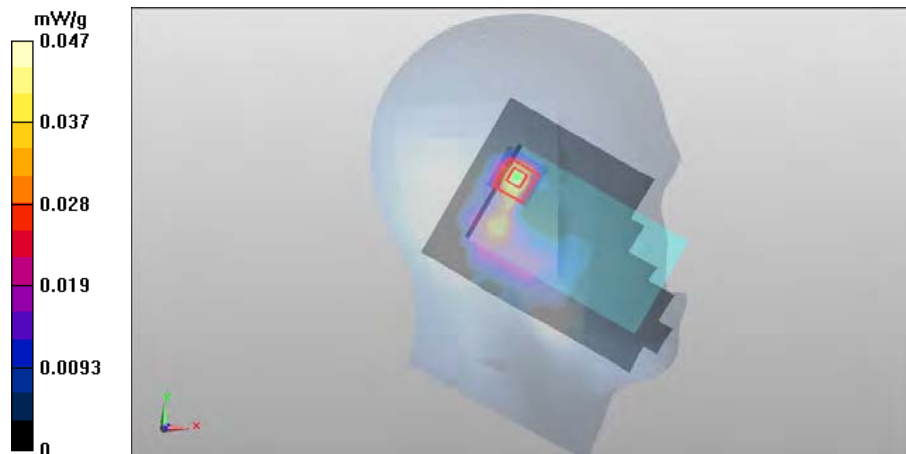
Peak SAR (extrapolated) = 0.071 mW/g

SAR(1 g) = 0.039 mW/g

SAR(10 g) = 0.018 mW/g

Power Drift = 0.31 dB

Maximum value of SAR (measured) = 0.0465 mW/g



Date/Time: 2012-06-22 17:20:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.831$ mho/m; $\epsilon_r = 38.755$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Right/Cheek – Middle/Area Scan (121x181x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.151 mW/g

WLAN - Right/Cheek - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 9.137 V/m

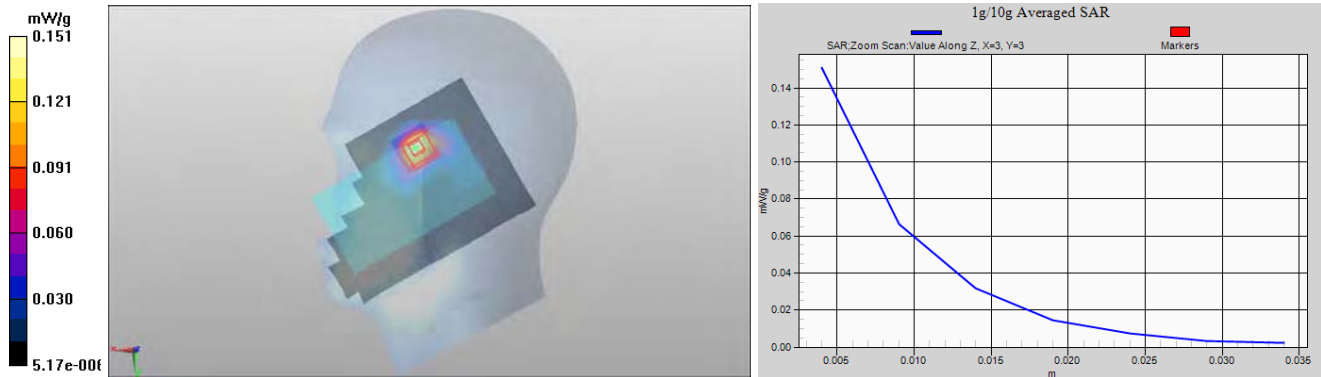
Peak SAR (extrapolated) = 0.309 mW/g

SAR(1 g) = 0.134 mW/g

SAR(10 g) = 0.064 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.151 mW/g



Date/Time: 2012-06-22 17:58:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.831$ mho/m; $\epsilon_r = 38.755$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Right/Tilt - Middle/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0570 mW/g

WLAN - Right/Tilt - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.427 V/m

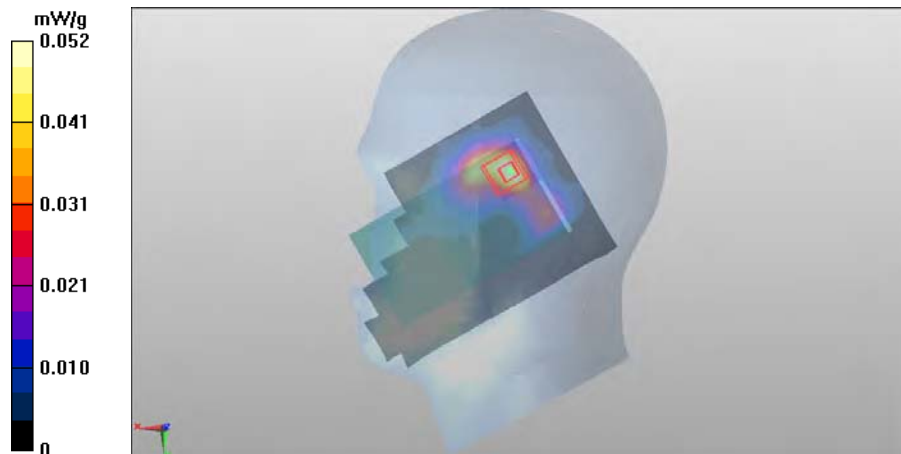
Peak SAR (extrapolated) = 0.087 mW/g

SAR(1 g) = 0.046 mW/g

SAR(10 g) = 0.022 mW/g

Power Drift = 0.30 dB

Maximum value of SAR (measured) = 0.0515 mW/g



Date/Time: 2012-06-21 14:24:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode MCS 2: OFDM 19.5 / 21.7 Mbps

Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Left/Cheek - Channel 36/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.179 mW/g

WLAN - Left/Cheek - Channel 36/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.915 V/m

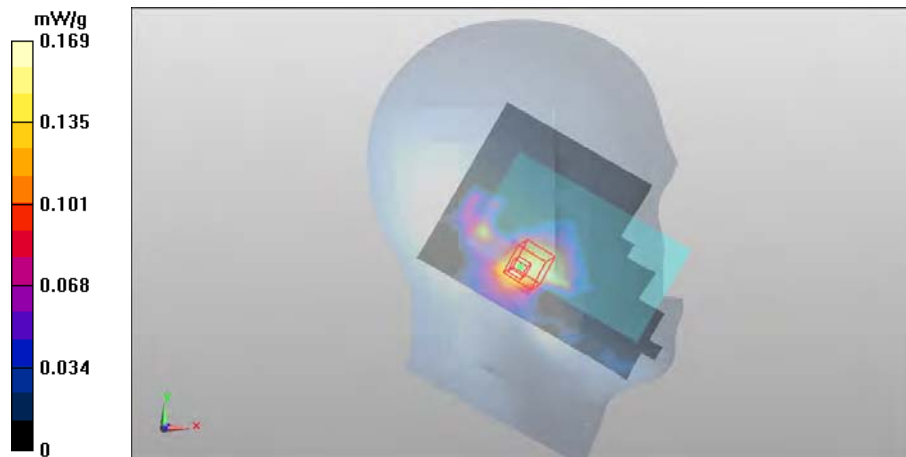
Peak SAR (extrapolated) = 0.382 mW/g

SAR(1 g) = 0.092 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = -0.43 dB

Maximum value of SAR (measured) = 0.169 mW/g



Date/Time: 2012-06-22 00:14:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode MCS 2: OFDM 19.5 / 21.7 Mbps

Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Left/Tilt - Channel 36/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.168 mW/g

WLAN - Left/Tilt - Channel 36/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.256 V/m

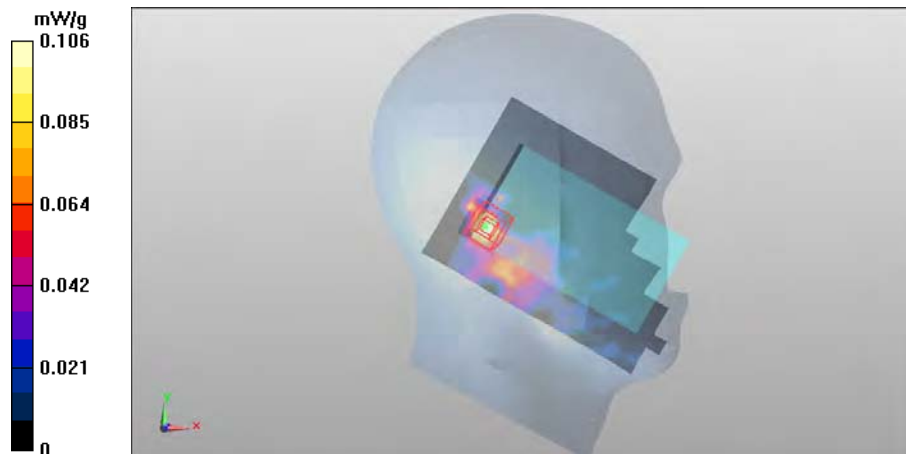
Peak SAR (extrapolated) = 0.216 mW/g

SAR(1 g) = 0.054 mW/g

SAR(10 g) = 0.017 mW/g

Power Drift = 0.39 dB

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



Date/Time: 2012-06-22 01:12:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode MCS 2: OFDM 19.5 / 21.7 Mbps

Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Right/Cheek – Channel 36/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.643 mW/g

WLAN - Right/Cheek – Channel 36/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 12.948 V/m

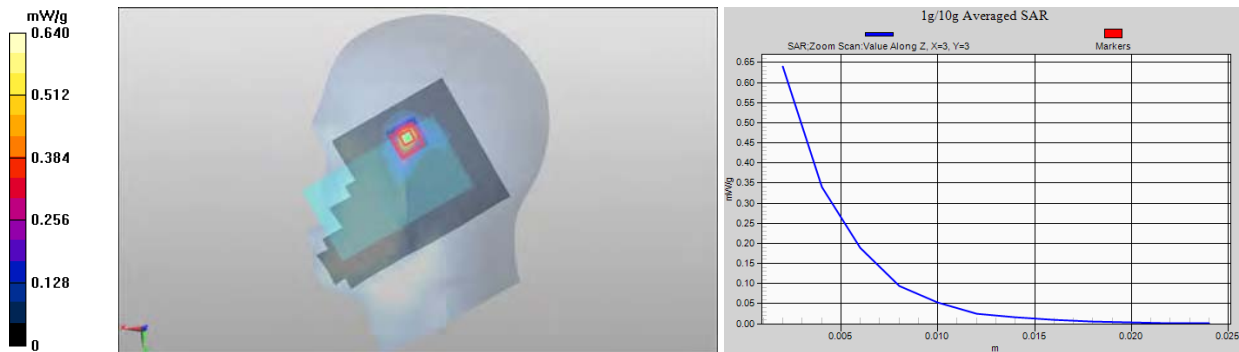
Peak SAR (extrapolated) = 1.302 mW/g

SAR(1 g) = 0.332 mW/g

SAR(10 g) = 0.115 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.640 mW/g



Date/Time: 2012-06-22 07:02:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode MCS 2: OFDM 19.5 / 21.7 Mbps

Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL5200; Medium Notes: 20.8 C

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.536$ mho/m; $\epsilon_r = 35.324$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM1; Type: SAM; Serial: TP-1126
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN - Right/Tilt – Channel 36/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.260 mW/g

WLAN - Right/Tilt – Channel 36 /Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.106 V/m

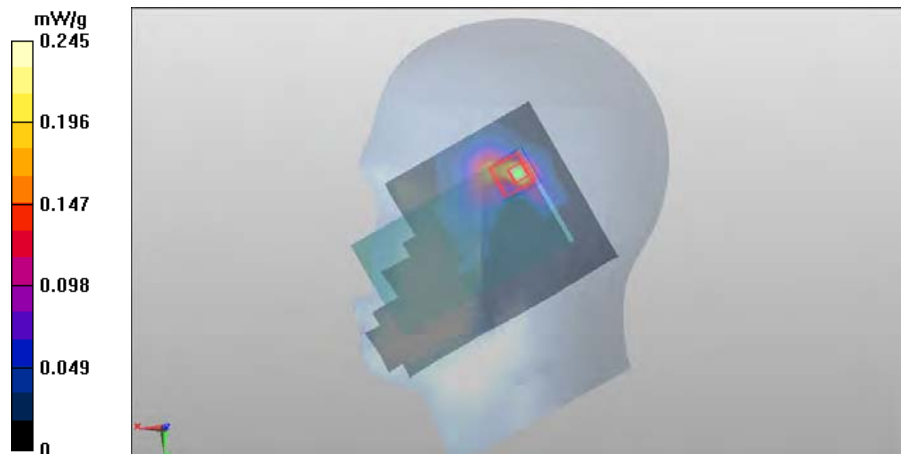
Peak SAR (extrapolated) = 0.487 mW/g

SAR(1 g) = 0.125 mW/g

SAR(10 g) = 0.041 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.245 mW/g



Date/Time: .2012-06-26 16:02:58

DASY Configuration for LTE - Right/Cheek - High - QPSK - 10MHz - 1 RB - 100% offset/Area Scan:

Test Laboratory: The name of your organization

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700; Frequency: 711 MHz; Duty Cycle: 1:1; PMF: 1.12202e-005

Medium: HSL750 Medium parameters used: $f = 711$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.639$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3165; ConvF(6.13, 6.13, 6.13); Calibrated:2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial:
Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-22 17:20:42

DASY Configuration for WLAN - Right/Cheek - Middle /Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

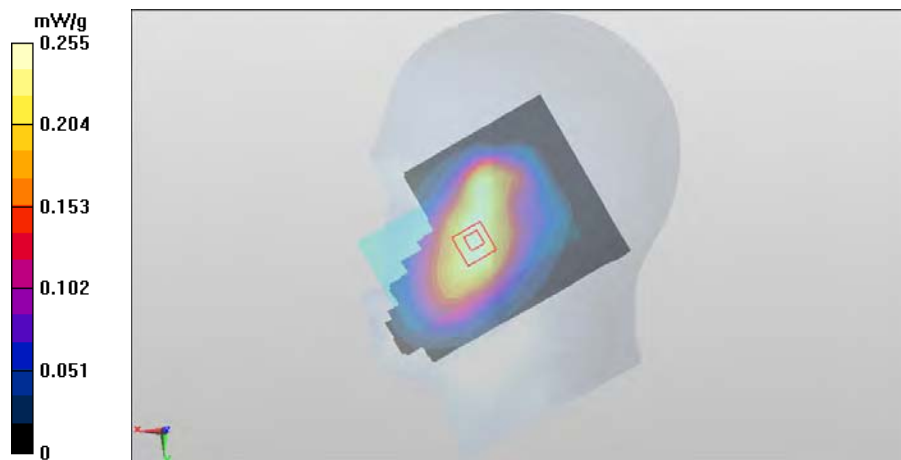
Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.831$ mho/m; $\epsilon_r = 38.755$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.168 mW/g

Maximum value of SAR (interpolated) = 0.255 mW/g



Date/Time: 2012-06-14 17:29:44

DASY Configuration for 2-slot GPRS - Right/Cheek - High/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

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

Medium: HSL835 Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 0.928 \text{ mho/m}$; $\epsilon_r = 40.393$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;

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

Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.6 (2)

Date/Time: 22-Jun-12 17:20:42

DASY Configuration for WLAN - Right/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

Medium: HSL2450 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.831 \text{ mho/m}$; $\epsilon_r = 38.755$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 23-Feb-12;

Sensor-Surface: 4mm (Mechanical Surface Detection)

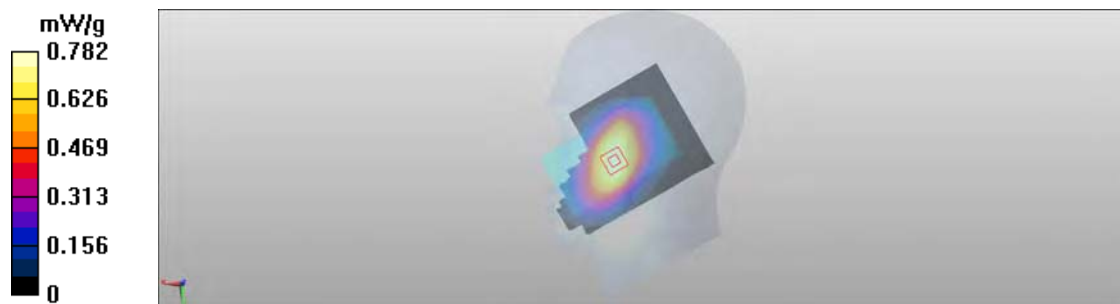
Electronics: DAE4 Sn793; Calibrated: 16-Sep-11

Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018

Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.514 mW/g

Maximum value of SAR (interpolated) = 0.782 mW/g



Date/Time: 2012-06-21 12:22:24

DASY Configuration for WCDMA - Right/Cheek - Low/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

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

Medium: HSL835 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.893$ mho/m; $\epsilon_r = 40.128$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2011-09-15
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (0)

Date/Time: 2012-06-22 17:20:42

DASY Configuration for WLAN - Right/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

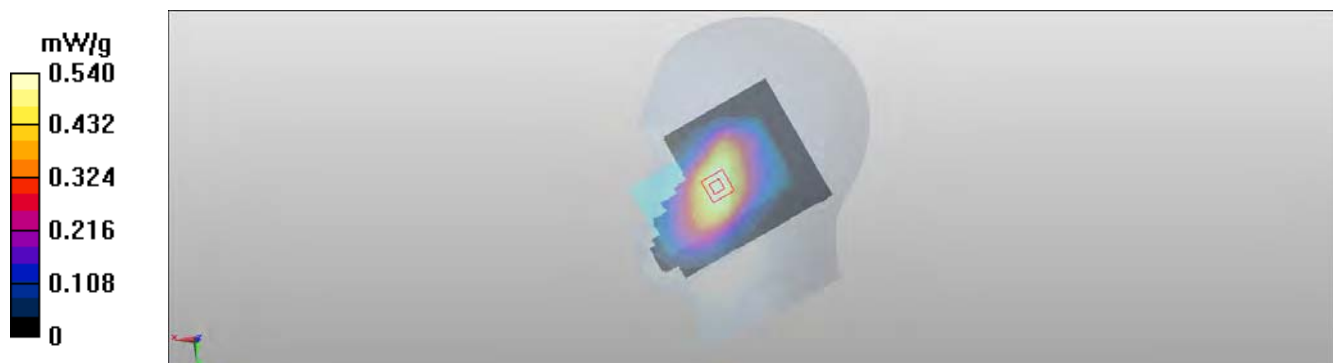
Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.831$ mho/m; $\epsilon_r = 38.755$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.357 mW/g

Maximum value of SAR (interpolated) = 0.540 mW/g



Date/Time: 2012-06-22 17:20:42

DASY Configuration for WLAN - Right/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.831$ mho/m; $\epsilon_r = 38.755$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-23 13:22:13

DASY Configuration for LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 100% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850; Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL835 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;

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

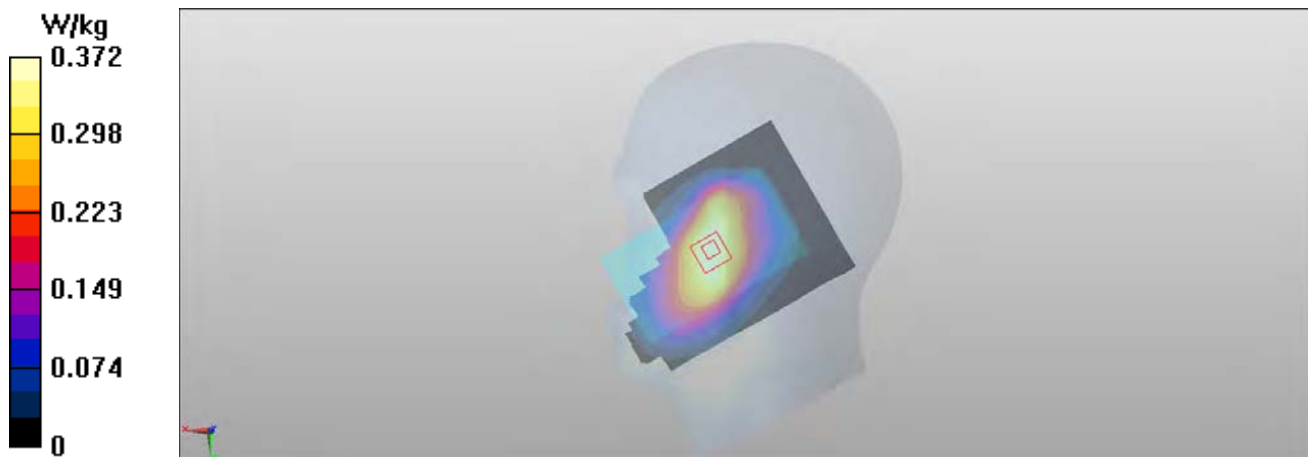
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.245 mW/g

Maximum value of SAR (interpolated) = 0.372 W/kg



Date/Time: 2012-06-21 16:30:32

DASY Configuration for WLAN - Left/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.755$ mho/m; $\epsilon_r = 38.199$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-08-15 14:37:17

DASY Configuration for WCDMA - Left/Cheek - Low/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100; Frequency: 1712.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL1800 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.307$ mho/m; $\epsilon_r = 39.229$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3165; ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

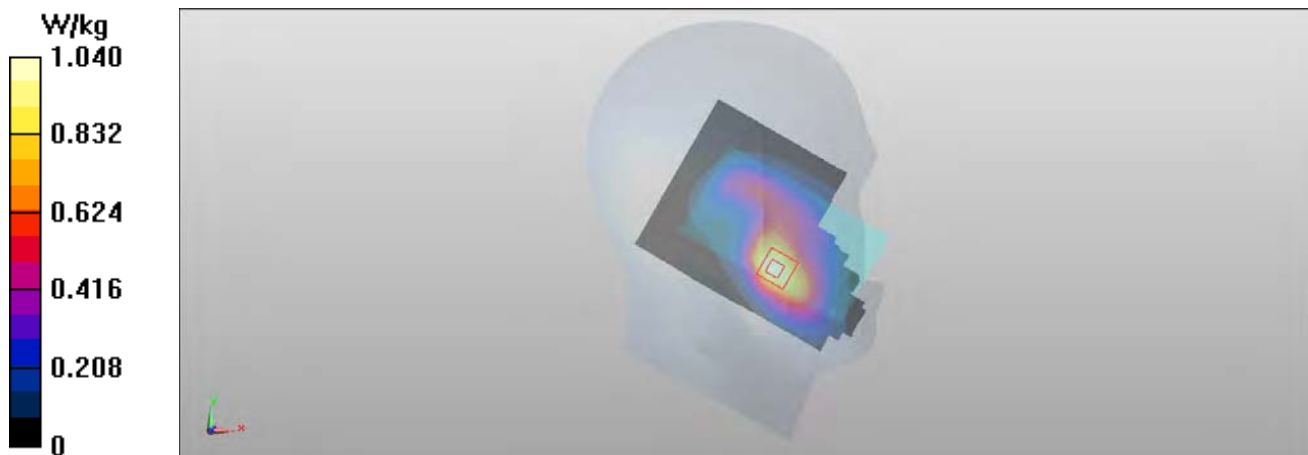
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

Phantom: SAM #1 CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.937 mW/g; SAR(10 g) = 0.559 mW/g

Maximum value of SAR (interpolated) = 1.04 W/kg



Date/Time: 2012-06-15 22:46:05

DASY Configuration for LTE - Left/Cheek - Low - QPSK - 20MHz - 1RB - 0% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100; Frequency: 1720 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL1800 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.3$ mho/m; $\epsilon_r = 38.756$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3165; ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #1 CRP; Type: SAM; Serial:
Measurement SW: DASY52, Version 52.8 (0)

Date/Time: 2012-06-21 16:30:32

DASY Configuration for WLAN - Left/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

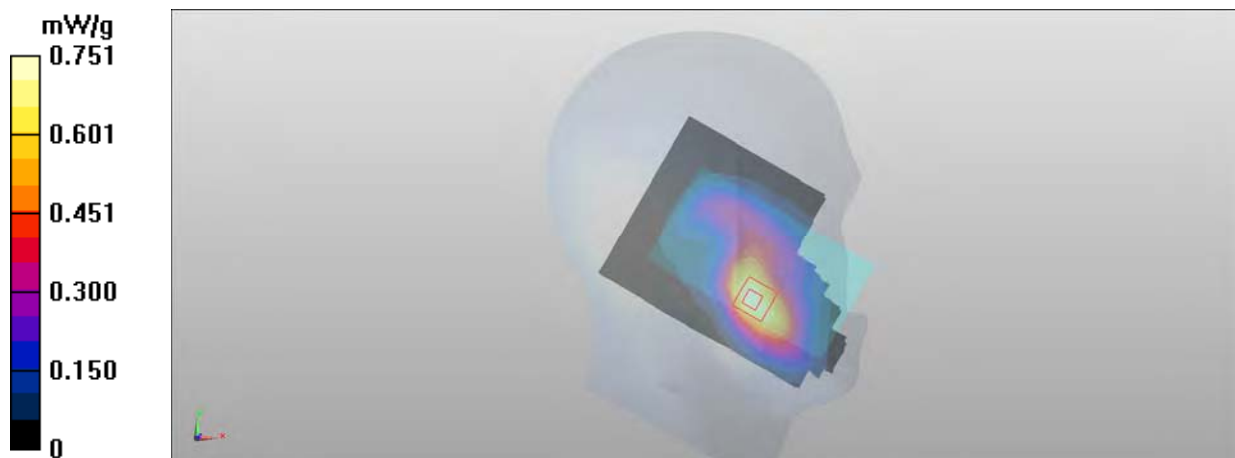
Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.755$ mho/m; $\epsilon_r = 38.199$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.681 mW/g; SAR(10 g) = 0.408 mW/g

Maximum value of SAR (interpolated) = 0.751 mW/g



Date/Time: 2012-06-12 19:47:17

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

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.2; PMF: 2.04939

Medium: HSL1900 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.436$ mho/m; $\epsilon_r = 39.268$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(7.43, 7.43, 7.43); Calibrated:2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1449
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-21 16:30:32

DASY Configuration for WLAN - Left/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

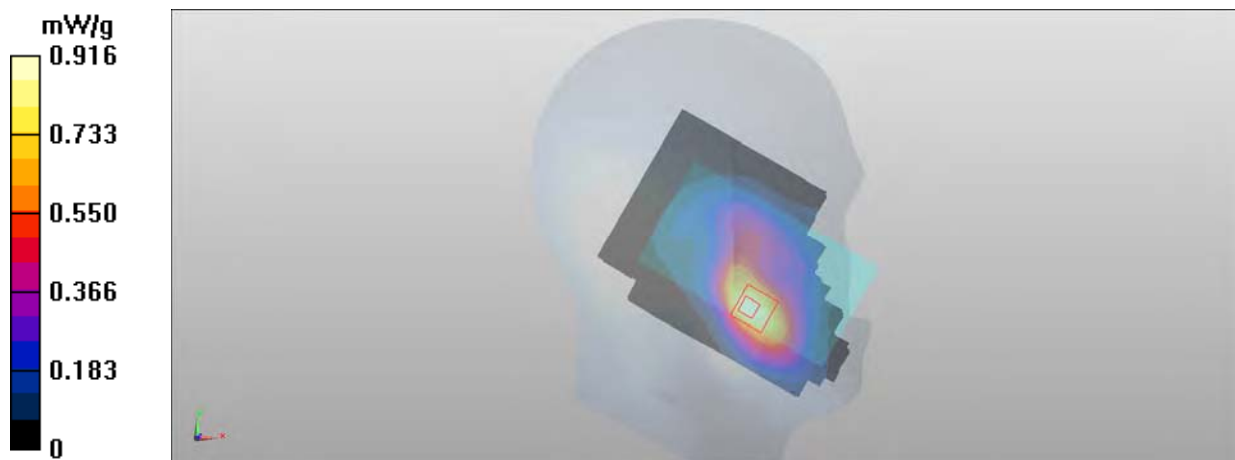
Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.755$ mho/m; $\epsilon_r = 38.199$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.829 mW/g; SAR(10 g) = 0.478 mW/g

Maximum value of SAR (interpolated) = 0.916 mW/g



Date/Time: 2012-06-19 16:25:56, Date/Time: 2012-06-21 16:30:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8, Serial: 004402/13/870750/4

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

Frequency: 1852.4 MHz, Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL1900, Medium: HSL2450; Medium Notes: t= 21.3 C, Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; ϵ_r = 39.3; ρ = 1000 kg/m³, Medium parameters used: f = 2437 MHz; σ = 1.76 mho/m; ϵ_r = 38.2; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

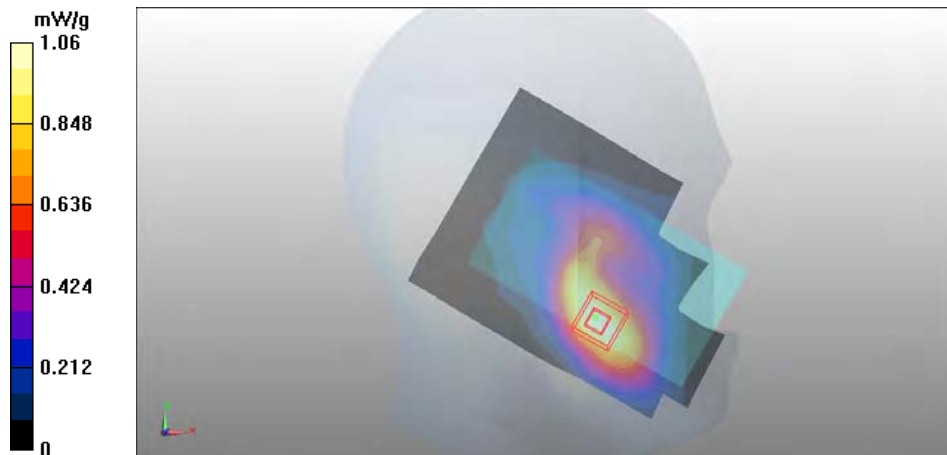
- Probe: EX3DV4 - SN3573
- ConvF(7.43, 7.43, 7.43), ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 1, Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1449, Serial: TP-1018
- ; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Low/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Middle/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.567 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



Date/Time: 2012-06-21 16:30:32

DASY Configuration for WLAN - Left/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

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

Medium: HSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.755$ mho/m; $\epsilon_r = 38.199$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 4; Type: Twin SAM 040 CA; Serial: TP-1018

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-19 22:27:04

DASY Configuration for LTE - Left/Cheek - Low - QPSK - 20MHz - 1RB - 100% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900; Frequency: 1860 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL1900 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.366$ mho/m; $\epsilon_r = 39.326$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

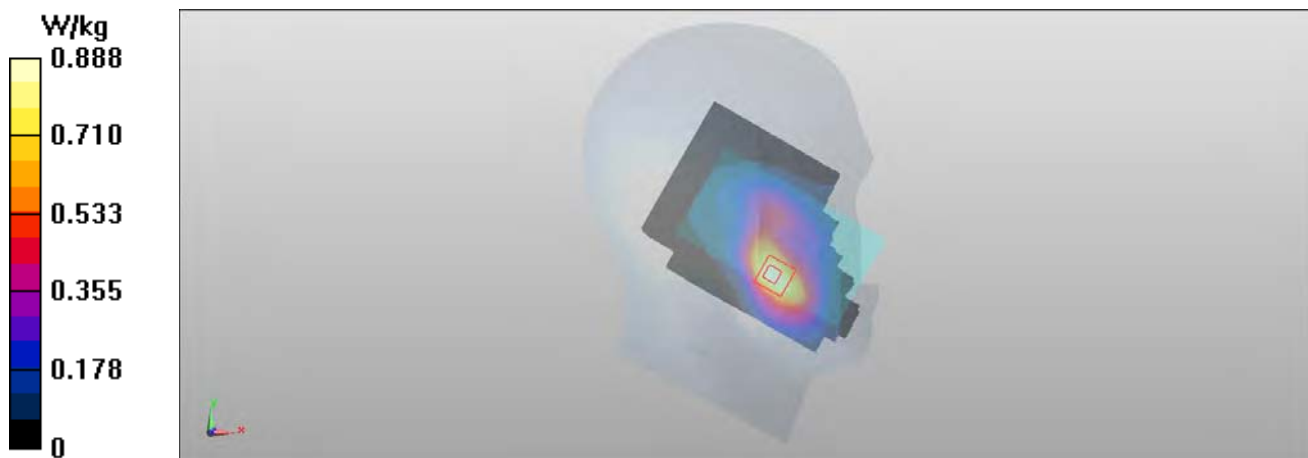
Electronics: DAE4 Sn793; Calibrated: 2011-09-16

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) = 0.800 mW/g; SAR(10 g) = 0.461 mW/g

Maximum value of SAR (interpolated) = 0.888 W/kg



Date/Time: 2012-06-22 01:12:35

DASY Configuration for WLAN - Right/Cheek – Channel 36/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-27 16:02:58

DASY Configuration for LTE - Right/Cheek - High - QPSK - 10MHz - 1 RB - 100% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700; Frequency: 711 MHz; Duty Cycle: 1:1; PMF: 1.12202e-005

Medium: HSL750 Medium parameters used: $f = 711$ MHz; $\sigma = 0.891$ mho/m; $\epsilon_r = 40.639$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3165; ConvF(6.13, 6.13, 6.13); Calibrated: 2012-02-21;

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

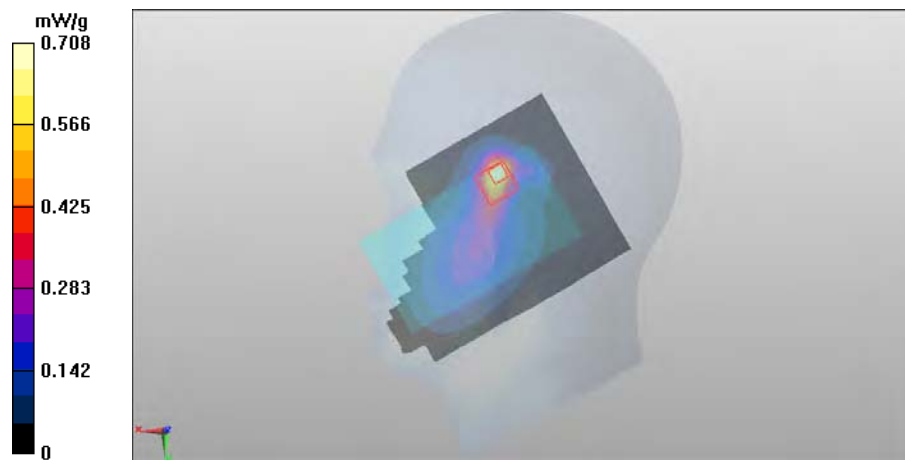
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

Phantom: SAM #4 CRP ; Type: QD000P40CD; Serial:

Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (interpolated) = 0.708 mW/g



Date/Time: 22.06.2012 01:12:35

DASY Configuration for WLAN - Right/Cheek - Middle/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 07.02.2012;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 14.02.2012

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 14.06.2012 17:29:44

DASY Configuration for 2-slot GPRS - Right/Cheek - High/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

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

Medium: HSL835 Medium parameters used: $f = 849$ MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 40.393$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 14.09.2011;

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

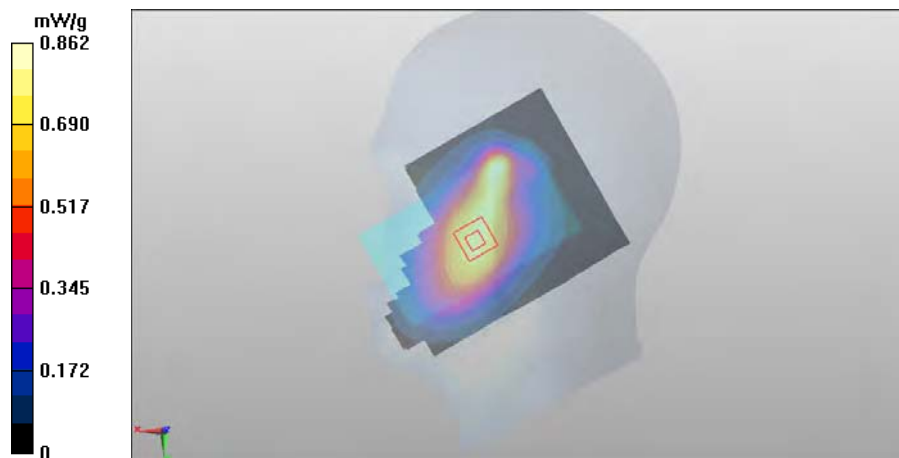
Electronics: DAE4 Sn538; Calibrated: 15.09.2011

Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.6 (2)

Fast SAR of Combined Scans: SAR(1 g) = 0.730 mW/g; SAR(10 g) = 0.512 mW/g

Maximum value of SAR (interpolated) = 0.862 mW/g



Date/Time: 2012-06-22 01:12:35

DASY Configuration for WLAN - Right/Cheek – Channel 36/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.442 \text{ mho/m}$; $\epsilon_r = 34.598$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-21 12:22:24

DASY Configuration for WCDMA - Right/Cheek - Low/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

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

Medium: HSL835 Medium parameters used (interpolated): $f = 826.4 \text{ MHz}$; $\sigma = 0.893 \text{ mho/m}$; $\epsilon_r = 40.128$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;

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

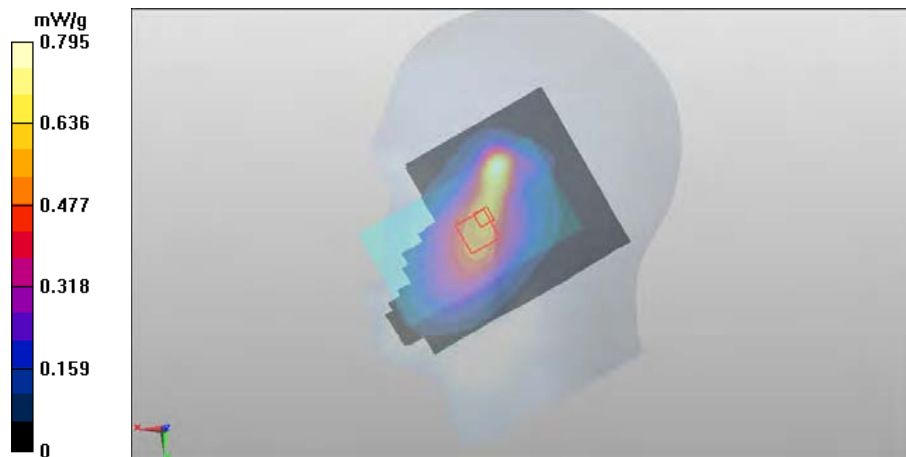
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.514 mW/g; SAR(10 g) = 0.356 mW/g

Maximum value of SAR (interpolated) = 0.795 mW/g



Date/Time: 2012-06-22 01:12:35

DASY Configuration for WLAN - Right/Cheek – Channel 36/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-23 13:22:13

DASY Configuration for LTE - Right/Cheek - Middle - QPSK - 10MHz - 1RB - 100% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850; Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL835 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 40.421$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: ES3DV3 - SN3131; ConvF(5.88, 5.88, 5.88); Calibrated: 2011-09-14;

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

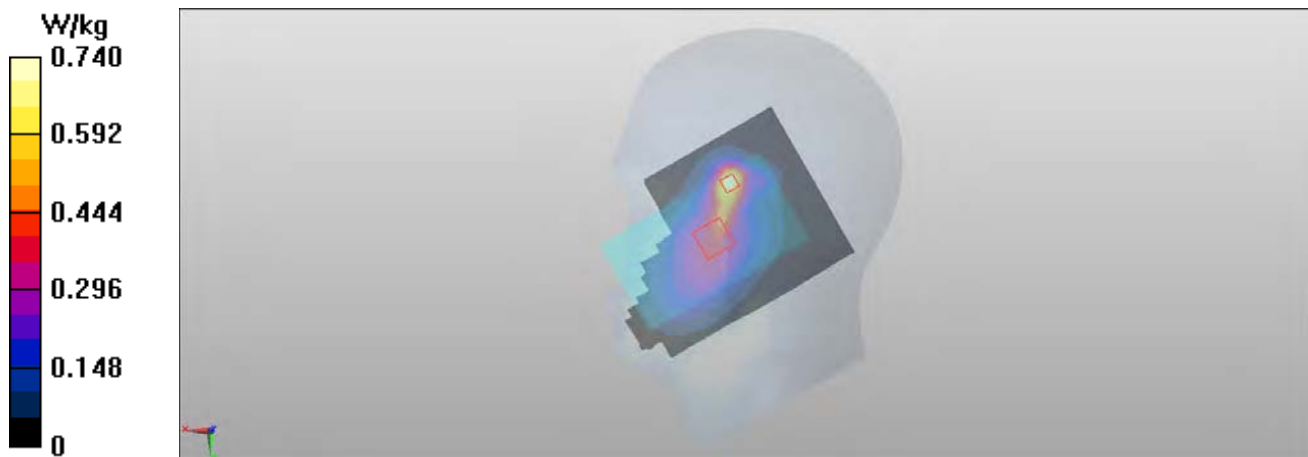
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 1; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.245 mW/g

Maximum value of SAR (interpolated) = 0.740 W/kg



Date/Time: 2012-06-21 14:24:57

DASY Configuration for WLAN - Left/Cheek - Channel 36/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-08-15 14:37:17

DASY Configuration for WCDMA - Left/Cheek - Low/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100; Frequency: 1712.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL1800 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.307$ mho/m; $\epsilon_r = 39.229$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: ES3DV3 - SN3165; ConvF(5.51, 5.51, 5.51); Calibrated: 2012-02-21;

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

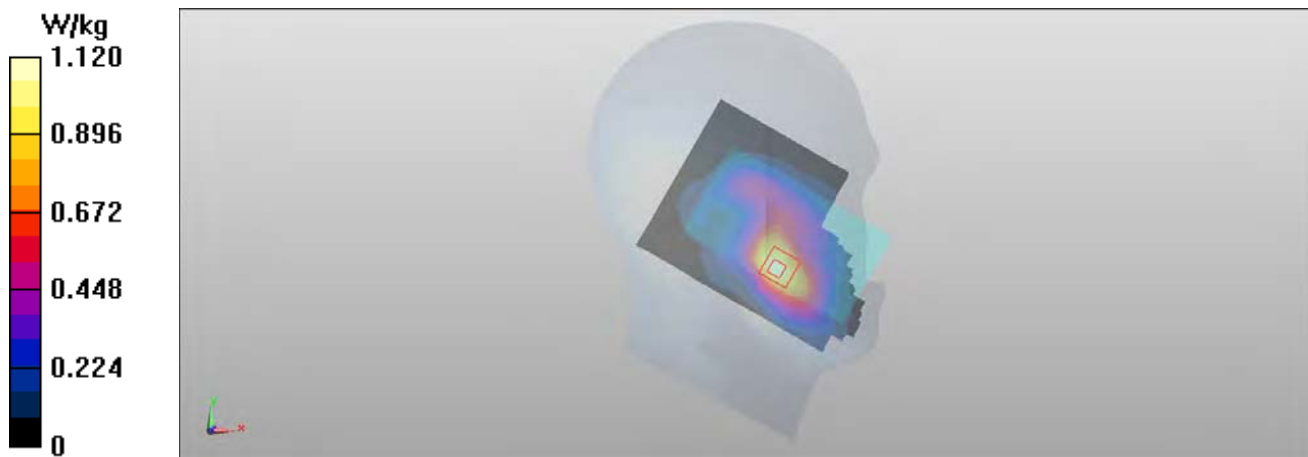
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

Phantom: SAM #1 CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.961 mW/g; SAR(10 g) = 0.563 mW/g

Maximum value of SAR (interpolated) = 1.12 W/kg



Date/Time: 2012-06-14 21:34:34, Date/Time: 2012-06-22 01:12:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0, Serial: 004402/13/870740/5

Communication System: LTE1700/2100, Communication System: WLAN5000 n-mode

Frequency: 1732.5 MHz, Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL1800, Medium: HSL5200; Medium Notes: t= 20.4 C, Medium Notes: 20.8 C

Medium parameters used (interpolated): f = 1732.5 MHz; $\sigma = 1.32$ mho/m; $\epsilon_r = 39.1$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5180 MHz; $\sigma = 4.44$ mho/m; $\epsilon_r = 34.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3834

- ConvF(5.51, 5.51, 5.51), ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-21, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1309, Electronics: DAE4 Sn1213; Calibrated: 2012-01-11, Calibrated: 2012-02-14

- Phantom: SAM #1 CRP, Phantom: SAM1; Type: SAM; Serial: TP-1126

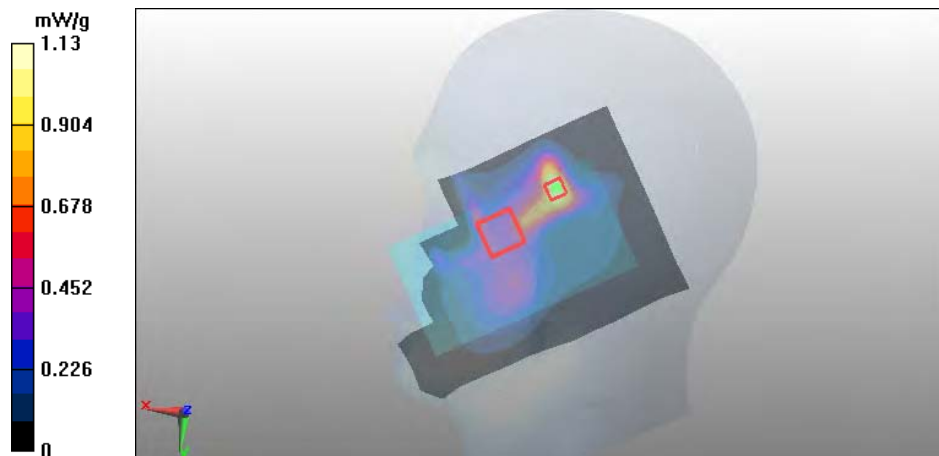
-; SEMCAD X Version 14.0 Build 61

LTE - Right/Cheek - Middle - QPSK - 20MHz - 1RB - 0% offset/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Right/Cheek – Channel 36/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.596 mW/g; SAR(10 g) = 0.277 mW/g

Maximum value of SAR (measured) = 1.13 mW/g



Date/Time: 2012-06-12 19:47:17, Date/Time: 2012-06-21 14:24:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0, Serial: 004402/13/870740/5

Communication System: 2-slot GPRS1900, Communication System: WLAN5000 n-mode

Frequency: 1909.8 MHz, Frequency: 5180 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: HSL1900, Medium: HSL5200; Medium Notes: t= 21.4 C, Medium Notes: 20.8 C

Medium parameters used: f = 1910 MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³, Medium parameters used:
f = 5180 MHz; $\sigma = 4.44$ mho/m; $\epsilon_r = 34.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573, Probe: EX3DV4 - SN3834

- ConvF(7.43, 7.43, 7.43), ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-23, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn793, Electronics: DAE4 Sn1213; Calibrated: 2011-09-16, Calibrated: 2012-02-14

- Phantom: SAM 1, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1449, Serial: TP-1126

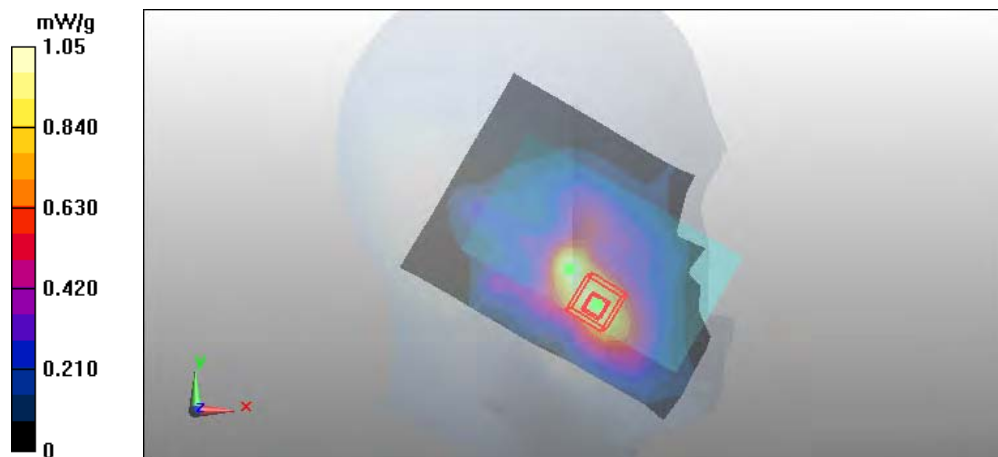
-; SEMCAD X Version 14.0 Build 61

2-slot GPRS - Left/Cheek - High/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Channel 36/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.833 mW/g; SAR(10 g) = 0.485 mW/g

Maximum value of SAR (measured) = 1.05 mW/g



Date/Time: 2012-06-19 16:25:56, Date/Time: 2012-06-21 14:24:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8, Serial: 004402/13/870740/5

Communication System: WCDMA1900, Communication System: WLAN5000 n-mode

Frequency: 1852.4 MHz, Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: HSL1900, Medium: HSL5200; Medium Notes: t= 21.3 C, Medium Notes: 20.8 C

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.36 mho/m; ϵ_r = 39.3; ρ = 1000 kg/m³, Medium parameters used: f = 5180 MHz; σ = 4.44 mho/m; ϵ_r = 34.6; ρ = 1000 kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573, Probe: EX3DV4 - SN3834

- ConvF(7.43, 7.43, 7.43), ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-23, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn793, Electronics: DAE4 Sn1213; Calibrated: 2011-09-16, Calibrated: 2012-02-14

- Phantom: SAM 1, Phantom: SAM1; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1449, Serial: TP-1126

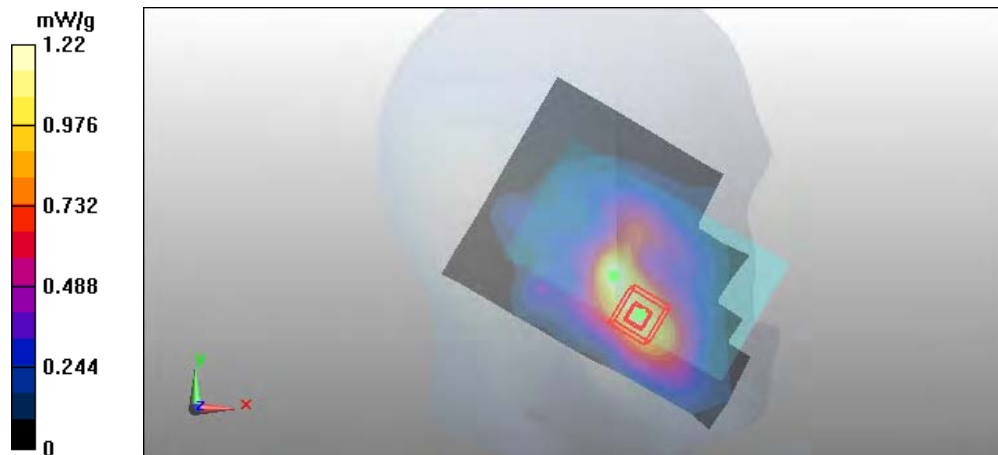
-; SEMCAD X Version 14.0 Build 61

WCDMA - Left/Cheek - Low/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN - Left/Cheek - Channel 36/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.967 mW/g; SAR(10 g) = 0.571 mW/g

Maximum value of SAR (measured) = 1.22 mW/g



Date/Time: 2012-06-21 14:24:57

DASY Configuration for WLAN - Left/Cheek - Channel 36/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

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

Medium: HSL5200 Medium parameters used: $f = 5180$ MHz; $\sigma = 4.442$ mho/m; $\epsilon_r = 34.598$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3834; ConvF(4.81, 4.81, 4.81); Calibrated: 2012-02-07;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM1; Type: SAM; Serial: TP-1126

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-19 22:27:04

DASY Configuration for LTE - Left/Cheek - Low - QPSK - 20MHz - 1RB - 100% offset/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900; Frequency: 1860 MHz; Duty Cycle: 1:1; PMF: 1

Medium: HSL1900 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.366$ mho/m; $\epsilon_r = 39.326$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV4 - SN3573; ConvF(7.43, 7.43, 7.43); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

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) = 0.809 mW/g; SAR(10 g) = 0.461 mW/g

Maximum value of SAR (interpolated) = 0.948 W/kg

