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TEST REPORT
REFERENCE STANDARDS:
FCC 47CFR Part 2.1093
FCC OET Bulletin 65, Supplement C (Edition 01-01)

NIE	29742RET.005
Approved by (name / position & signature)	A. Llamas / RF Lab Manager
Elaboration date	2009-11-24
Identification of item tested	TERRESTAR GENUS
Trademark	Genus
Model and/or type reference	TSN-1
Serial number	EBL0001940, EBL0001821, EBL0001893, EBL0001511, EBL0001971
Other identification of the product	FCC ID: OBW120897 IC ID: 3282A-120897
Features	GSM850/GSM900/GSM1800/GSM1900/WCDMA FDD V/ WCDMA FDD II / GMR-1 3G / BT / WiFi / A-GPS
Description	PDA
Applicant	Elektrobit Inc.
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CIF/NIF/Passport	91-1746142
Contact person:	Tuomo Väinämö
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Test samples supplier	Same as applicant
Manufacturer	Same as applicant

Test method requested	See Standard
Standard	1. FCC 47 CFR Part 2.1093. Radiofrequency radiation exposure evaluation: portable devices. 2. FCC OET Bulletin 65, Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields". 3. FCC OET KDB 450824 – SAR Probe Calibration and System Verification Considerations for measurements at 150 MHz – 3 GHz (January 2007). 4. FCC OET KDB 941225 D01 – SAR Measurement Procedures for 3G Devices (October 2007). 5. FCC OET KDB 941225 D03 – Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE. 6. FCC OET KDB 248227 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised). 7. FCC OET KDB 648474 D01 – SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas (Sept 2008). 8. FCC OET KDB Inquiry 654565.
Test procedure	Same as standards.
Non-standardized test method	N/A
Used instrumentation	1. Dosimetric E-field probe SPEAG ES3DV3 2. Data acquisition device SPEAG DAE4 3. Electro-optical converter SPEAG EOC3 4. 900 MHz dipole validation kit SPEAG D900V2 5. 1800MHz dipole validation kit SPEAG D1800V2 6. 2000MHz dipole validation kit SPEAG D2000V2 7. 2450 MHz dipole validation kit SPEAG D2450V2 8. Robot STÄUBLI RX60BL 9. Robot controller STÄUBLI CM7MB 10. SAM head-body simulator SPEAG Twin SAM V4.0 11. SAR measurement software SPEAG DASY4 V4.7 Build 80 12. Measurement server SPEAG DASY4 SE UMS 001 DC 13. Head and Body Tissue Equivalent Liquids for 900MHz, 1800MHz, 2000MHz and 2450MHz bands 14. Universal Radio Communication Tester R&S CMU 200 15. Vector network analyzer Agilent E5071C 16. Dielectric probe kit Agilent 85070C 17. Power meter R&S NRVD 18. Power sensor R&S NRV-Z51 19. Power sensor R&S NRV-Z1 20. RF Generator Agilent ESG E4438C 21. Dual directional coupler NARDA FSCM 99899 22. Dual directional coupler HP 778D. 23. Power amplifier MITEQ AMF-4D-00400600-50-30P 24. Handset positioner SPEAG Device Holder
Report template No.	FDT08_11
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INDEX

Competences and guarantees	4
General conditions	4
Uncertainty	4
Usage of samples.....	5
Testing period	6
Environmental conditions	6
Summary	6
Remarks and comments	6
Testing verdicts	6
APPENDIX A: Test Configuration.....	8
APPENDIX B: Test results.....	18
APPENDIX C: Measurements Reports	39
APPENDIX D: Photographs	109
APPENDIX E: Calibration Data.....	117

Competences and guarantees

AT4 wireless is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance programme for its measurement equipment.

AT4 wireless guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at AT4 wireless at the time of performance of the test.

AT4 wireless is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the following documents:

1. FCC OET Bulletin 65, Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields".

Usage of samples

Samples undergoing test have been selected by: **the client**.

Sample M/01 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
29742/60	PDA	TSN-1	EBL0001940	2009-11-02
29742/20	Battery	--	--	2009-09-28

Sample M/02 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
29742/73	PDA	TSN-1	EBL0001821	2009-11-05
29742/61	Battery	--	--	2009-11-02

Sample M/03 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
29742/89	PDA	TSN-1	EBL0001893	2009-11-09
29742/80	Battery	--	--	2009-11-05
29742/82	Battery	--	--	2009-11-05

Sample M/04 is composed of the following elements:

<u>Control N°</u>	<u>Description</u>	<u>Model</u>	<u>Serial N°</u>	<u>Date of reception</u>
29742/50	PDA	TSN-1	EBL0001511	2009-10-22
29742/72	PDA satellite conducted sample	TSN-1	EBL0001971	2009-11-05
30051/19	Dummy Battery	--	--	2009-07-29

1. Sample M/01 has undergone the test(s) specified in subclause "Test method requested": SAR evaluation for cellular modes.
2. Sample M/02 has undergone the test(s) specified in subclause "Test method requested": SAR evaluation for 802.11 b/g modes.
3. Sample M/03 has undergone the test(s) specified in subclause "Test method requested": SAR evaluation for satellite modes.
4. Sample M/04 has undergone the test(s) specified in subclause "Test method requested": Conducted average output power.

Testing period

The performed test started on 2009-11-06 and finished on 2009-11-13.

The tests have been performed at AT4 wireless.

Environmental conditions

In the chamber for measurements, the following limits were not exceeded during the test:

Temperature	Min. = 19.55 °C Max. = 23.41 °C
Relative humidity	Min. = 33.53 % Max. = 62.12 %

Summary

Considering the results of the performed test according to FCC 47CFR Part 2.1093, the item under test is **IN COMPLIANCE** with the requested specifications specified in the standards.

The maximum 1g volume averaged SAR found during this test has been 1.41 W/kg, for the head position and Satellite band ($\pi/2$ BPSK 31.25KHz BW mode)

NOTE: The results presented in this Test Report apply only to the particular item under test established in page 1 of this document, as presented for test on the date(s) shown in section, "USAGE OF SAMPLES, TESTING PERIOD AND ENVIRONMENTAL CONDITIONS".

Remarks and comments

1: Testing of the lowest and highest channels is not necessary according to the "2 dB" rule specified in the FCC OET Bulletin 65, Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields".

2: GSM and EDGE mode tested only for one position due to testing reductions mentioned in FCC OET KDB 941225 D03 – Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE.

3: Testing of HSDPA mode is not required according to FCC OET KDB 941225 D01 – SAR Measurement Procedures for 3G Devices (October 2007).

4: Testing of other channels in each band is optional when the maximum output channel SAR fulfills the testing reductions mentioned in FCC OET KDB 248227 – SAR Measurements Procedures 802.11a/b/g Transmitters (May 2007 – Revised), paragraph "Frequency Channel Configurations".

5: Testing of Bluetooth mode is not required according to FCC OET KDB 648474 D01 – SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas (Sept 2008), paragraph "Individual Transmitters".

Testing verdicts

Not applicable: NA
 Pass.....: P
 Fail: F
 Not measured.....: NM

850 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) GSM		P		
(d)(2) GPRS		P		
(d)(2) EDGE		P		
(d)(2) WCDMA Band V		P		
(d)(2) HSDPA Band V				NM ³

3: See Remarks and Comments.

1900 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) GSM		P		
(d)(2) GPRS		P		
(d)(2) EDGE		P		
(d)(2) WCDMA Band II		P		
(d)(2) HSDPA Band II				NM ³

3: See Remarks and Comments.

2000 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) Satellite		P		

2450 MHz band

FCC 47CFR Part 2.1093 Paragraph	VERDICT			
	NA	P	F	NM
(d)(2) 802.11b		P		
(d)(2) 802.11g		P		
(d)(2) Bluetooth				NM ⁵

5: See Remarks and Comments.

APPENDIX A: Test Configuration

INDEX

1. GENERAL INTRODUCTION	10
1.1. Application Standard.....	10
1.2. General requirements	10
1.3. Measurement system requirements.....	10
1.4. Phantom requirements.....	10
1.5. Measurement Liquids requirements.	11
2. MEASUREMENT SYSTEM.....	12
2.1. Measurement System.....	12
2.2. Test Positions of device relative to body.....	13
2.3. Test to be performed	14
2.4. Description of interpolation/extrapolation scheme.....	15
2.5. Determination of the largest peak spatial-average SAR	15
2.6. System Validation	15
3. UNCERTAINTY	16
4. SAR LIMIT	17

1. GENERAL INTRODUCTION

1.1. Application Standard

The Federal Communications Commission (FCC) sets the limits for General Population / Uncontrolled exposure to radio frequency electromagnetic fields for transmitting devices designed to be used within 20 centimetres of the body of the user under FCC 47 CFR Part 2.1093 - "Radiofrequency radiation exposure evaluation: portable devices", paragraph (d)(2).

Specific requirements and procedure for SAR assessment are describe under FCC OET Bulletin 65, Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields", and all the documents referred at the beginning of this document.

1.2. General requirements

The SAR measurement has been performed continuing the following considerations and environment conditions:

- The ambient temperature shall be in the range of 18°C to 25°C and the variation shall not exceed $\pm 2^{\circ}\text{C}$ during the test.
- The ambient humidity shall be in the range of and 30% - 70%.
- The device battery shall be fully charged before each measurement.

1.3. Measurement system requirements

The measurement system used for SAR tests fulfils the procedural and technical requirements described at the reference standards used.

1.4. Phantom requirements

The phantom is a simplified representation of the human anatomy and comprised of material with electrical properties similar to the corresponding tissues in human body. The human model has the following proportions:

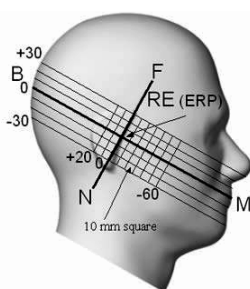


Figure 1: Proportions of Phantom

The shell model is a shaped container and it has the representation shown in the following figure:

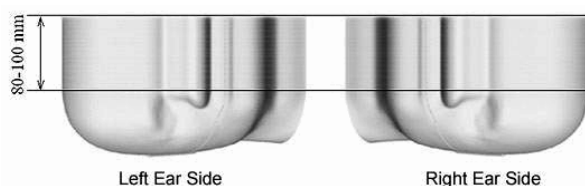


Figure 2: Proportions and shape of Phantom shell

1.5. Measurement Liquids requirements.

The liquids used to simulate the human tissues, must fulfil the requirements of the dielectric properties required. These target dielectric properties per FCC OET KDB 450824 instructions come from the dipole and probe calibration data which are included in Appendix B, Section 3, of this document.

2. MEASUREMENT SYSTEM

2.1. Measurement System

Manufacturer	Device	Type
Schmid & Partner Engineering AG	Dosimetric E-Fiel Probe	ES3DV3
Schmid & Partner Engineering AG	Data Acquisition Electronics	DAE4
Schmid & Partner Engineering AG	Electro-Optical Converter	EOC5
Schmid & Partner Engineering AG	900 MHz System Validation Dipole	D900V2
Schmid & Partner Engineering AG	1800 MHz System Validation Dipole	D1800V2
Schmid & Partner Engineering AG	2000 MHz System Validation Dipole	D2000V2
Schmid & Partner Engineering AG	2450 MHz System Validation Dipole	D2450V2
Stäubli	Robot	RX60BL
Stäubli	Robot controller	CM7MB
Schmid & Partner Engineering AG	SAM head-body simulator	TWIN SAM V4.0
Schmid & Partner Engineering AG	Measurement Software	DASY V4.7 Build 80
Schmid & Partner Engineering AG	Measurement Server	DASY4 SE UMS 001 DC
Rohde & Schwarz	Universal Radio Communication Tester	CMU 200
Agilent	Vector Network Analyser	E5071C
Agilent	Dielectric Probe Kit	85070C
Rohde & Schwarz	Power Meter	NRVD
Rohde & Schwarz	Power Sensor	NRV-Z51
Rohde & Schwarz	Power Sensor	NRV-Z1
Agilent	RF Generator	ESG E4438C
NARDA	Dual directional coupler	FSCM 99899
HP	Dual directional coupler	778D
MITEQ	Power amplifier	AMF-4D-00400600-50-30P
Schmid & Partner Engineering AG	Handset Positioner	SD000 HD1 HA

Table 1: Measurement Equipment

2.2. Test Positions of device relative to body

The standard FCC OET Bulletin 65, Supplement C (Edition 01-01) requires two test positions for the handset in the head. These positions are the "cheek" position and the "tilted" position. The tests positions used are described below. The handset should be tested in both positions (left and right sides) in the SAM phantom.

The EUT shall be placed in the Phantom in such way that the main point of the mobile terminal (acoustic output) coincides with the reference point located at the Phantom's ear.

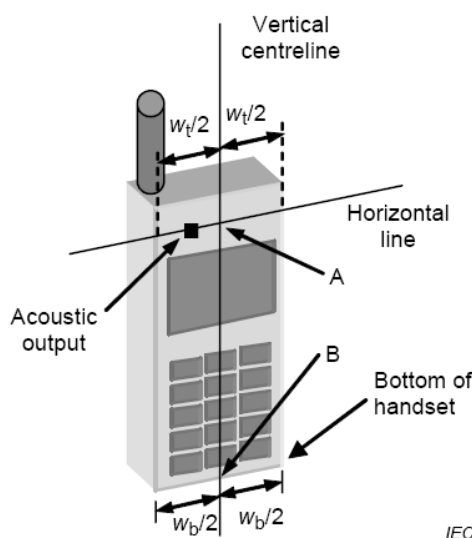


Figure 3: EUT's basic scheme

SAR measurements will be performed for the following configurations as indicated in the reference standard:

- Right side of Phantom, Cheek position.
- Right side of Phantom, 15° Tilted position.
- Left side of Phantom, Cheek position.
- Left side of Phantom, 15° Tilted position.

Definition of the "cheek" position

The "cheek" position relative to Phantom is described as follows:

1. - Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the Phantom. While maintaining the device in this plane, aligning the centre line with the reference plane containing the three ear and mouth reference points (M, RE and LE).
2. - Translate the mobile phone box towards the Phantom until the ear-piece touches the ear reference point (RE or LE). While maintaining the device in the reference plane, move the bottom of the box until any point of the front side is in contact with the cheek of the Phantom.

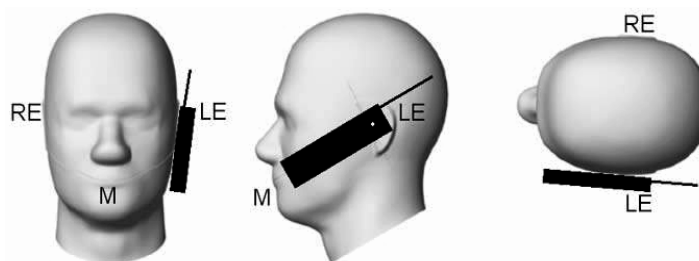


Figure 4: “Cheek” position of EUT

Definition of the tilted position:

The "15° tilted" position relative to Phantom is described as follows:

1. - Position the device in the “cheek” position described above.
2. - While maintaining the device in the reference plane described above and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees.

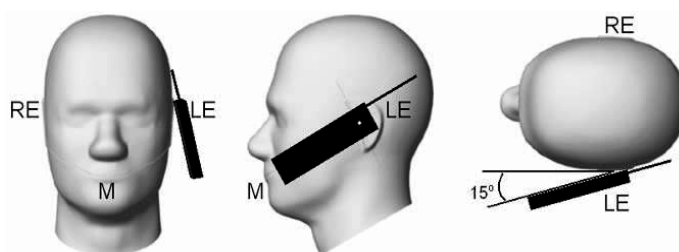


Figure 5: “Tilted” position of EUT

Also, according to the FCC OET Bulletin 65, Supplement C (Edition 01-01), for devices that are designed to operate in body-worn configurations SAR compliance should be evaluated using a flat phantom.

2.3. Test to be performed

Test shall be performed at both phone positions previously described, on each side of the head (left and right side) and using the centre frequency of each operating band.

Additionally, the configuration giving to the maximum mass averaged SAR shall be used to test the low-end and the high-end frequencies of each transmitting band. Thus, the tests to be performed in mobile phones are as follows:

- Measurements at Central Channel of application band:
 1. SAR measurement at the left side of Phantom and the cheek position of the EUT.
 2. SAR measurement at the left side of Phantom and the tilted 15° position of the EUT.
 3. SAR measurement at the right side of Phantom and the cheek position of the EUT.
 4. SAR measurement at the right side of Phantom and the tilted 15° position of the EUT.
- Measurements at Low Channel of application band:

SAR measurement at the side and position where the maximum SAR level, measured at Central channel, was found.
- Measurements at High Channel of application band:

SAR measurement at the side and position where the maximum SAR level, measured at Central channel, was found.

As noted above, measurements shall be performed using a flat phantom for body worn configuration. EUT will be placed at the center of flat phantom. The EUT position using during the body SAR tests will be that where maximum peak SAR was found. Low and high channels for each band should be tested at this position.

If the mobile phone is also designed to transmit with other configurations (antenna fully extended/retracted, keypad cover opened/closed...), all tests described above shall be performed for each configuration. When considering multi-mode and multi-band mobile phones, all of the above tests shall be performed at each transmitting mode/band with the corresponding maximum peak power level.

2.4. Description of interpolation/extrapolation scheme

The local SAR inside the Phantom is measured using small dipole sensing elements inside a probe element. The probe tip must not be in contact with the Phantoms surface in order to minimise measurement errors, but the highest local SAR is obtained from measurements at a certain distances from the shell trough extrapolation. The accurate assessment of the maximum SAR averaged over 1gr. requires a very fine resolution in the three dimensional scanned data array. Since the measurements have to be performed over a limited time, the measured data have to be interpolated to provide an array of sufficient resolution.

The interpolation of 2D area scan is used after the initial area scan, at a fixed distance from the Phantom shell wall. The initial scan data are collected with approx. 15 mm spatial resolution and this interpolation is used to find the location of the local maximum for positioning the subsequent 3D scanning to within a 1mm resolution.

For the 3D scan, data are collected on a spatially regular 3D grid having 5 mm steps in both directions. After the data collection by the SAR probe, the data are extrapolated in the depth direction to assign values to points in the 3D array closer to the shell wall. A notional extrapolation value is also assigned to the first point outside the shell wall so that subsequent interpolation schemes will be applicable right up to the shell wall boundary.

2.5. Determination of the largest peak spatial-average SAR

To determine the maximum value of the peak spatial-average SAR of a EUT, all device positions, configurations and operational modes should be tested for each frequency band.

According to FCC OET Bulletin 65, Supplement C (Edition 01-01), the averaging volume shall be chosen as 1gr. of contiguous tissue. The cubic volumes, over which the SAR measurements are averaged after extrapolation and interpolation, are chosen in order to include the highest values of local SAR.

The maximum SAR level for the EUT will be the maximum level obtained of the performed measurements, and indicated in the previous points.

2.6. System Validation

Prior to the SAR measurements, system verification is done daily to verify the system accuracy. FCC OET Bulletin 65 – Supplement C, Appendix D “SAR measurement procedures” Paragraph “System Verification” specifies, a complete SAR evaluation is done using a half-wavelength dipole as source with the frequency of the mid-band channel of the operating band, or within 10% of this channel.

The measured one-gram SAR should be within 10% of the expected target values specified in the calibration certificate of the dipole, for the specific tissue and frequency used.

3. UNCERTAINTY

Uncertainty for 300 MHz – 3 GHz

ERROR SOURCES	Uncertainty value (%)	Probability distribution	Divisor	(c _i) 1g	(c _i) 10g	Standard uncertainty (1g)	Standard uncertainty (10g)	V _i V _{eff}
Measurement Equipment								
Probe Calibration	±5.9%	Normal	1	1	1	±5.90 %	±5.90%	∞
Axial Isotropy	±4.7%	Rectangular	√3	0.7	0.7	±1.92%	±1.92%	∞
Hemispherical Isotropy	±9.6%	Rectangular	√3	0.7	0.7	±3.92%	±3.92%	∞
Boundary effect	±1.0%	Rectangular	√3	1	1	±0.58%	±0.58%	∞
Linearity	±4.7%	Rectangular	√3	1	1	±2.71%	±2.71%	∞
System detection limits	±1.0%	Rectangular	√3	1	1	±0.58%	±0.58%	∞
Readout electronics	±1.0%	Normal	1	1	1	±1.00%	±1.00%	∞
Response time	±0.8%	Rectangular	√3	1	1	±0.46%	±0.46%	∞
Integration time	±2.6%	Rectangular	√3	1	1	±1.50%	±1.50%	∞
RF Ambien conditions	±3.0%	Rectangular	√3	1	1	±1.73%	±1.73%	∞
Probe positioner	±0.4%	Rectangular	√3	1	1	±0.23%	±0.23%	∞
Probe positioning	±2.9%	Rectangular	√3	1	1	±1.67%	±1.67%	∞
Maximum SAR evaluation	±1.0%	Rectangular	√3	1	1	±0.58%	±0.58%	∞
Test Sample Related								
Device positioning	±2.9%	Normal	1	1	1	±2.90%	±2.90%	145
Device Holder	±3.6%	Normal	1	1	1	±3.60%	±3.60%	5
Power Drift	±5.0%	Rectangular	√3	1	1	±2.89%	±2.89%	∞
Phantom and Setup								
Phantom uncertainty	±4.0%	Rectangular	√3	1	1	±2.31%	±2.31%	∞
Liquid conductivity (deviation from target)	±5.0%	Rectangular	√3	0.64	0.43	±1.85%	±1.24%	∞
Liquid conductivity (measurement error)	±2.5%	Normal	1	0.64	0.43	±1.60%	±1.08%	∞
Liquid permittivity (deviation from target)	±5.0%	Rectangular	√3	0.60	0.49	±1.73%	±1.41%	∞
Liquid permittivity (measurement error)	±2.5%	Normal	1	0.60	0.49	±1.50%	±1.23%	∞
Combined standard uncertainty	$u_c = \sqrt{\sum_{i=1}^m c_i^2 \cdot u_i^2}$					±10.85%	±10.62%	330
Expanded uncertainty (confidence interval of 95%)	$ue = 2.00 u_c$					±21.71%	±21.24%	

Table 2: Uncertainty Assessment for 300 MHz - 3 GHz

4. SAR LIMIT

Having a worst case measurement, the SAR limit is valid for general population/uncontrolled exposure.

The SAR values have to be averaged over a mass of 1 gr. (SAR_{1 gr.}) with the shape of a cube. This level couldn't exceed the values indicated in the application Standard:

Standard	SAR	SAR Limit (W/Kg)
FCC 47 CFR Part 2.1093 Paragraph (d)(2)	SAR _{1 gr.}	1.6

Table 3: SAR limit

APPENDIX B: Test results

INDEX

1.	TEST CONDITIONS	20
1.1.	Power supply (V):.....	20
1.2.	Temperature (°C):.....	20
1.3.	Test signal, Output Power and Frequencies.....	20
1.4.	EUT and test-site configurations	21
2.	CONDUCTED AVERAGE POWER MEASUREMENTS	22
3.	TISSUE PARAMETERS MEASUREMENTS.....	23
4.	SYSTEM VALIDATION MEASUREMENTS	24
4.1.	Validation results in 900 MHz Band for Head TSL	24
4.2.	Validation results in 900 MHz Band for Body TSL	24
4.3.	Validation results in 1800 MHz Band for Head TSL	24
4.4.	Validation results in 1800 MHz Band for Body TSL	24
4.5.	Validation results in 2000 MHz Band for Head TSL	24
4.6.	Validation results in 2000 MHz Band for Body TSL	24
4.7.	Validation results in 2450 MHz Band for Body TSL	24
5.	MEASUREMENT RESULTS FOR SAR (SPECIFIC ABSORPTION RATE)	25
5.1.	Summary maximum results for head measurements	25
5.2.	Summary maximum results for body measurements.....	26
5.3.	Results for GSM 850 MHz band.	27
5.4.	Results for GPRS 850 MHz band – 1 slot.	28
5.5.	Results for GPRS 850 MHz band – 2 slots.....	28
5.6.	Results for EGPRS 850 MHz band – 1 slot.....	29
5.7.	Results for EGPRS 850 MHz band – 2 slots.	29
5.8.	Results for WCDMA Band V	30
5.9.	Results for GSM 1900 MHz Band	31
5.10.	Results for GPRS 1900 MHz Band – 1 slot.....	32
5.11.	Results for GPRS 1900 MHz Band – 2 slots.	32
5.12.	Results for EGPRS 1900 MHz Band – 1 slot.	33
5.13.	Results for EGPRS 1900 MHz Band – 2 slots.....	33
5.14.	Results for WCDMA Band II	34
5.15.	Results for Satellite $\pi/2$ BPSK (31.25kHz BW)	35
5.16.	Results for Satellite $\pi/4$ QPSK (31.25kHz BW).....	36
5.17.	Results for Satellite $\pi/4$ QPSK (62.5kHz BW).....	37
5.18.	Results for Satellite $\pi/4$ QPSK (156.25kHz BW).....	37
5.19.	Results for 802.11b.....	38
5.20.	Results for 802.11g.....	38

1. TEST CONDITIONS

1.1. Power supply (V):

$V_n = 3.7$ Li-ion polymer rechargeable battery

Type of power supply = DC Voltage from rechargeable Li-Ion 3.7 V battery.

1.2. Temperature (°C):

$T_n = +19.55$ to $+23.41$ °C

The subscript n indicates normal test conditions.

1.3. Test signal, Output Power and Frequencies

For the GSM/GPRS/EDGE and WCDMA modes, the device was put into operation by using a R&S CMU 200 as base station simulator. The output power of the device was set to Power Control Level (PCL) maximum for all tests.

For the 802.11b/g and Satellite modes, the device was put into operation by using a manufacturer proprietary test mode, setting the maximum output power for each mode. For 802.11b/g mode, the duty factor is set to maximum (aprox. 100%). For Satellite mode the duty factor is fixed at 25% (10ms transmission slot from 40ms frame duration), as the actual use.

A fully charged battery was used for every test sequence.

In all operating bands and test position, the measurements were performed on middle channels. In each band, for those positions with the maximum averaged SAR was found, measurements were performed on lowest and highest channels except those with applicable test reductions ^{1, 2, 4}.

1, 2 and 4: See remarks and comments

The maximum time-average conducted power of the device for each mode was measured with a Power meter R&S NRVD and a thermocoupled power sensor NRV-Z51. It was measured using another samples (S/N: EBL0001511 and EBL0001971). See 'usage of samples' paragraph of this report.

The actual SAR samples does not have accessible antenna connectors for conducted measurements, so the conducted average output power was measured using another identical sample provided by the manufacturer with auxiliary external connectors that makes the measurements representative and applicable for all the tested samples.

No simultaneous transmission evaluation was performed following the FCC OET KDB 648474 D01 – SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas (Sept 2008), because the EUT does not admit the simultaneous operation of any mode combination except the Bluetooth with the other ones. The detailed simultaneous transmission combination is:

	GSM / GPRS / EDGE	WCDMA / HSDPA	Satellite	802.11b/g	Bluetooth
GSM / GPRS / EDGE		Not supported	Not supported	Not supported	Supported
WCDMA / HSDPA	Not supported		Not supported	Not supported	Supported
Satellite	Not supported	Not supported		Not supported	Supported
802.11b/g	Not supported	Not supported	Not supported		Supported

The distances between antennas are (please check the antennas location diagram in the appendix D):

- Bluetooth and Satellite antenna → 6 cm.
- Bluetooth and GSM/WCDMA antenna → 6.4 cm.
- Satellite and GSM/WCDMA antenna → 9 cm.

1.4. EUT and test-site configurations

For only-data modes (GPRS, EDGE, 802.11b/g, Satellite 62.5kHz BW and Satellite 156.25kHz BW), the EUT was test only over body worn positions because it does not admit voice mode over only-data transmissions.

For body worn tests, the EUT was placed with its back face against the flat phantom surface which was found the worst case for all modes.

The separation distance between EUT and flat phantom surface was 15mm, declared by the manufacturer as the minimum operating distance for body-worn use. For each mode, the EUT was measured with and without the headset provided with it.

2. CONDUCTED AVERAGE POWER MEASUREMENTS

Band	Mode	Average Conducted Power (dBm)		
		CH Low	CH Mid	CH High
850 MHz	GSM	23.67	23.53	23.43
	GPRS 1slot	23.62	23.49	23.37
	GPRS 2slot	26.20	26.22	26.24
	EGPRS 1slot	17.74	17.62	17.45
	EGPRS 2slot	21.31	21.24	21.19
	WCDMA Band V	24.52	24.36	24.69
	HSDPA Band V	24.21	24.09	24.28
1900 MHz	GSM	20.40	20.41	20.45
	GPRS 1slot	20.31	20.32	20.36
	GPRS 2slot	21.91	21.90	21.93
	EGPRS 1slot	16.97	17.15	17.21
	EGPRS 2slot	20.28	20.33	20.40
	WCDMA Band II	24.74	24.08	23.95
	HSDPA Band II	24.39	23.8	23.6
2000 MHz	$\pi/2$ BPSK (31.25KHz BW)	26.92	26.87	26.78
	$\pi/4$ QPSK (31.25KHz BW)	26.89	26.82	26.77
	$\pi/4$ QPSK (62.5KHz BW)	27.07	26.9	26.85
	$\pi/4$ QPSK (156.25KHz BW)	24.97	24.87	24.79
2450 MHz	802.11b	13.85	14.05	13.60
	802.11g	14.91	15.06	14.64
	Bluetooth	-1.03	-1.14	-1.35

3. TISSUE PARAMETERS MEASUREMENTS

Frequency (MHz)	Target Head Tissue: Parameters used in Probe Calibration		Target Head Tissue: Parameters used in Dipole Calibration		Measured Head Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	41.5 ± 5%	0.90 ± 5%	-	-	40.72	0.87	2009-11-10
900	41.5 ± 5%	0.97 ± 5%	39.8 ± 6%	0.94 ± 6%	39.71	0.92	2009-11-10
1800	40.0 ± 5%	1.40 ± 5%	41.1 ± 6%	1.37 ± 6%	40.54	1.39	2009-11-11
1900	40.0 ± 5%	1.40 ± 5%	-	-	39.68	1.41	2009-11-11
2000	40.0 ± 5%	1.40 ± 5%	39.3 ± 6%	1.43 ± 6%	38.38	1.43	2009-11-11

Frequency (MHz)	Target Body Tissue: Parameters used in Probe Calibration		Target Body Tissue: Parameters used in Dipole Calibration		Measured Body Tissue		Measured Date
	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	55.2 ± 5%	0.97 ± 5%	-	-	53.10	0.96	2009-11-07
900	55.0 ± 5%	1.05 ± 5%	52.4 ± 6%	1.06 ± 6%	52.44	1.02	2009-11-07
1800	53.3 ± 5%	1.52 ± 5%	54.0 ± 6%	1.49 ± 6%	52.45	1.52	2009-11-05
1900	53.3 ± 5%	1.52 ± 5%	-	-	52.00	1.53	2009-11-07
2000	53.3 ± 5%	1.52 ± 5%	52.9 ± 6%	1.59 ± 6%	51.55	1.53	2009-11-07
2450	52.7 ± 5%	1.95 ± 5%	53.2 ± 6%	2.00 ± 6%	51.75	2.02	2009-11-08

Note: The dielectric properties have been measured by the contact probe method at 21.5° C.

4. SYSTEM VALIDATION MEASUREMENTS

4.1. Validation results in 900 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	10.70	10.97	2.51	± 10
10 gr.	6.92	7.05	1.82	± 10

4.2. Validation results in 900 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	11.00	10.84	-1.47	± 10
10 gr.	7.16	7.02	-1.89	± 10

4.3. Validation results in 1800 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	38.90	39.16	0.68	± 10
10 gr.	20.50	20.26	-1.16	± 10

4.4. Validation results in 1800 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	39.20	37.29	-4.86	± 10
10 gr.	20.80	19.56	-5.94	± 10

4.5. Validation results in 2000 MHz Band for Head TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	42.70	41.14	-3.66	± 10
10 gr.	22.00	20.09	-8.68	± 10

4.6. Validation results in 2000 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	42.70	43.67	2.26	± 10
10 gr.	22.40	21.79	-2.71	± 10

4.7. Validation results in 2450 MHz Band for Body TSL

SAR	Target SAR	Measured SAR	Drift (%)	Limit (%)
1 gr.	53.00	51.63	-2.58	± 10
10 gr.	25.00	23.88	-4.48	± 10

5. MEASUREMENT RESULTS FOR SAR (SPECIFIC ABSORPTION RATE)

5.1. Summary maximum results for head measurements

Band	Mode	Side / Position	Channel (Frequency)	Measured SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
850 MHz	GSM	Right / Cheek	CH 190 (836.6 MHz)	0.536	1.6
	WCDMA Band V	Right / Cheek	CH 4183 (836.6 MHz)	0.705	1.6
1900 MHz	GSM	Left / Cheek	CH 661 (1880 MHz)	0.348	1.6
	WCDMA Band II	Left / Cheek	CH 9262 (1852.4 MHz)	0.914	1.6
2000 MHz	$\pi/2$ BPSK (31.25KHz BW)	Right / Tilt	Low (2000.015625 MHz)	1.410	1.6
	$\pi/4$ QPSK (31.25KHz BW)	Right / Tilt	Mid (2009.984375 MHz)	1.400	1.6

5.2. Summary maximum results for body measurements

Band	Mode	Side / Position	Channel (Frequency)	Measured SAR (1g avg) (W/Kg)	SAR limit (1g avg) (W/Kg)
850 MHz	GSM	Back face	CH 190 (836.6 MHz)	0.642	1.6
	GPRS 1slot	Back face	CH 190 (836.6 MHz)	0.558	1.6
	GPRS 2slots	Back face	CH 190 (836.6 MHz)	0.977	1.6
	EGPRS 1slot	Back face	CH 190 (836.6 MHz)	0.196	1.6
	EGPRS 2slot	Back face	CH 190 (836.6 MHz)	0.375	1.6
	WCDMA Band V	Back face	CH 4183 (836.6 MHz)	0.657	1.6
1900 MHz	GSM	Back face with Headset	CH 661 (1880 MHz)	0.363	1.6
	GPRS 1slot	Back face	CH 661 (1880 MHz)	0.308	1.6
	GPRS 2slots	Back face with Headset	CH 661 (1880 MHz)	0.464	1.6
	EGPRS 1slot	Back face with Headset	CH 661 (1880 MHz)	0.185	1.6
	EGPRS 2slot	Back face with Headset	CH 661 (1880 MHz)	0.493	1.6
	WCDMA Band II	Back face with Headset	CH 9400 (1880 MHz)	0.716	1.6
2000 MHz	$\pi/2$ BPSK (31.25KHz BW)	Back face	Mid (2009.984375 MHz)	0.750	1.6
	$\pi/4$ QPSK (31.25KHz BW)	Back face with Headset	Mid (2009.984375 MHz)	0.698	1.6
	$\pi/4$ QPSK (62.5KHz BW)	Back face	Mid (2010.0 MHz)	0.800	1.6
	$\pi/4$ QPSK (156.25KHz BW)	Back face with Headset	Mid (2009.984375 MHz)	0.755	1.6
2450 MHz	802.11b	Back face with Headset	CH 6 (2437 MHz)	0.063	1.6
	802.11g	Back face with Headset	CH 6 (2437 MHz)	0.031	1.6

5.3. Results for GSM 850 MHz band.

- **Head measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 190 (836.6 Mhz)	0.536	-1.42	±5	Pass
Right / 15° Tilted	CH 190 (836.6 Mhz)	0.243	-0.66	±5	Pass
Left / Cheek	CH 190 (836.6 Mhz)	0.515	-0.51	±5	Pass
Left / 15° Tilted	CH 190 (836.6 Mhz)	0.223	-1.05	±5	Pass
-	CH 128 (824.2 Mhz)	NM ¹	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 190 (836.6 Mhz)	0.642	-0.23	±5	Pass
Back Face with Headset	CH 190 (836.6 Mhz)	0.599	0.00	±5	Pass
-	CH 128 (824.2 Mhz)	NM ¹	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments.

5.4. Results for GPRS 850 MHz band – 1 slot.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 190 (836.6 Mhz)	0.558	-0.47	±5	Pass
Back Face with Headset	CH 190 (836.6 Mhz)	0.517	0.06	±5	Pass
-	CH 128 (824.2 Mhz)	NM ¹	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.5. Results for GPRS 850 MHz band – 2 slots.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 190 (836.6 Mhz)	0.977	-1.09	±5	Pass
Back Face with Headset	CH 190 (836.6 Mhz)	0.891	-0.17	±5	Pass
Back Face	CH 128 (824.2 Mhz)	0.959	-0.57	±5	Pass
Back Face	CH 251 (848.8 Mhz)	0.878	0.10	±5	Pass

1: See remarks and comments

5.6. Results for EGPRS 850 MHz band – 1 slot.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 190 (836.6 Mhz)	0.196	-0.87	±5	Pass
Back Face with Headset	CH 190 (836.6 Mhz)	0.147	-0.31	±5	Pass
-	CH 128 (824.2 Mhz)	NM ¹	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.7. Results for EGPRS 850 MHz band – 2 slots.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 190 (836.6 Mhz)	0.375	0.73	±5	Pass
Back Face with Headset	CH 190 (836.6 Mhz)	0.301	-1.71	±5	Pass
-	CH 128 (824.2 Mhz)	NM ¹	-	±5	Pass
-	CH 251 (848.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.8. Results for WCDMA Band V

- Head measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 4183 (836.6 Mhz)	0.705	0.14	±5	Pass
Right / 15° Tilted	CH 4183 (836.6 Mhz)	0.365	-1.14	±5	Pass
Left / Cheek	CH 4183 (836.6 Mhz)	0.675	2.07	±5	Pass
Left / 15° Tilted	CH 4183 (836.6 Mhz)	0.324	-1.68	±5	Pass
-	CH 4132 (826.4 Mhz)	NM ¹	-	±5	Pass
-	CH 4233 (846.6 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 4183 (836.6 Mhz)	0.657	-0.25	±5	Pass
Back Face with Headset	CH 4183 (836.6 Mhz)	0.538	-1.85	±5	Pass
-	CH 4132 (826.4 Mhz)	NM ¹	-	±5	Pass
-	CH 4233 (846.6 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.9. Results for GSM 1900 MHz Band

- Head measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 661 (1880 Mhz)	0.337	0.75	±5	Pass
Right / 15° Tilted	CH 661 (1880 Mhz)	0.137	0.81	±5	Pass
Left / Cheek	CH 661 (1880 Mhz)	0.348	0.34	±5	Pass
Left / 15° Tilted	CH 661 (1880 Mhz)	0.100	0.71	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 661 (1880 Mhz)	0.342	-0.24	±5	Pass
Back Face with Headset	CH 661 (1880 Mhz)	0.363	1.09	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.10. Results for GPRS 1900 MHz Band – 1 slot.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 661 (1880 Mhz)	0.308	0.73	±5	Pass
Back Face with Headset	CH 661 (1880 Mhz)	0.284	0.02	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.11. Results for GPRS 1900 MHz Band – 2 slots.

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 661 (1880 Mhz)	0.453	0.79	±5	Pass
Back Face with Headset	CH 661 (1880 Mhz)	0.464	1.09	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.12. Results for EGPRS 1900 MHz Band – 1 slot.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 661 (1880 Mhz)	NM ²	-	±5	Pass
Back Face with Headset	CH 661 (1880 Mhz)	0.185	0.96	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1 and 2: See remarks and comments

5.13. Results for EGPRS 1900 MHz Band – 2 slots.

- **Body measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 661 (1880 Mhz)	0.482	0.50	±5	Pass
Back Face with Headset	CH 661 (1880 Mhz)	0.493	0.94	±5	Pass
-	CH 512 (1850.2 Mhz)	NM ¹	-	±5	Pass
-	CH 810 (1909.8 Mhz)	NM ¹	-	±5	Pass

1 and 2: See remarks and comments

5.14. Results for WCDMA Band II

- **Head measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	CH 9400 (1880 Mhz)	0.820	-2.79	±5	Pass
Right / 15° Tilted	CH 9400 (1880 Mhz)	0.289	-1.70	±5	Pass
Left / Cheek	CH 9400 (1880 Mhz)	0.845	1.30	±5	Pass
Left / 15° Tilted	CH 9400 (1880 Mhz)	0.227	-1.67	±5	Pass
Left / Cheek	CH 9262 (1852.4 Mhz)	0.914	2.38	±5	Pass
Left / Cheek	CH 9538 (1907.6 Mhz)	0.780	0.90	±5	Pass

1: See remarks and comments

- **Body measurements**

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 9400 (1880 Mhz)	0.699	-0.21	±5	Pass
Back Face with Headset	CH 9400 (1880 Mhz)	0.716	0.07	±5	Pass
-	CH 9262 (1852.4 Mhz)	NM ¹	-	±5	Pass
-	CH 9538 (1907.6 Mhz)	NM ¹	-	±5	Pass

1: See remarks and comments

5.15. Results for Satellite $\pi/2$ BPSK (31.25kHz BW)

- Head measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	Mid (2009.984375 MHz)	0.974	-1.81	± 5	Pass
Right / 15° Tilted	Mid (2009.984375 MHz)	1.390	1.25	± 5	Pass
Left / Cheek	Mid (2009.984375 MHz)	0.950	-1.41	± 5	Pass
Left / 15° Tilted	Mid (2009.984375 MHz)	1.100	1.86	± 5	Pass
Right / 15° Tilted	Low (2000.015625 MHz)	1.410	-0.15	± 5	Pass
Right / 15° Tilted	High (2019.984375 MHz)	1.220	-0.66	± 5	Pass

1: See remarks and comments

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	Mid (2009.984375 MHz)	0.750	-3.06	± 5	Pass
Back Face with Headset	Mid (2009.984375 MHz)	0.740	3.37	± 5	Pass
-	Low (2000.015625 MHz)	NM ¹	-	± 5	Pass
-	High (2019.984375 MHz)	NM ¹	-	± 5	Pass

1: See remarks and comments

5.16. Results for Satellite $\pi/4$ QPSK (31.25kHz BW)

- Head measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Right / Cheek	Mid (2009.984375 MHz)	0.974	0.36	± 5	Pass
Right / 15° Tilted	Mid (2009.984375 MHz)	1.400	2.28	± 5	Pass
Left / Cheek	Mid (2009.984375 MHz)	0.912	-1.76	± 5	Pass
Left / 15° Tilted	Mid (2009.984375 MHz)	1.100	2.24	± 5	Pass
Right / 15° Tilted	Low (2000.015625 MHz)	1.360	0.10	± 5	Pass
Right / 15° Tilted	High (2019.984375 MHz)	1.250	-0.40	± 5	Pass

1: See remarks and comments

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	Mid (2009.984375 MHz)	0.695	1.40	± 5	Pass
Back Face with Headset	Mid (2009.984375 MHz)	0.698	0.26	± 5	Pass
-	Low (2000.015625 MHz)	NM ¹	-	± 5	Pass
-	High (2019.984375 MHz)	NM ¹	-	± 5	Pass

1: See remarks and comments

5.17. Results for Satellite $\pi/4$ QPSK (62.5kHz BW)

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	Mid (2010.0 MHz)	0.800	-1.12	± 5	Pass
Back Face with Headset	Mid (2010.0 MHz)	0.749	-0.37	± 5	Pass
Back Face	Low (2000.03125 MHz)	0.748	0.79	± 5	Pass
Back Face	High (2019.96875 MHz)	0.756	-0.74	± 5	Pass

1: See remarks and comments

5.18. Results for Satellite $\pi/4$ QPSK (156.25kHz BW)

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	Mid (2009.984375 MHz)	0.741	-0.54	± 5	Pass
Back Face with Headset	Mid (2009.984375 MHz)	0.755	-0.93	± 5	Pass
-	Low (2000.078125 MHz)	NM ¹	-	± 5	Pass
-	High (2019.921875 MHz)	NM ¹	-	± 5	Pass

1: See remarks and comments

5.19. Results for 802.11b

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 1 (2412 Mhz)	NM ⁴	-	±5	Pass
Back Face with Headset	CH 1 (2412 Mhz)	NM ⁴	-	±5	Pass
Back Face	CH 6 (2437 Mhz)	0.058	-0.35	±5	Pass
Back Face with Headset	CH 6 (2437 Mhz)	0.063	0.00	±5	Pass
Back Face	CH 11 (2462 Mhz)	NM ⁴	-	±5	Pass
Back Face with Headset	CH 11 (2462 Mhz)	NM ⁴	-	±5	Pass

4: See remarks and comments

5.20. Results for 802.11g

- Body measurements

Side / Position	Channel (Frequency)	SAR Max. over 1gr (W/Kg)	Power Drift (%)	Limit (%)	Verdict
Back Face	CH 1 (2412 Mhz)	NM ⁴	-	±5	Pass
Back Face with Headset	CH 1 (2412 Mhz)	NM ⁴	-	±5	Pass
Back Face	CH 6 (2437 Mhz)	0.028	-0.64	±5	Pass
Back Face with Headset	CH 6 (2437 Mhz)	0.031	0.00	±5	Pass
Back Face	CH 11 (2462 Mhz)	NM ⁴	-	±5	Pass
Back Face with Headset	CH 11 (2462 Mhz)	NM ⁴	-	±5	Pass

4: See remarks and comments

APPENDIX C: Measurements Reports

GSM 850 MHz – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 850 (Right-Hand Side)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.571 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

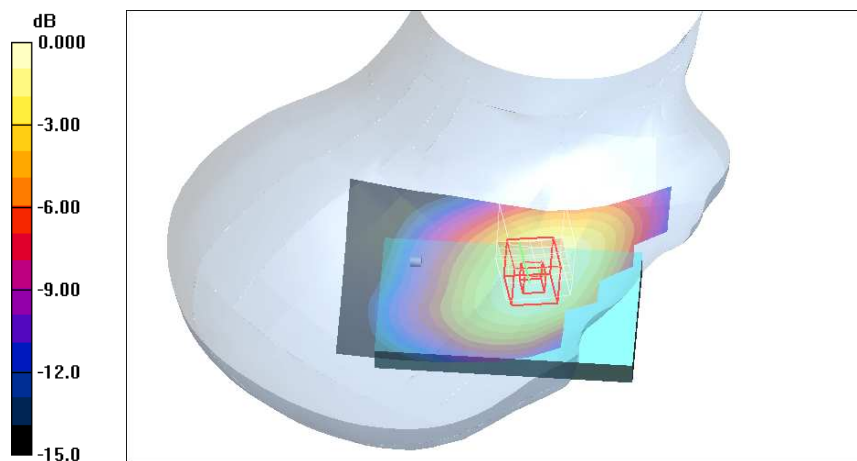
Reference Value = 7.26 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.730 W/kg

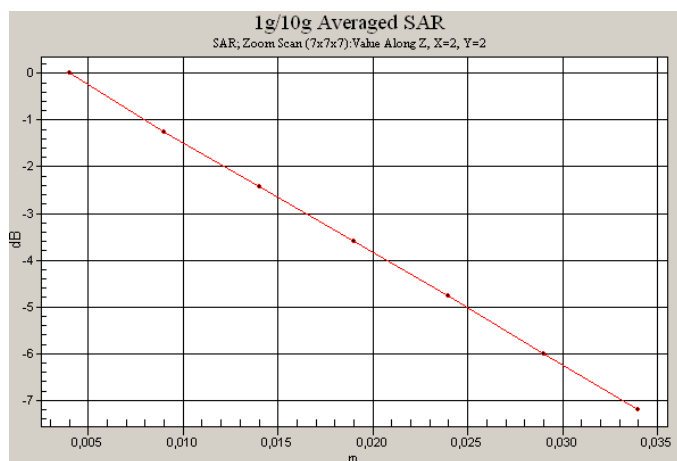
SAR(1 g) = 0.536 mW/g; SAR(10 g) = 0.381 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.575 mW/g



0 dB = 0.575mW/g



GSM 850 MHz – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 850 (Right-Hand Side)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.258 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

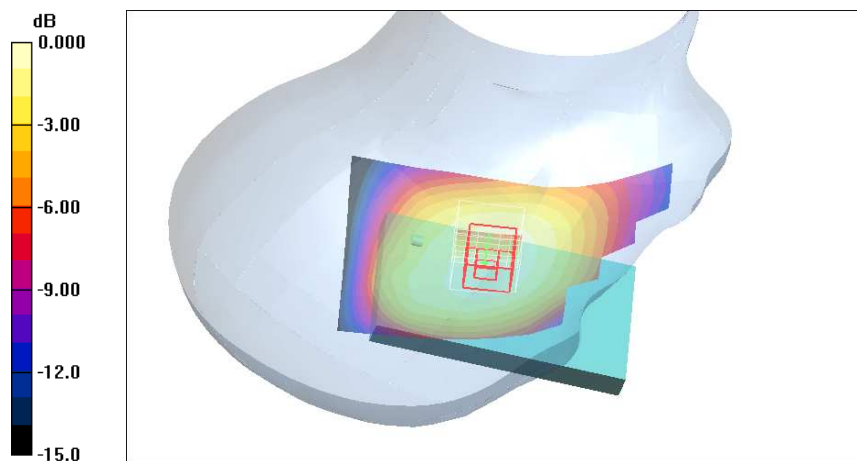
Reference Value = 12.6 V/m; Power Drift = -0.057 dB

Peak SAR (extrapolated) = 0.303 W/kg

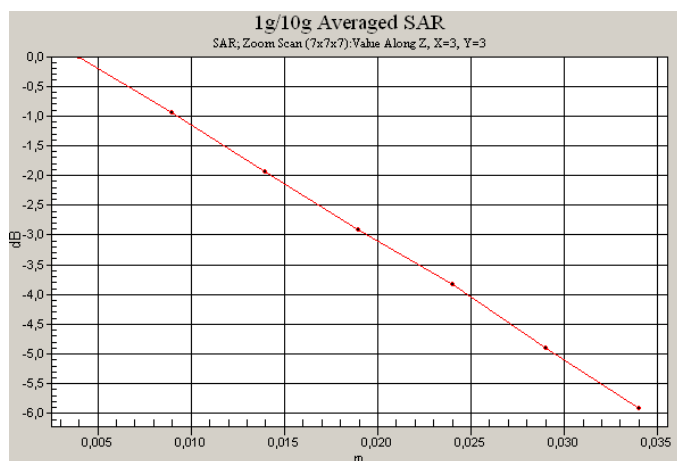
SAR(1 g) = 0.243 mW/g; SAR(10 g) = 0.187 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.256 mW/g



0 dB = 0.256mW/g



GSM 850 MHz – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 850 (Left-Hand Side)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.546 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

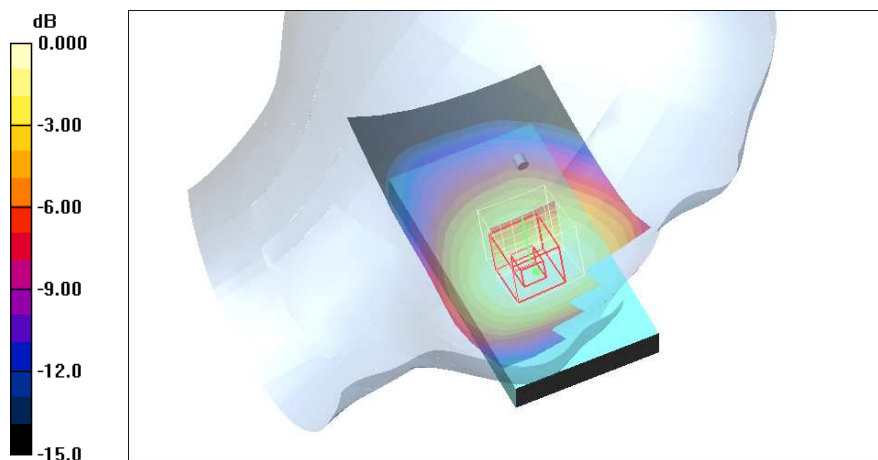
Reference Value = 7.60 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.642 W/kg

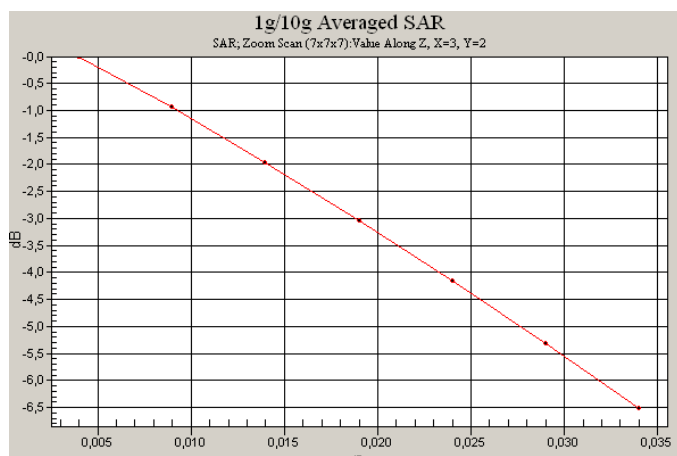
SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.385 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.540 mW/g



0 dB = 0.540mW/g



GSM 850 MHz – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940
Program Name: GSM 850 (Left-Hand Side)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.873 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.238 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

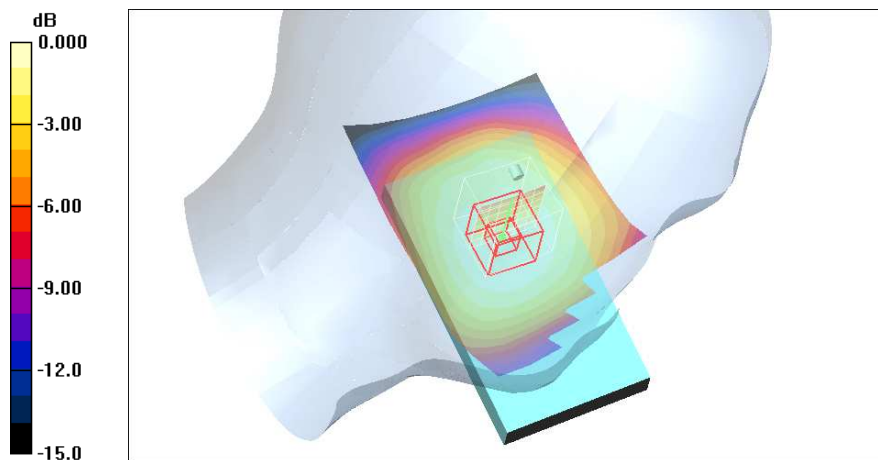
Reference Value = 12.8 V/m ; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 0.278 W/kg

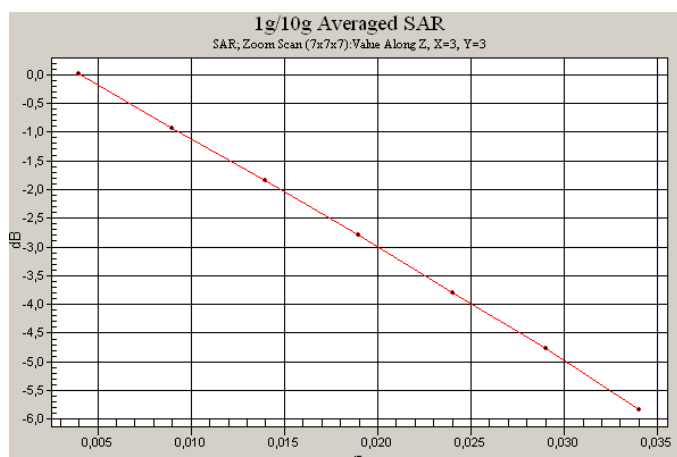
SAR(1 g) = 0.223 mW/g ; SAR(10 g) = 0.175 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.232 mW/g



0 dB = 0.232mW/g



GSM 850 MHz – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 850 (Body)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.674 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

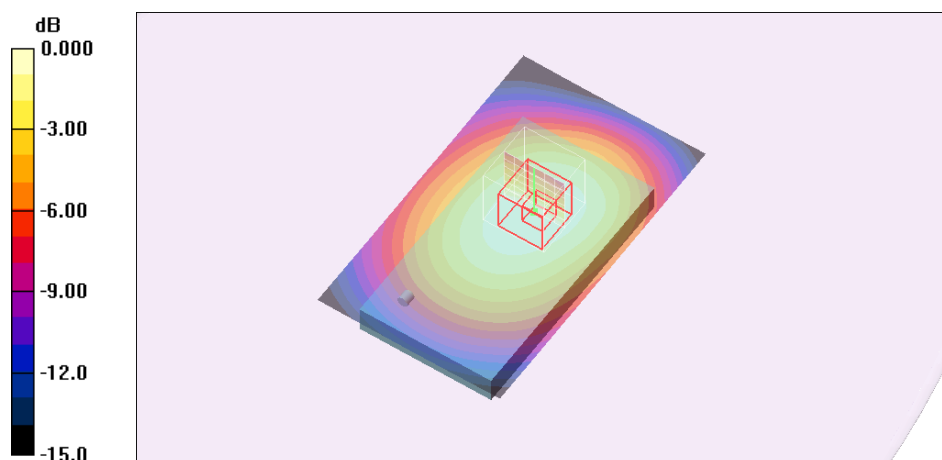
Reference Value = 11.6 V/m; Power Drift = -0.020 dB

Peak SAR (extrapolated) = 0.828 W/kg

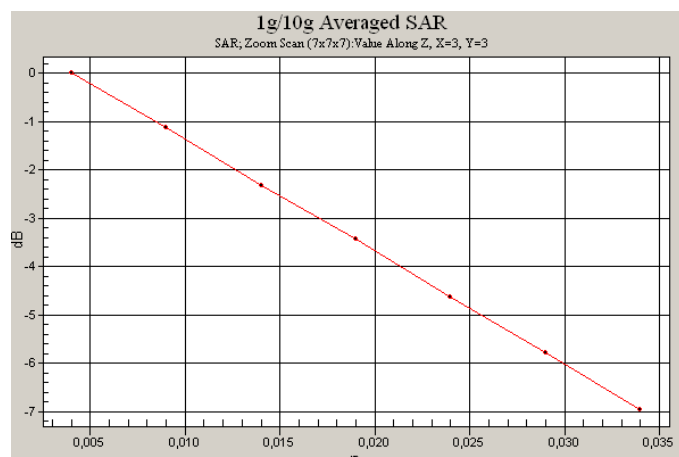
SAR(1 g) = 0.642 mW/g; SAR(10 g) = 0.474 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.677 mW/g



0 dB = 0.677mW/g



GSM 850 MHz – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940
Program Name: GSM 850 (Body)

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.633 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

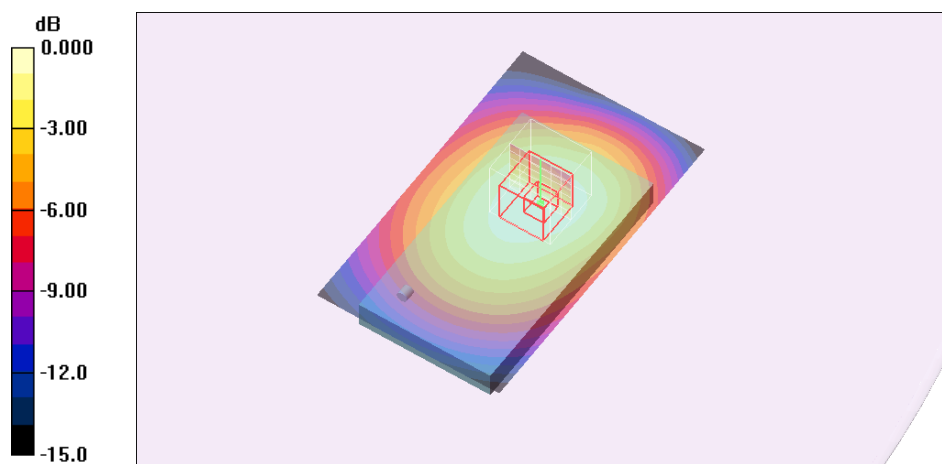
Reference Value = 10.9 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.792 W/kg

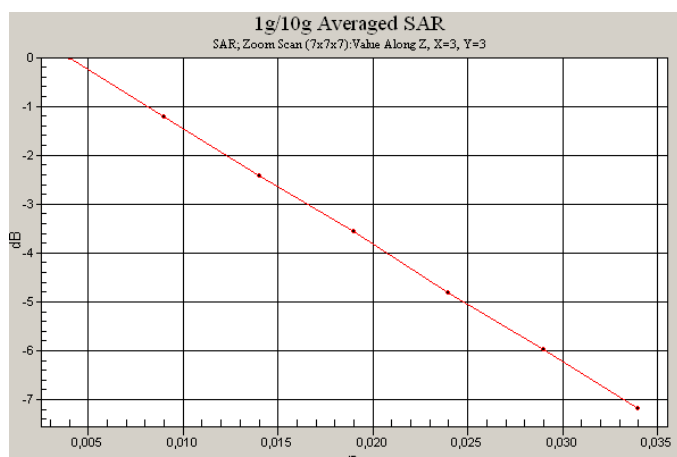
SAR(1 g) = 0.599 mW/g; SAR(10 g) = 0.441 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.633 mW/g



0 dB = 0.633mW/g



GPRS 850 MHz (1 slot) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 1 slot (Body)

Communication System: GPRS 850 (1 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.585 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

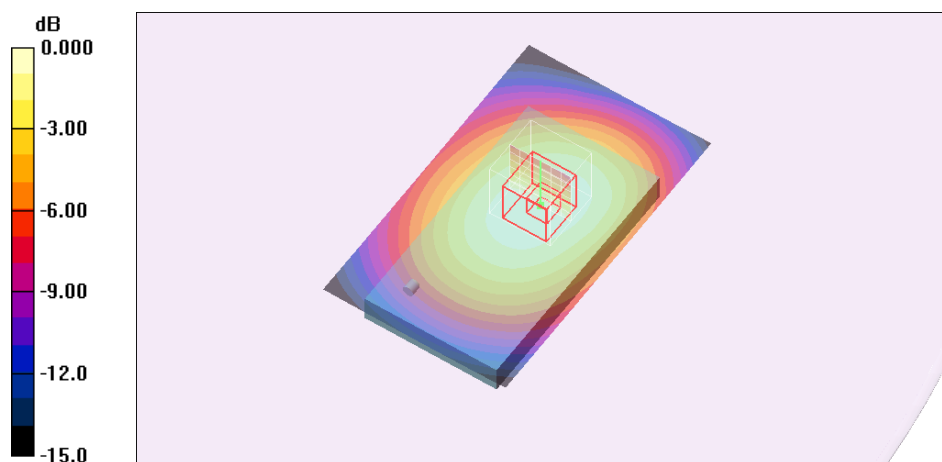
Reference Value = 11.0 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.724 W/kg

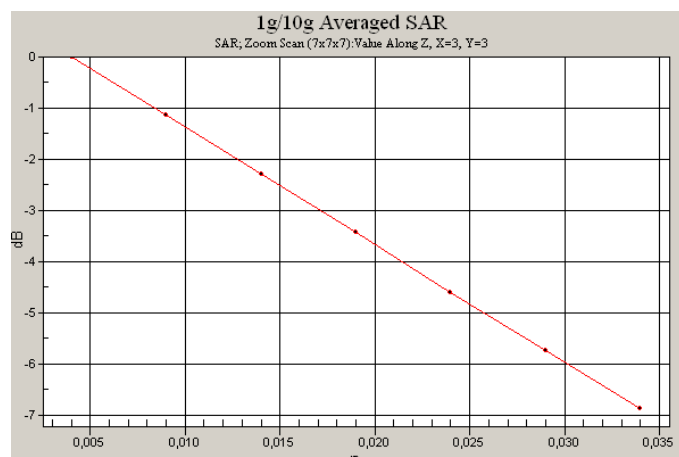
SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.415 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.589 mW/g



0 dB = 0.589mW/g



GPRS 850 MHz (1 slot) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 1 slot (Body)

Communication System: GPRS 850 (1 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.543 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

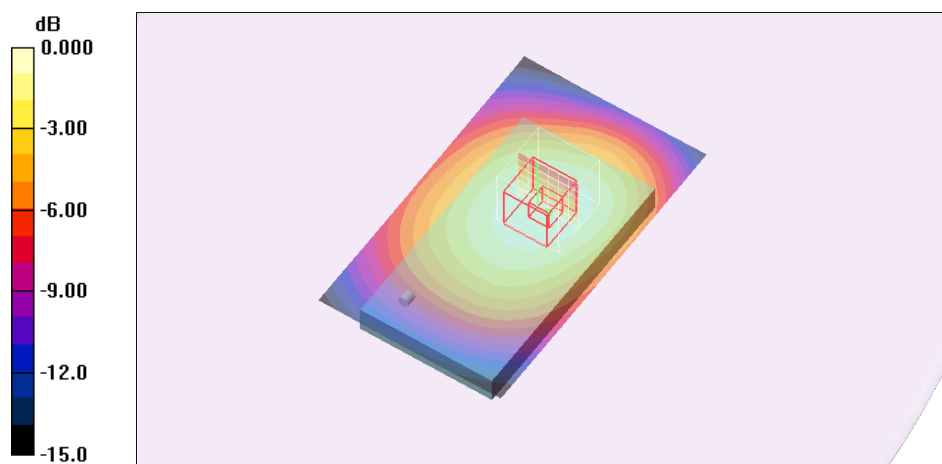
Reference Value = 9.64 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.676 W/kg

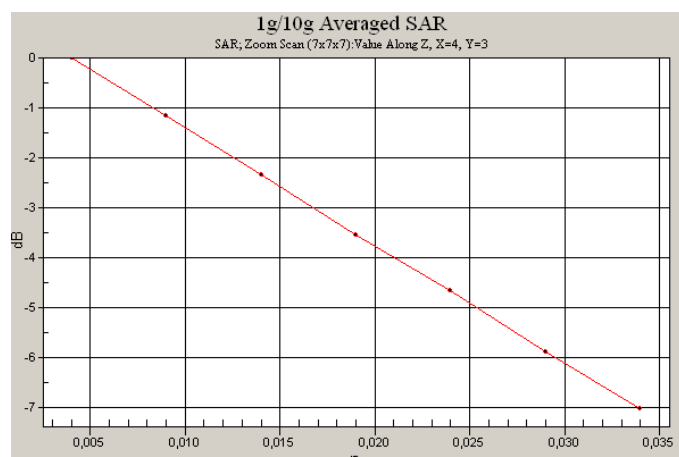
SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.381 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.545 mW/g



0 dB = 0.545mW/g



GPRS 850 MHz (2 slots) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 2 slots (Body)

Communication System: GPRS 850 (2 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:4
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.04 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

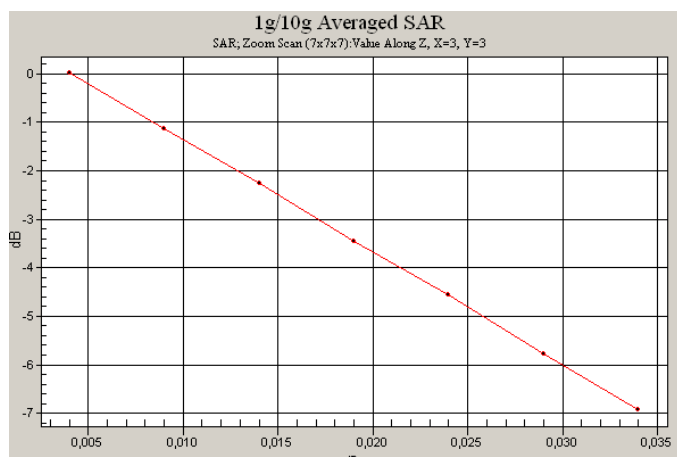
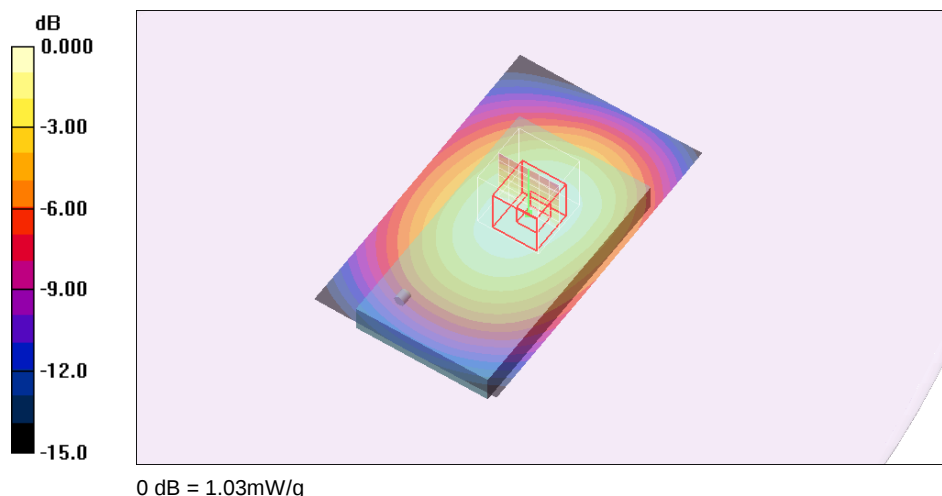
Reference Value = 14.4 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.720 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 mW/g



GPRS 850 MHz (2 slots) – Body – Back Face position – Lowest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 2 slots (Body)

Communication System: GPRS 850 (2 Timeslots); Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (extrapolated): $f = 824.2 \text{ MHz}$; $\sigma = 0.951 \text{ mho/m}$; $\epsilon_r = 53.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn669; Calibrated: 26/10/2009

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Low CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.02 mW/g

Back face, Low CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

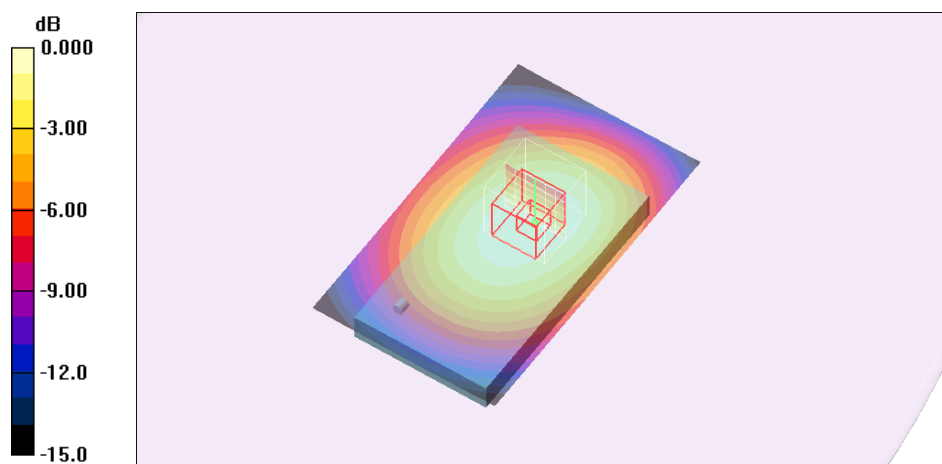
Reference Value = 14.2 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 1.23 W/kg

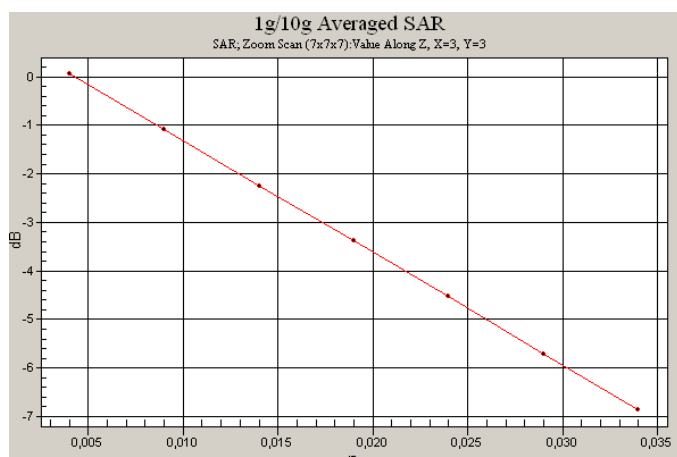
SAR(1 g) = 0.959 mW/g; SAR(10 g) = 0.713 mW/g

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g



GPRS 850 MHz (2 slots) – Body – Back Face position – Highest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 2 slots (Body)

Communication System: GPRS 850 (2 Timeslots); Frequency: 848.8 MHz; Duty Cycle: 1:4
Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.968$ mho/m; $\epsilon_r = 53$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, High CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.923 mW/g

Back face, High CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

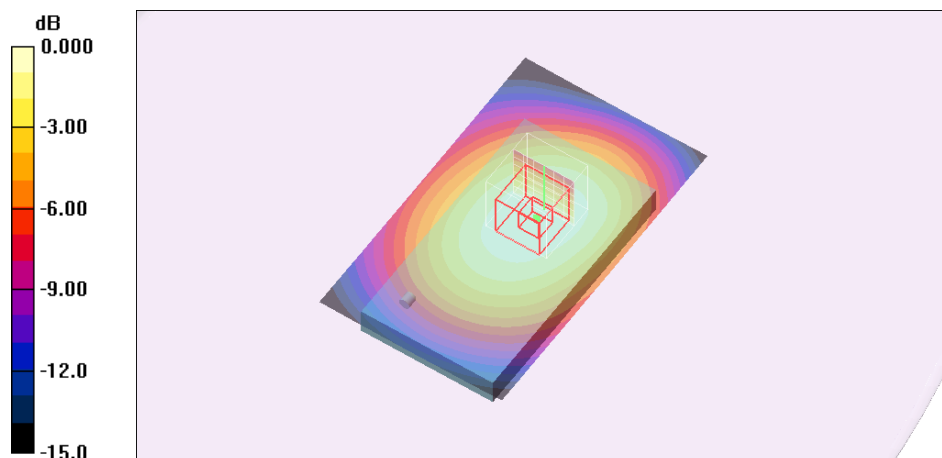
Reference Value = 13.7 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 1.14 W/kg

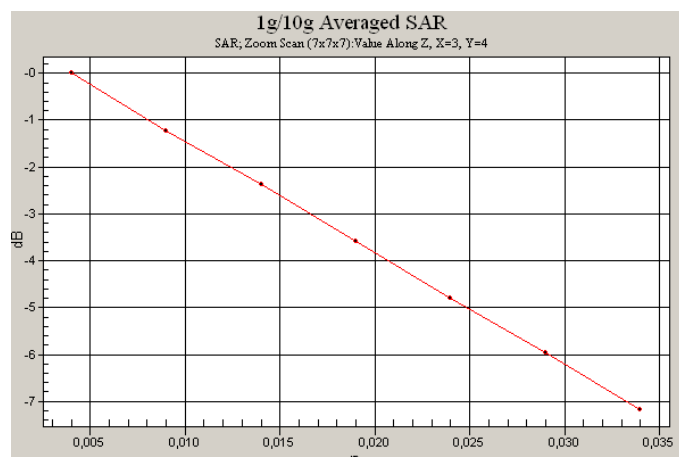
SAR(1 g) = 0.878 mW/g; SAR(10 g) = 0.652 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.922 mW/g



0 dB = 0.922mW/g



GPRS 850 MHz (2 slots) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 850 2 slots (Body)

Communication System: GPRS 850 (2 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:4
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.939 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

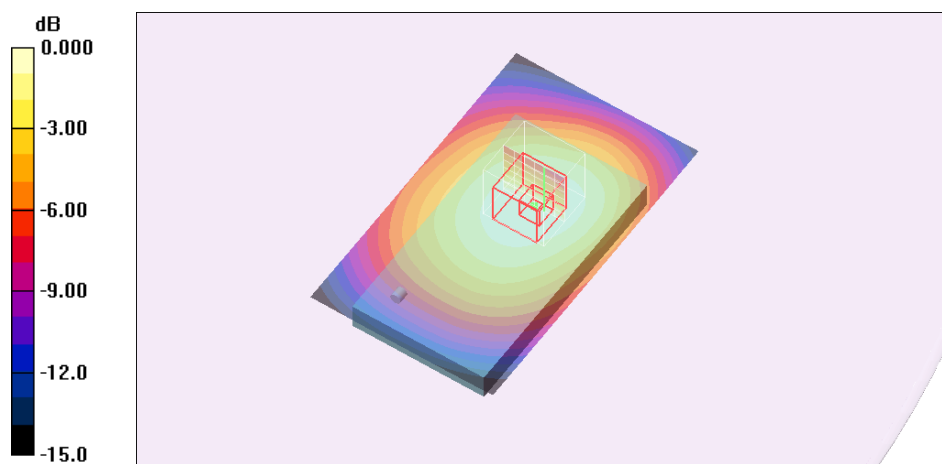
Reference Value = 12.6 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.16 W/kg

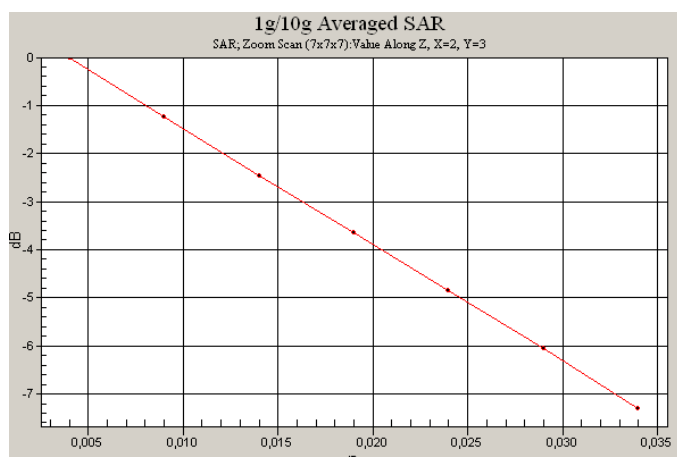
SAR(1 g) = 0.891 mW/g; SAR(10 g) = 0.658 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.937 mW/g



0 dB = 0.937mW/g



EGPRS 850 MHz (1 slot) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 850 1 slots (Body)

Communication System: EDGE850 (1 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.216 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

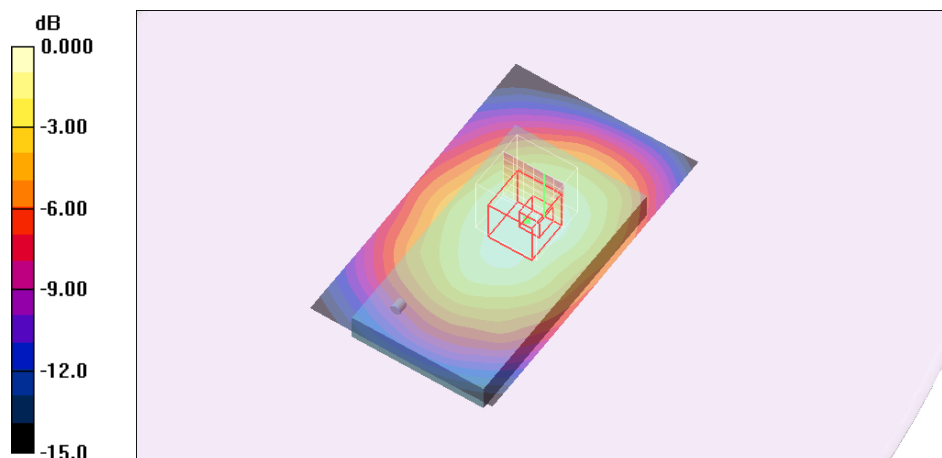
Reference Value = 6.43 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.280 W/kg

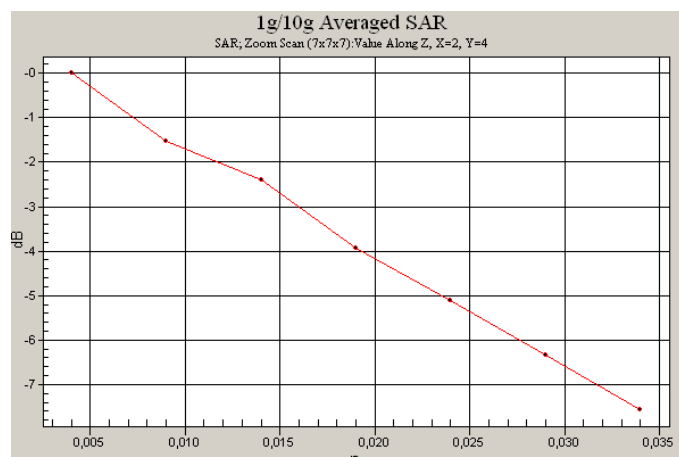
SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.148 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.215 mW/g



0 dB = 0.215mW/g



EGPRS 850 MHz (1 slot) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 850 1 slots (Body)

Communication System: EDGE850 (1 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:8
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.147 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

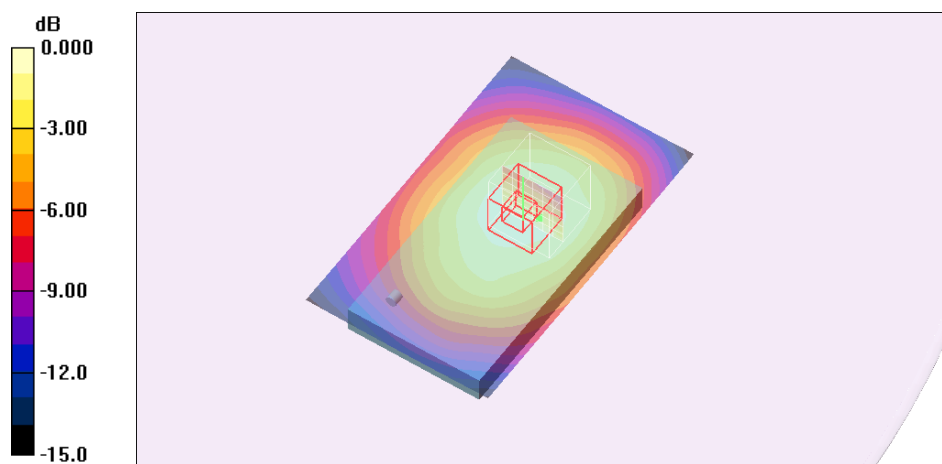
Reference Value = 5.79 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.211 W/kg

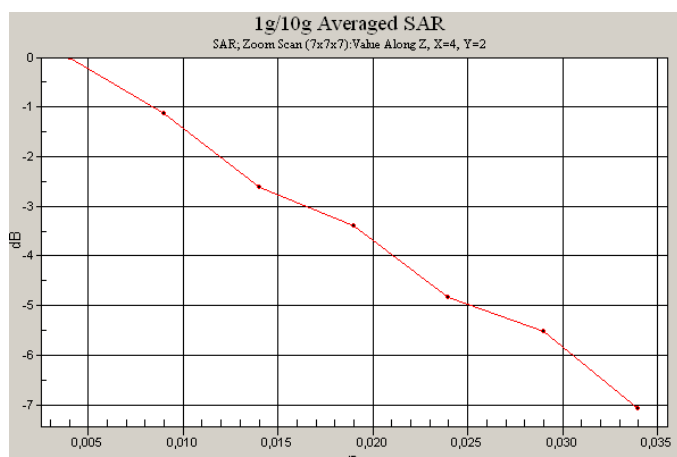
SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.108 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.160 mW/g



0 dB = 0.160mW/g



EGPRS 850 MHz (2 slots) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 850 2 slots (Body)

Communication System: EDGE850 (2 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:4
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.407 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

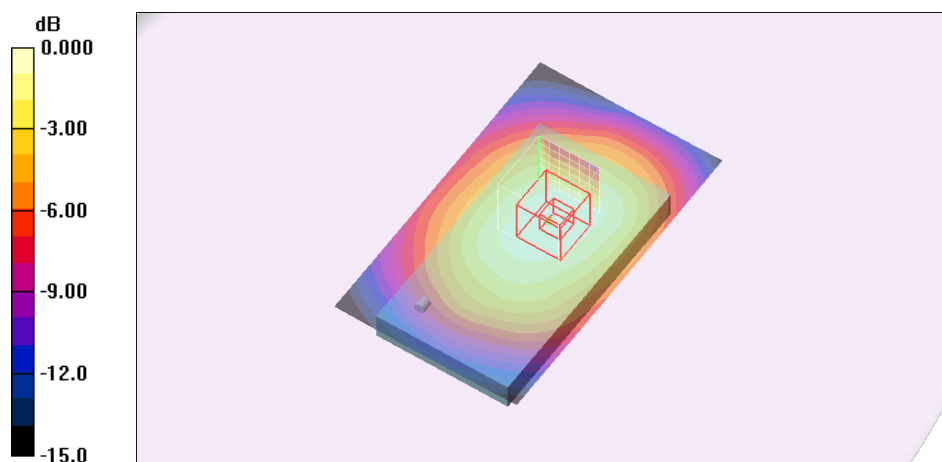
Reference Value = 8.67 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 0.505 W/kg

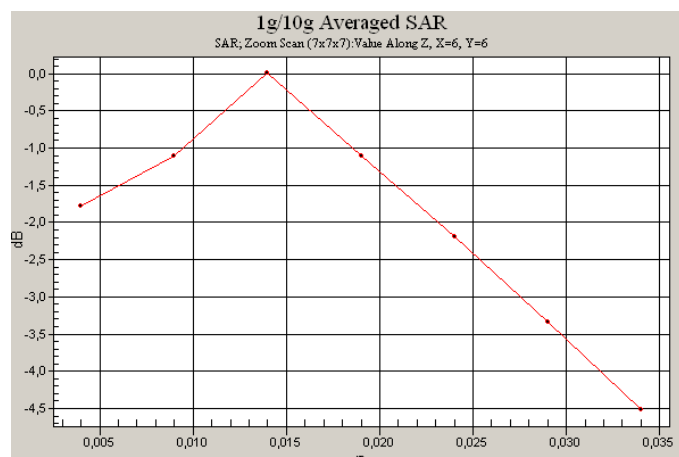
SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.272 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.406 mW/g



0 dB = 0.406mW/g



EGPRS 850 MHz (2 slots) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 850 2 slots (Body)

Communication System: EDGE850 (2 Timeslots); Frequency: 836.6 MHz; Duty Cycle: 1:4
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.311 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

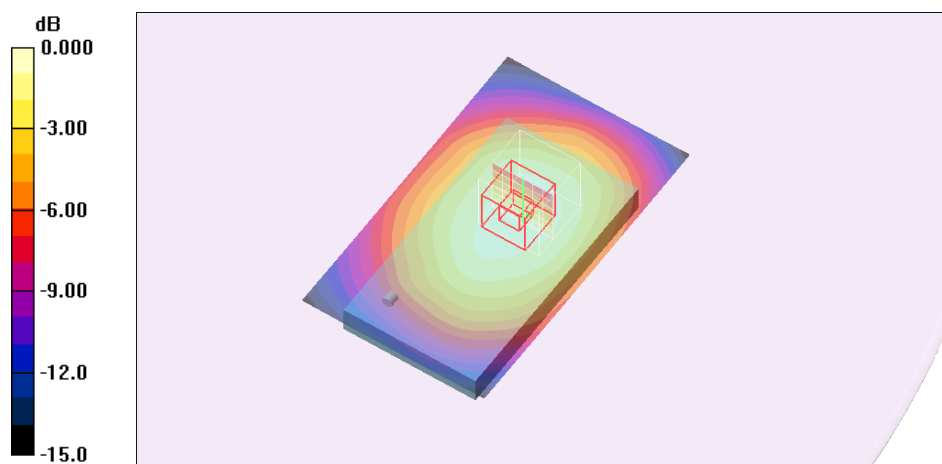
Reference Value = 8.38 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 0.409 W/kg

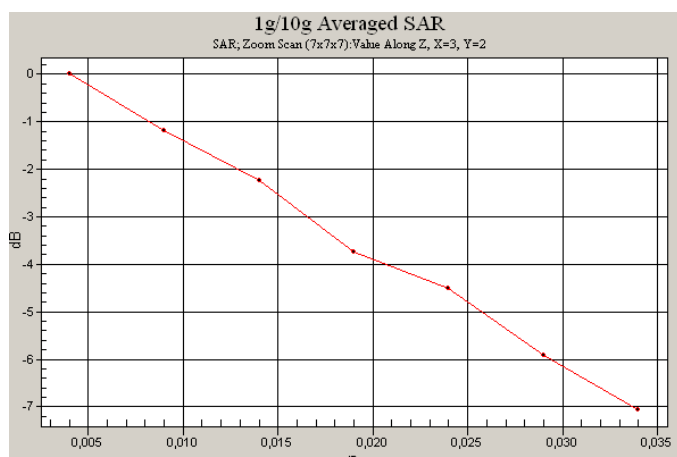
SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.227 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.330 mW/g



0 dB = 0.330mW/g



WCDMA Band V – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Right-Hand Side)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.718 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

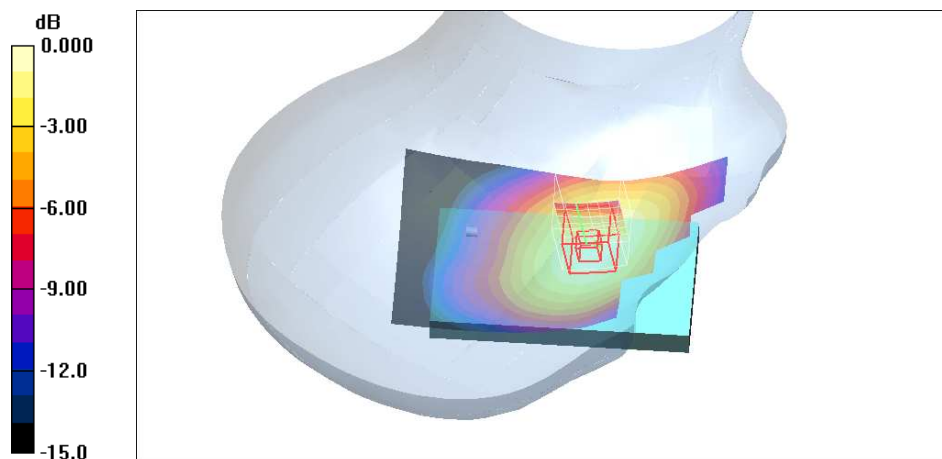
Reference Value = 8.40 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.965 W/kg

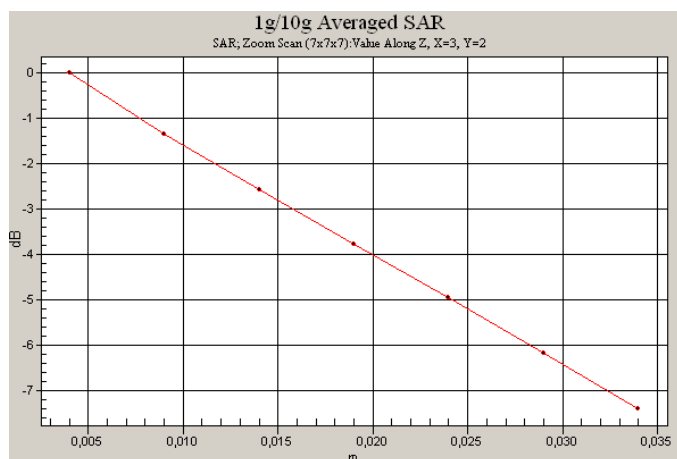
SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.499 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.753 mW/g



0 dB = 0.753mW/g



WCDMA Band V – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Right-Hand Side)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn669; Calibrated: 21/08/2007

- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.391 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

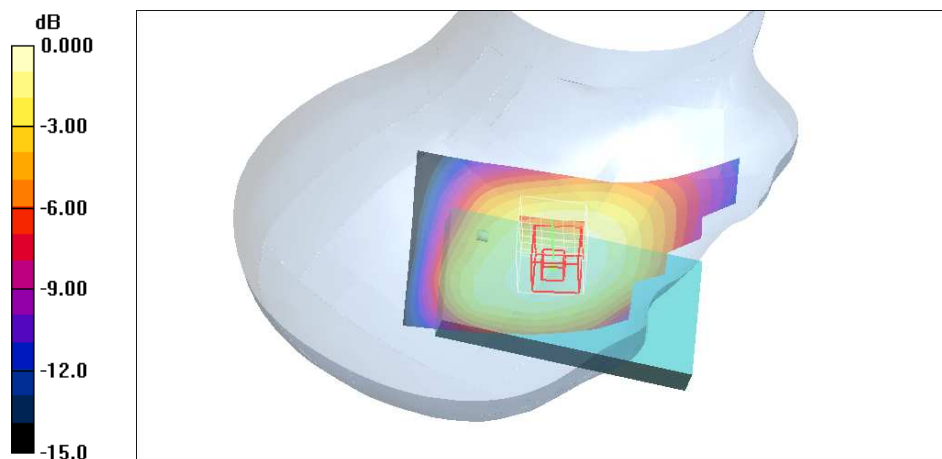
Reference Value = 14.6 V/m; Power Drift = -0.100 dB

Peak SAR (extrapolated) = 0.450 W/kg

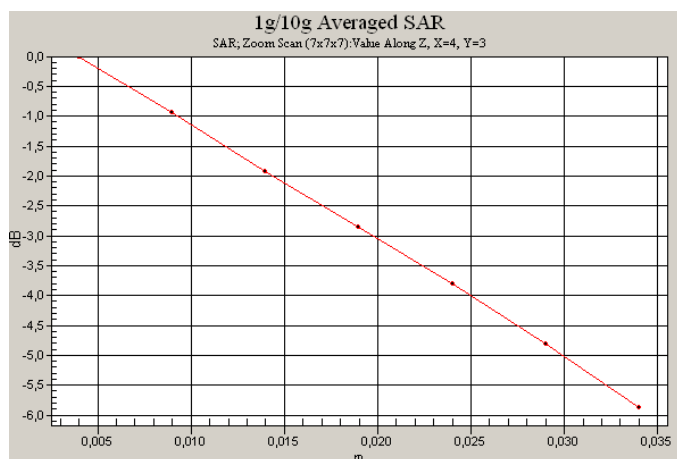
SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.284 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.379 mW/g



0 dB = 0.379mW/g



WCDMA Band V – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Left-Hand Side)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 21/08/2007
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.690 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

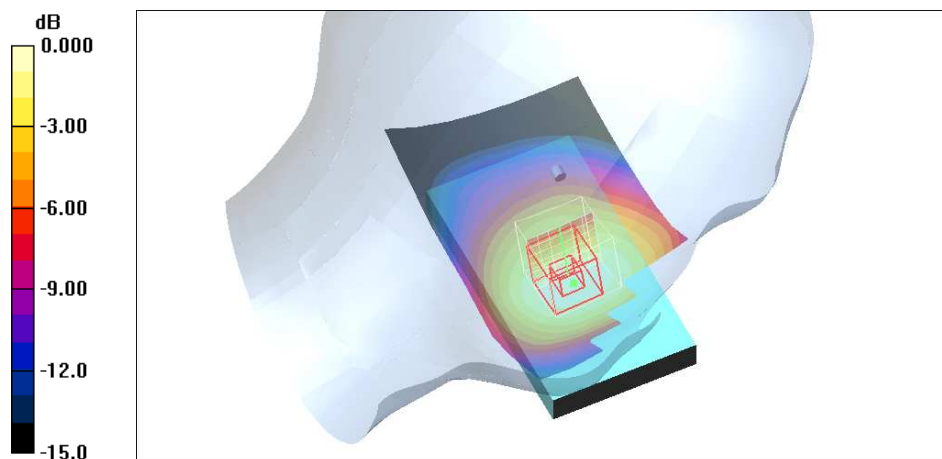
Reference Value = 8.46 V/m; Power Drift = 0.178 dB

Peak SAR (extrapolated) = 0.849 W/kg

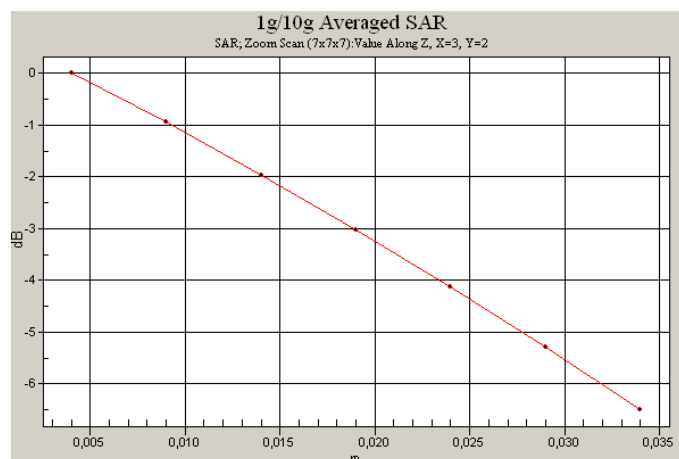
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.503 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.714 mW/g



0 dB = 0.714mW/g



WCDMA Band V – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Left-Hand Side)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.873$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.83, 5.83, 5.83); Calibrated: 27/10/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn669; Calibrated: 21/08/2007

- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

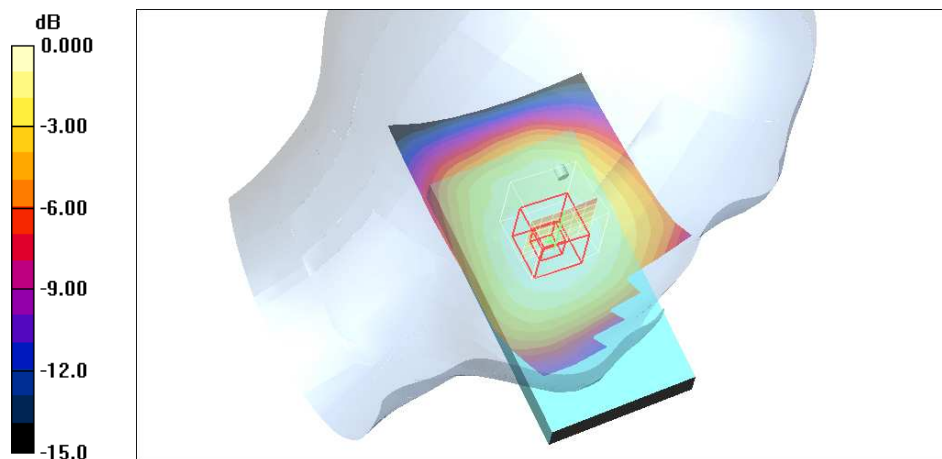
Reference Value = 15.1 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 0.397 W/kg

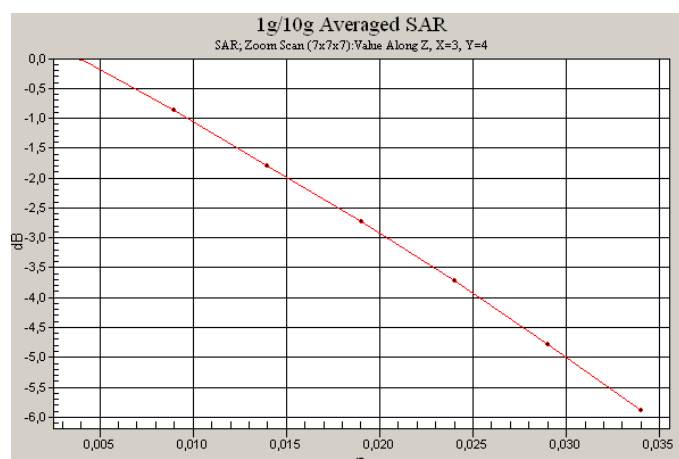
SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.253 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.337 mW/g



0 dB = 0.337mW/g



WCDMA Band V – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Body)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 53.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.679 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

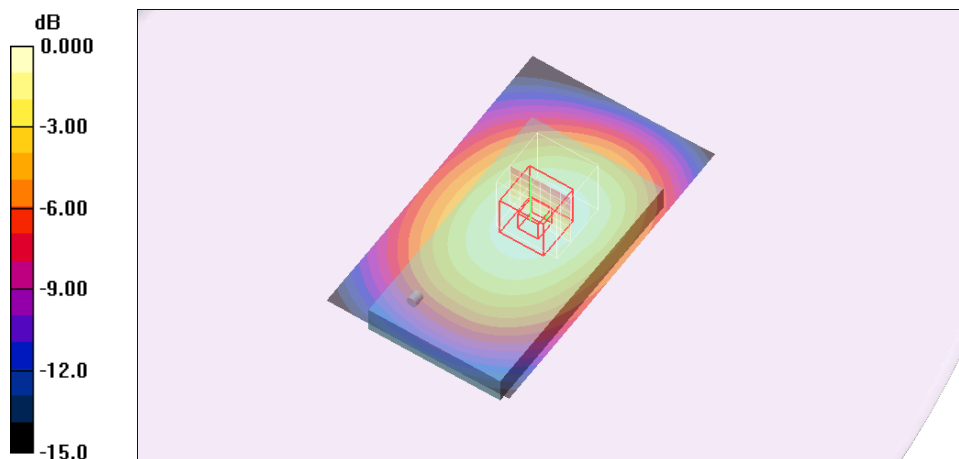
Reference Value = 12.5 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 0.856 W/kg

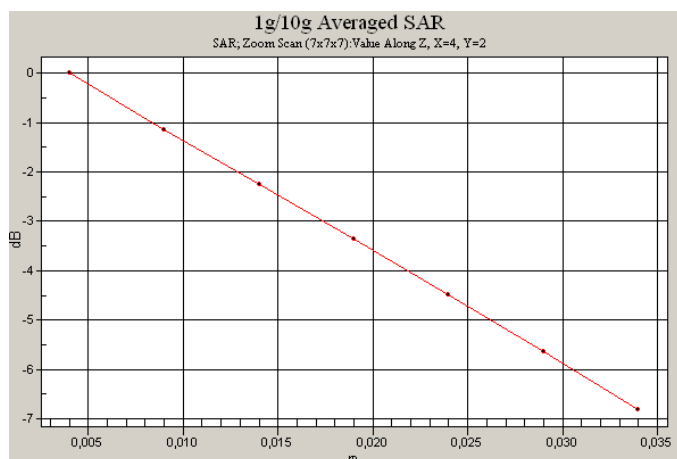
SAR(1 g) = 0.657 mW/g; SAR(10 g) = 0.489 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.697 mW/g



0 dB = 0.697mW/g



WCDMA Band V – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND V (Body)

Communication System: W-CDMA 850 (Band V); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(5.71, 5.71, 5.71); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.572 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

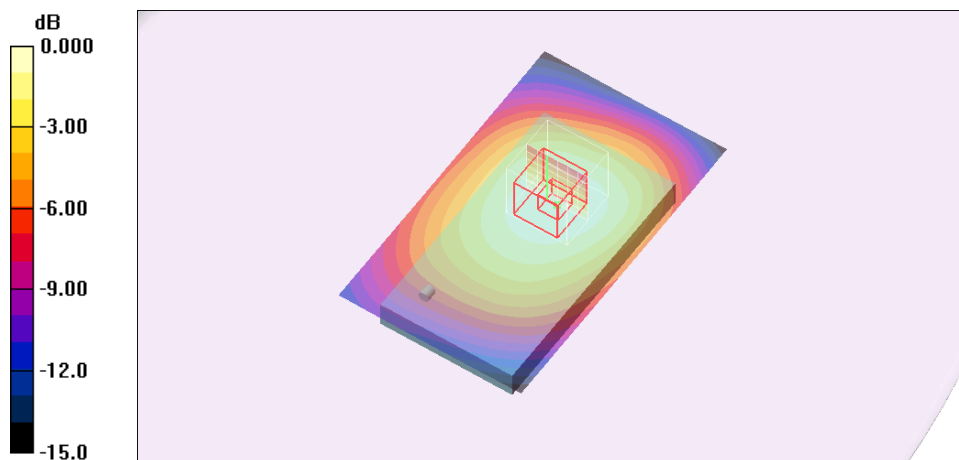
Reference Value = 10.9 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.701 W/kg

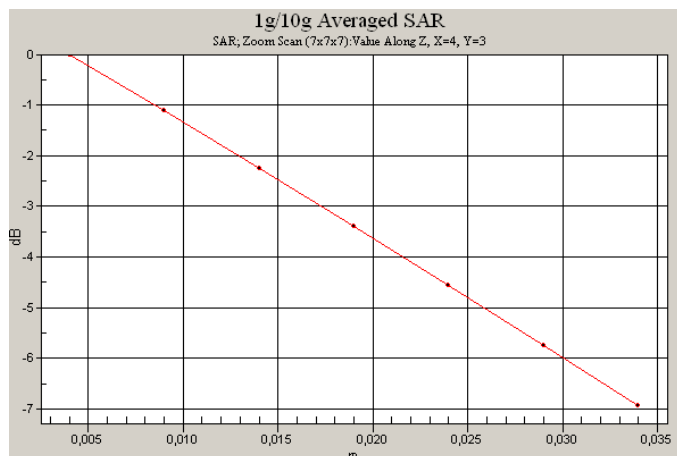
SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.398 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.565 mW/g



0 dB = 0.565mW/g



GSM 1900 MHz – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Right-Hand Side)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.367 mW/g

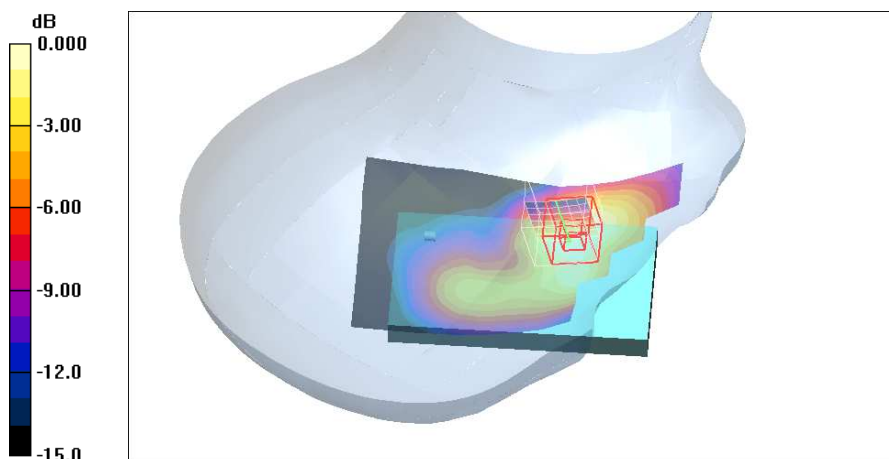
Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.70 V/m; Power Drift = 0.065 dB

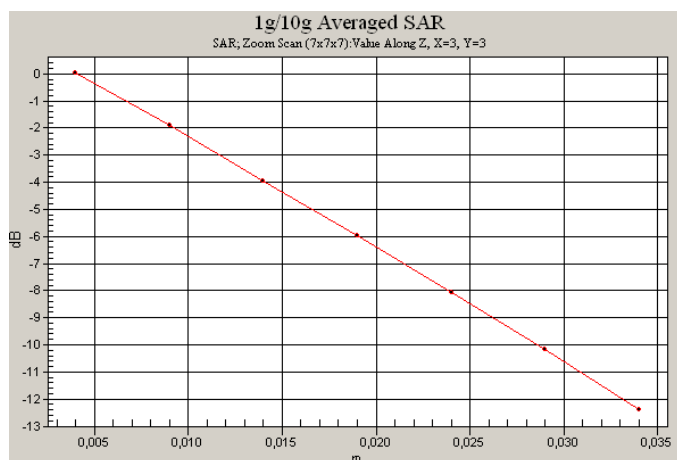
Peak SAR (extrapolated) = 0.522 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.202 mW/g

Maximum value of SAR (measured) = 0.363 mW/g



0 dB = 0.363mW/g



GSM 1900 MHz – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Right-Hand Side)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.164 mW/g

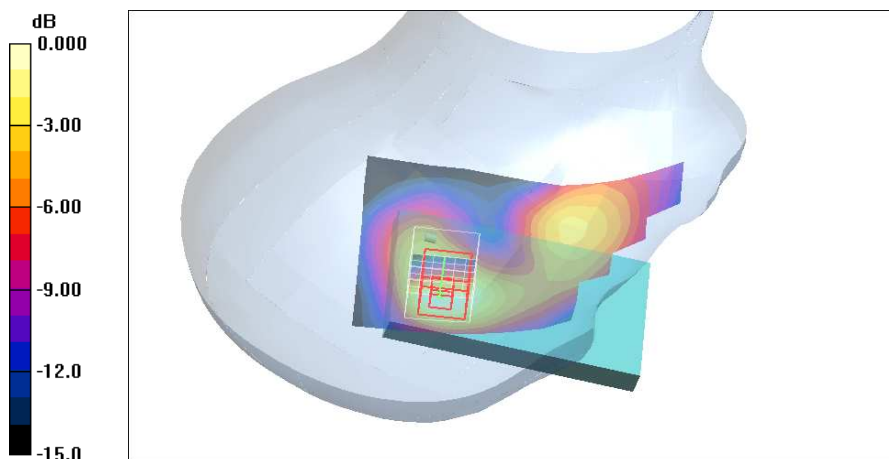
Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.42 V/m; Power Drift = -0.070 dB

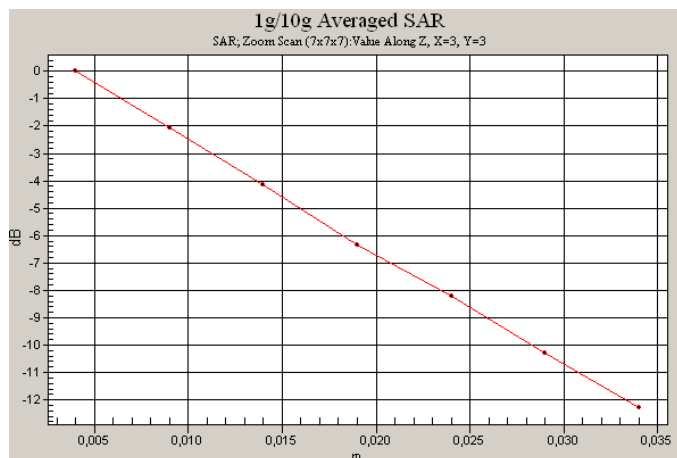
Peak SAR (extrapolated) = 0.221 W/kg

SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.080 mW/g

Maximum value of SAR (measured) = 0.152 mW/g



0 dB = 0.152mW/g



GSM 1900 MHz – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Left-Hand Side)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.373 mW/g

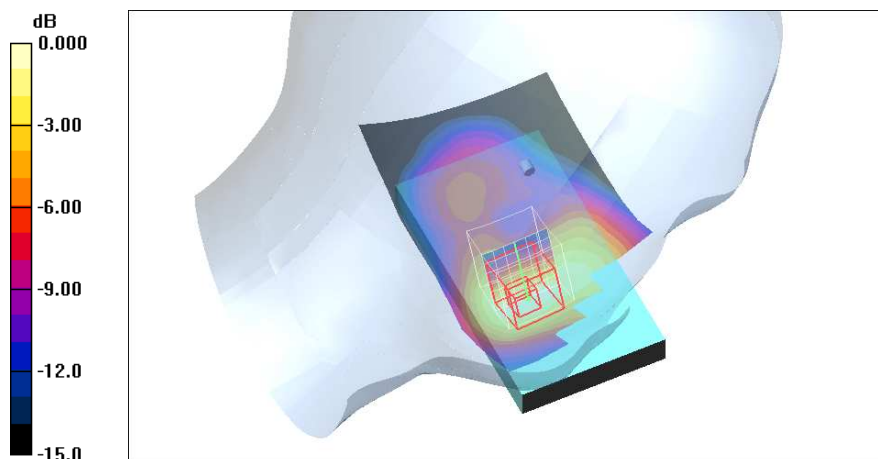
Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.80 V/m; Power Drift = -0.030 dB

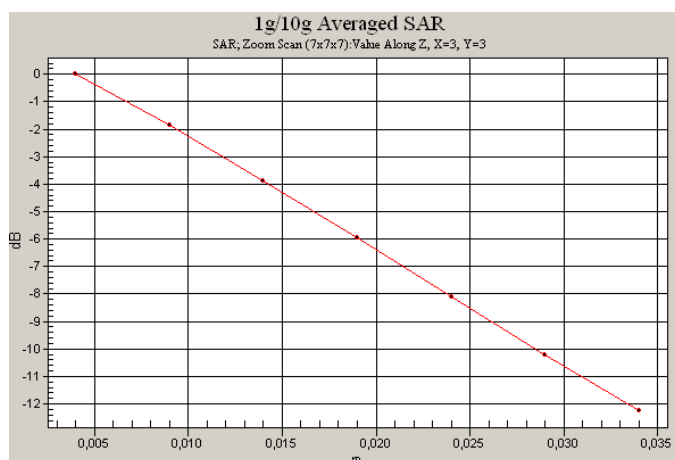
Peak SAR (extrapolated) = 0.529 W/kg

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.379 mW/g



0 dB = 0.379mW/g



GSM 1900 MHz – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Left-Hand Side)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.112 mW/g

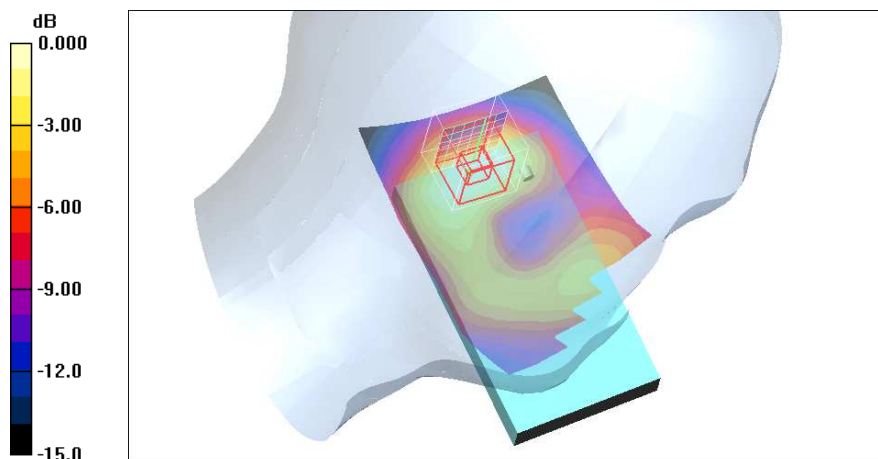
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.98 V/m; Power Drift = -0.062 dB

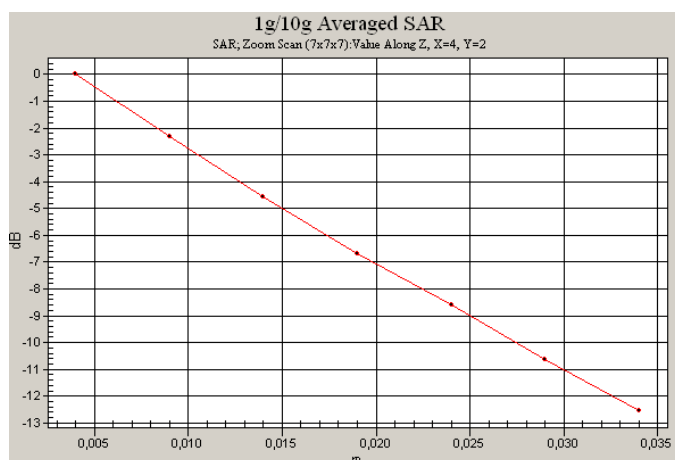
Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.108 mW/g



0 dB = 0.108mW/g



GSM 1900 MHz – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Body)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.364 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.96 V/m; Power Drift = -0.021 dB

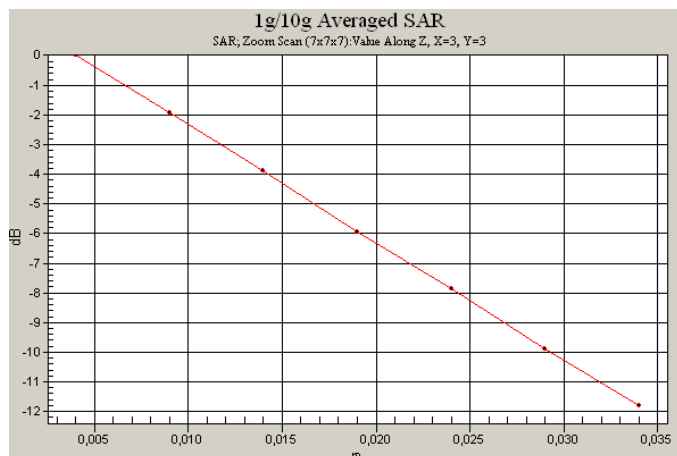
Peak SAR (extrapolated) = 0.532 W/kg

SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.206 mW/g

Maximum value of SAR (measured) = 0.375 mW/g



0 dB = 0.375mW/g



GSM 1900 MHz – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GSM 1900 (Body)

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

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

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

Reference Value = 4.94 V/m; Power Drift = 0.094 dB

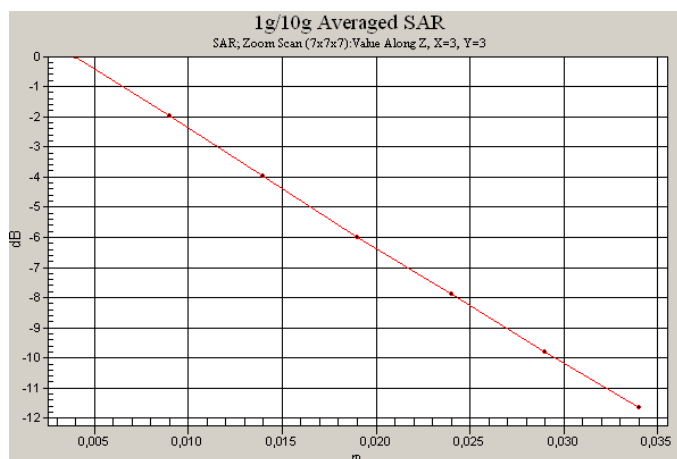
Peak SAR (extrapolated) = 0.568 W/kg

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.218 mW/g

Maximum value of SAR (measured) = 0.397 mW/g



0 dB = 0.397mW/g



GPRS 1900 MHz (1 slot) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 1900 1slot (Body)

Communication System: GPRS 1900 (1 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.330 mW/g

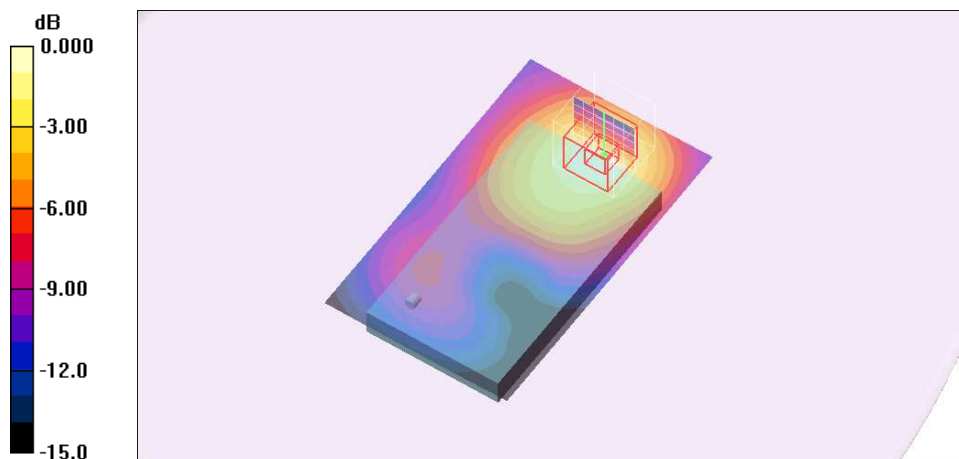
Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.03 V/m; Power Drift = 0.063 dB

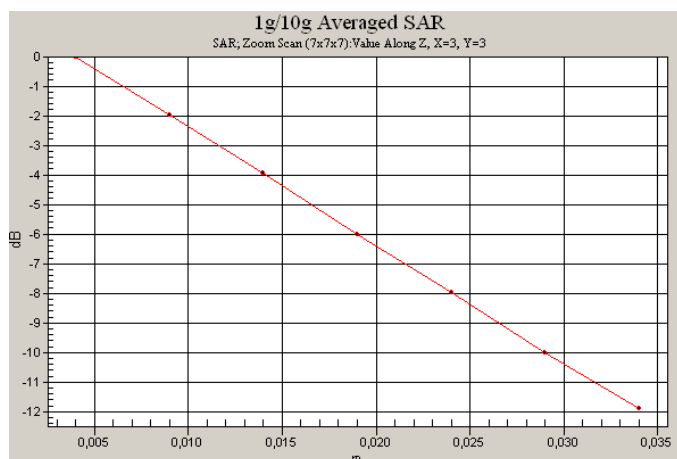
Peak SAR (extrapolated) = 0.484 W/kg

SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.338 mW/g



0 dB = 0.338mW/g



GPRS 1900 MHz (1 slot) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 1900 1slot (Body)

Communication System: GPRS 1900 (1 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.304 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

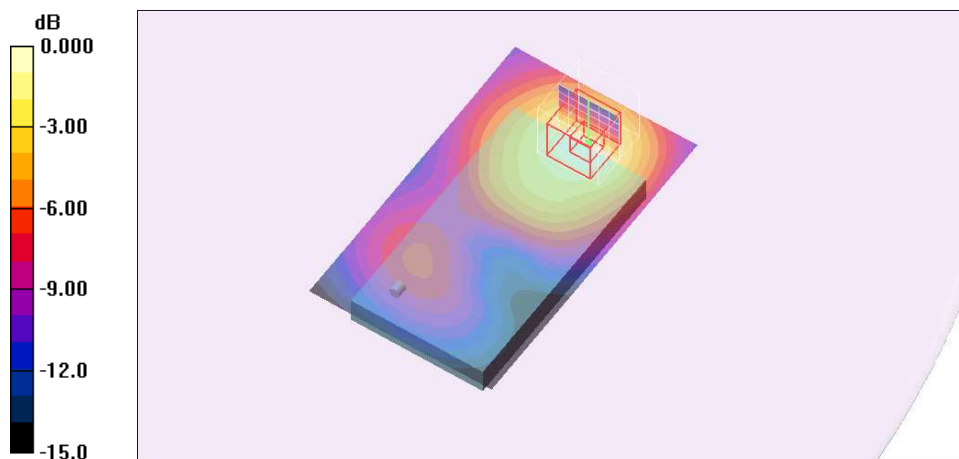
dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.43 V/m; Power Drift = 0.002 dB

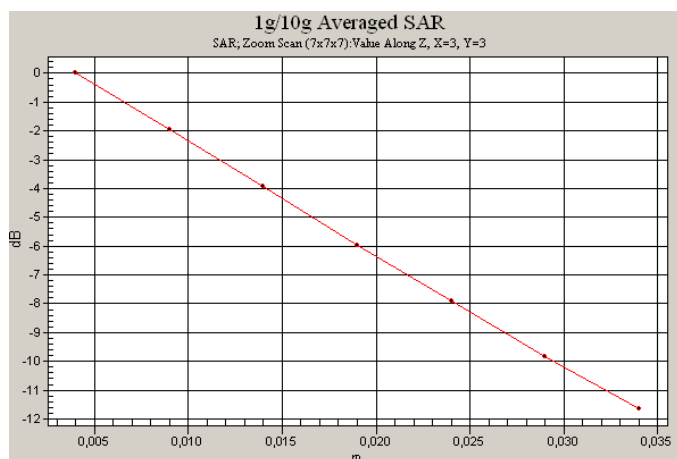
Peak SAR (extrapolated) = 0.445 W/kg

SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.172 mW/g

Maximum value of SAR (measured) = 0.312 mW/g



0 dB = 0.312mW/g



GPRS 1900 MHz (2 slots) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 1900 2slot (Body)

Communication System: GPRS 1900 (2 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.486 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.28 V/m; Power Drift = 0.068 dB

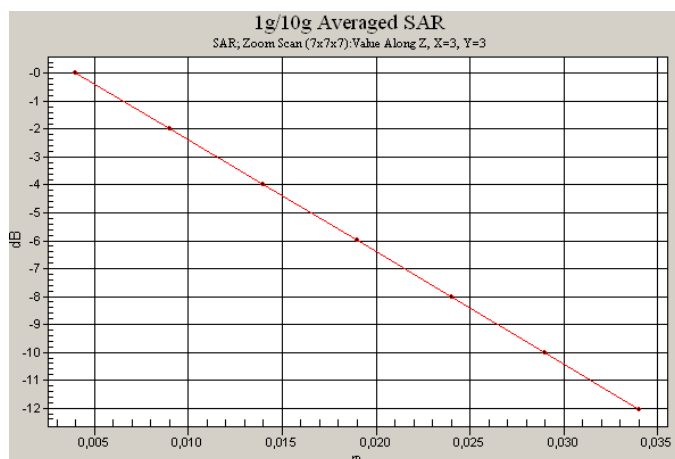
Peak SAR (extrapolated) = 0.711 W/kg

SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.272 mW/g

Maximum value of SAR (measured) = 0.497 mW/g



0 dB = 0.497mW/g



GPRS 1900 MHz (2 slots) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: GPRS 1900 2slot (Body)

Communication System: GPRS 1900 (2 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.495 mW/g

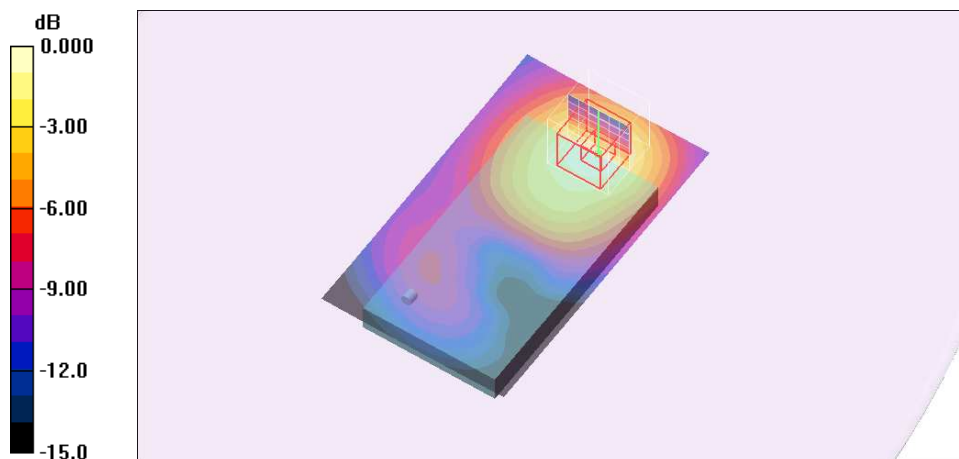
Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.33 V/m; Power Drift = 0.094 dB

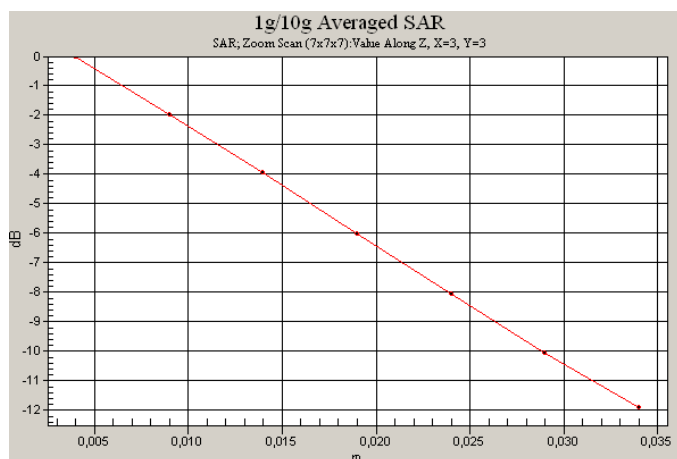
Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.508 mW/g



0 dB = 0.508mW/g



EGPRS 1900 MHz (1 slot) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 1900 1slot (Body)

Communication System: EDGE 1900 (1 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.198 mW/g

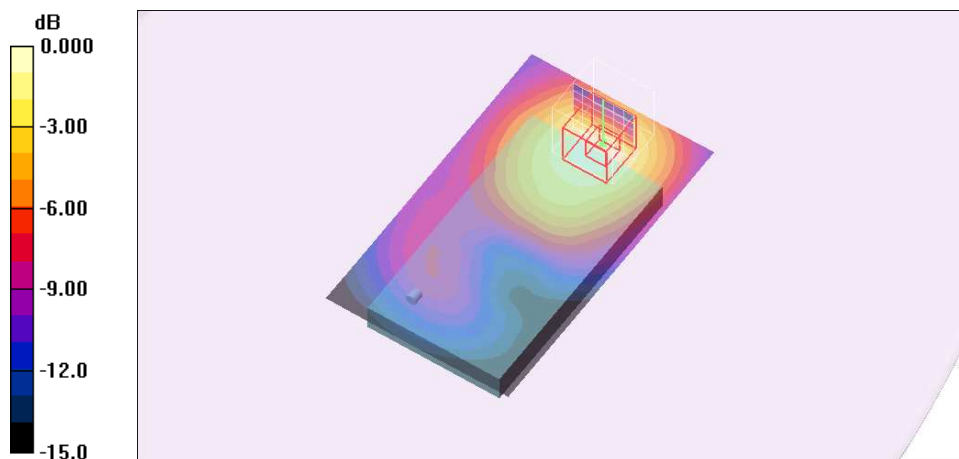
Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.73 V/m; Power Drift = 0.083 dB

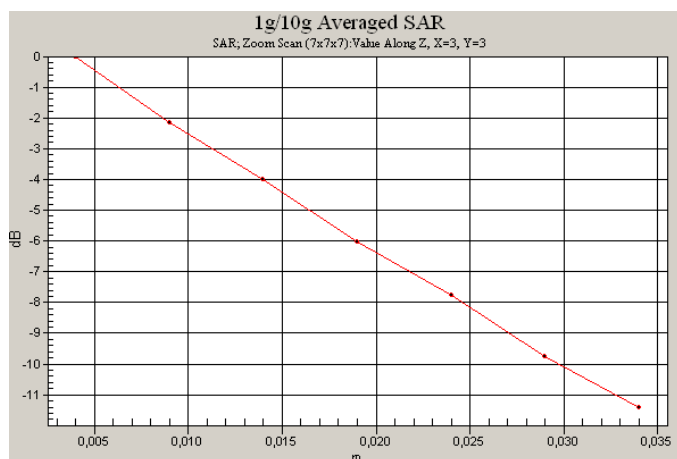
Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.185 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.204 mW/g



0 dB = 0.204mW/g



EGPRS 1900 MHz (2 slot) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 1900 2slot (Body)

Communication System: EDGE 1900 (2 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.417 mW/g

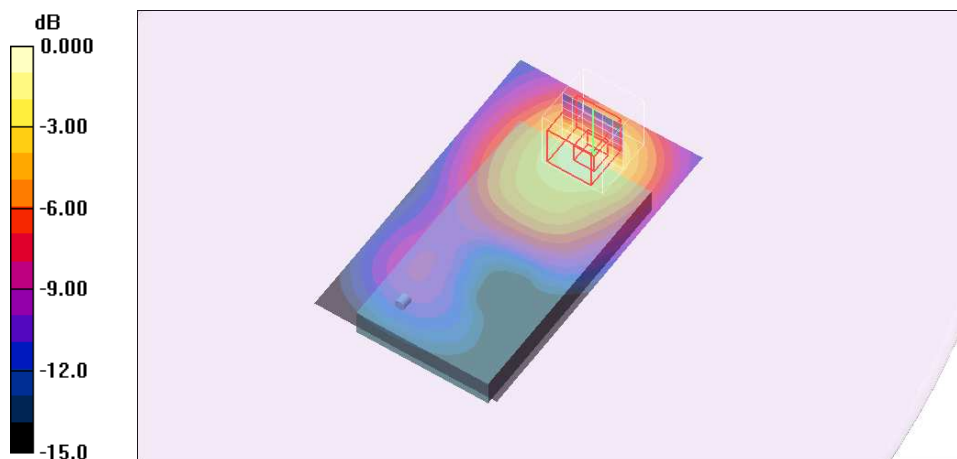
Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.80 V/m; Power Drift = 0.043 dB

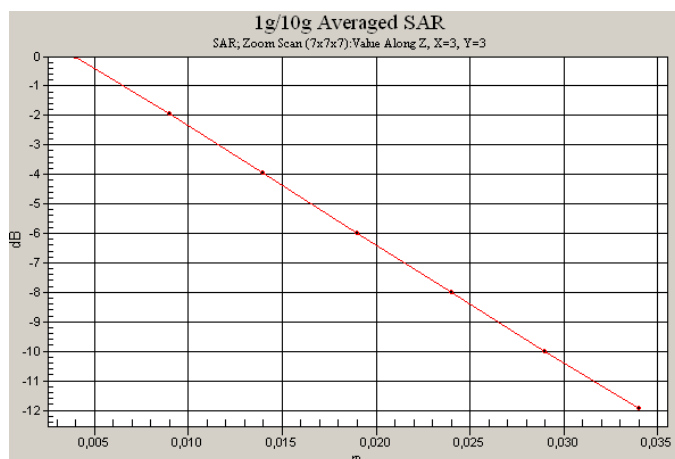
Peak SAR (extrapolated) = 0.774 W/kg

SAR(1 g) = 0.482 mW/g; SAR(10 g) = 0.282 mW/g

Maximum value of SAR (measured) = 0.527 mW/g



0 dB = 0.527mW/g



EGPRS 1900 MHz (2 slot) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: EDGE 1900 2slot (Body)

Communication System: EDGE 1900 (2 Timeslots); Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.432 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

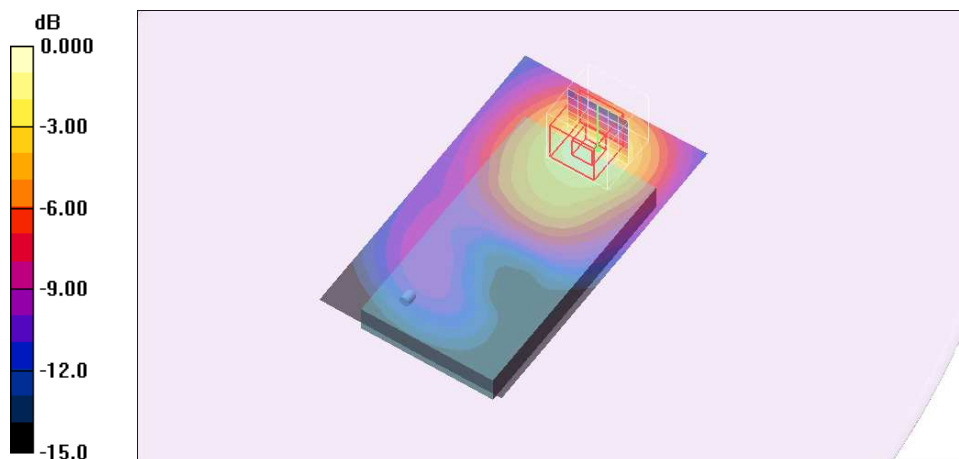
dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.92 V/m; Power Drift = 0.082 dB

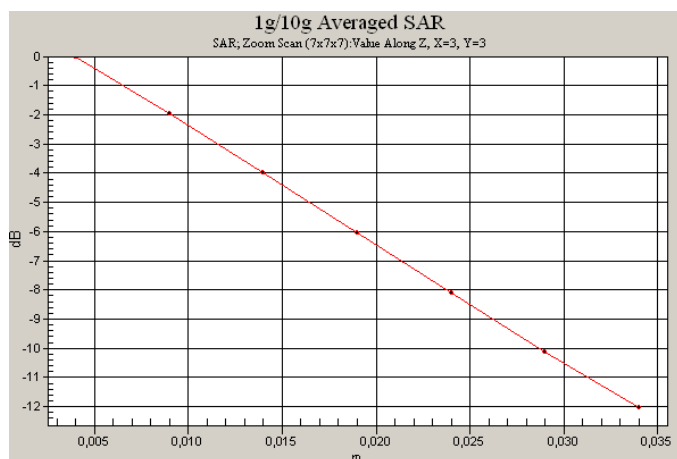
Peak SAR (extrapolated) = 0.798 W/kg

SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.286 mW/g

Maximum value of SAR (measured) = 0.548 mW/g



0 dB = 0.548mW/g



WCDMA Band II – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Right-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.929 mW/g

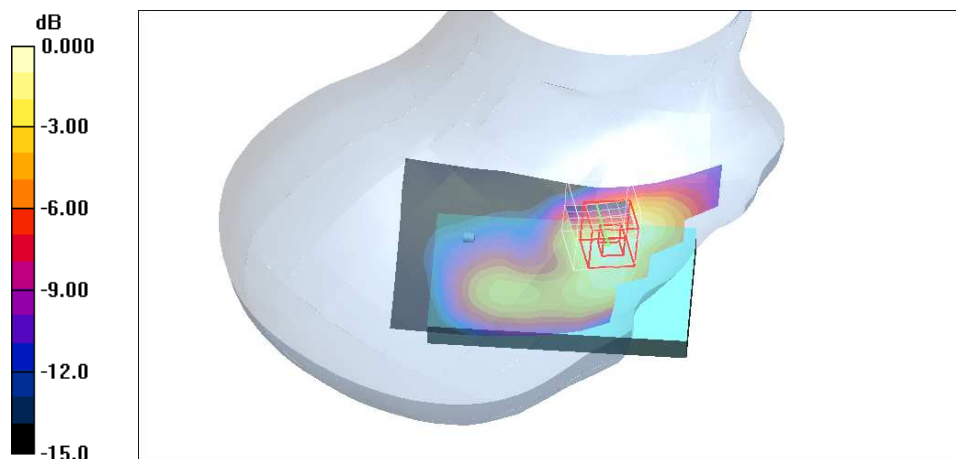
Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.25 V/m; Power Drift = -0.246 dB

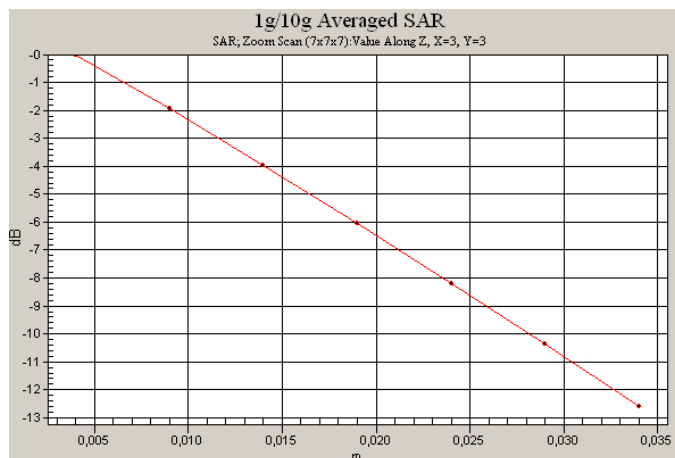
Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.820 mW/g; SAR(10 g) = 0.491 mW/g

Maximum value of SAR (measured) = 0.888 mW/g



0 dB = 0.888mW/g



WCDMA Band II – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Right-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.348 mW/g

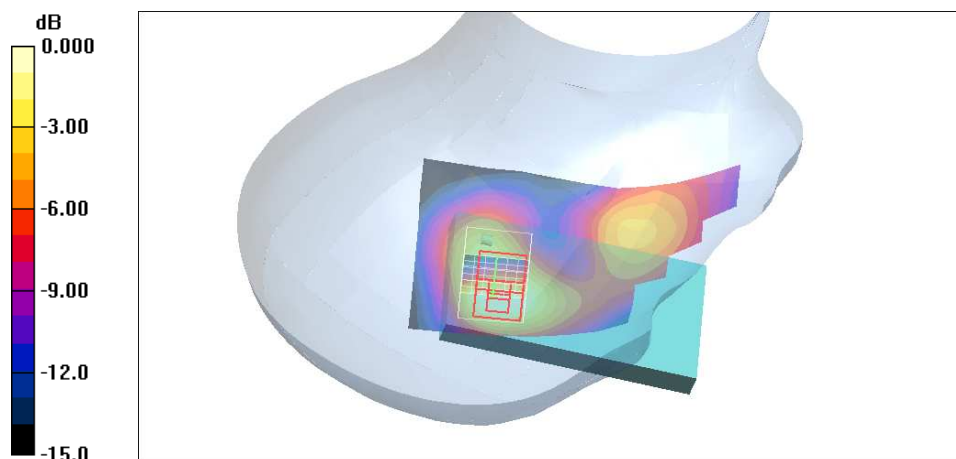
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.6 V/m; Power Drift = -0.149 dB

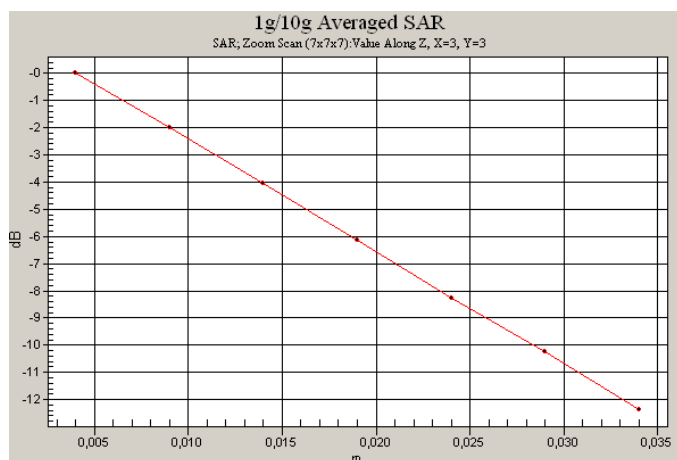
Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.316 mW/g



0 dB = 0.316mW/g



WCDMA Band II – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Left-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 39.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

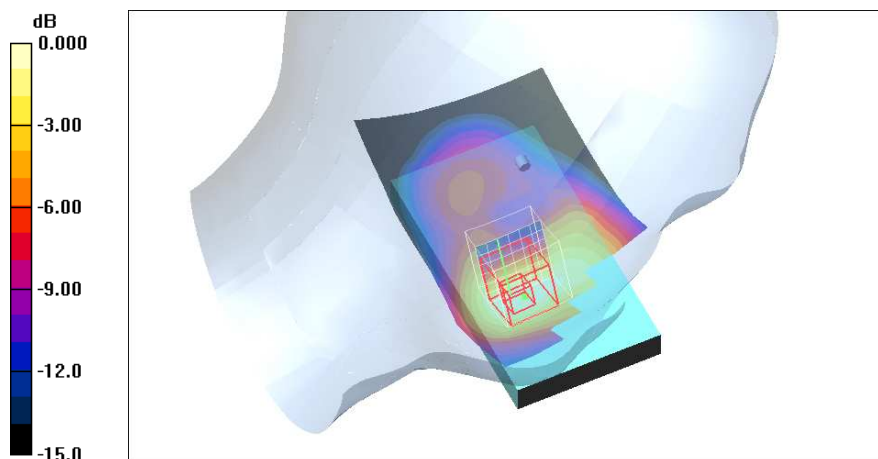
Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.1 V/m ; Power Drift = 0.112 dB

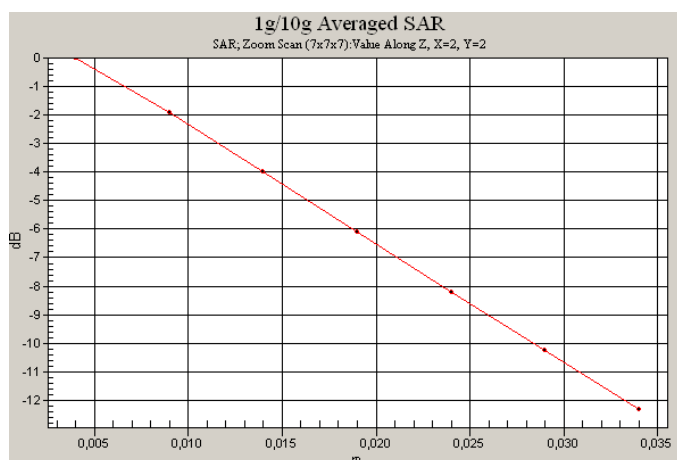
Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.845 mW/g ; SAR(10 g) = 0.502 mW/g

Maximum value of SAR (measured) = 0.914 mW/g



0 dB = 0.914 mW/g



WCDMA Band II – Left hand side – Cheek position – Lowest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Left-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1852.4 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40.1$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - Low/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.984 mW/g

Worst position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

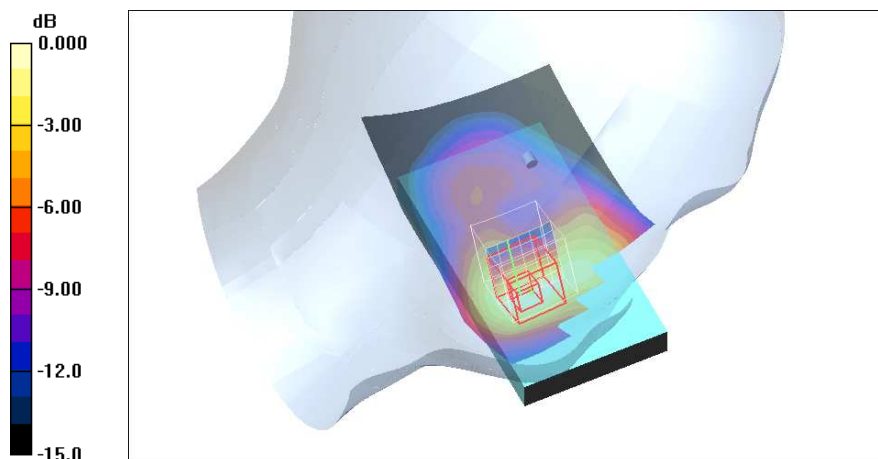
Reference Value = 9.68 V/m ; Power Drift = 0.204 dB

Peak SAR (extrapolated) = 1.38 W/kg

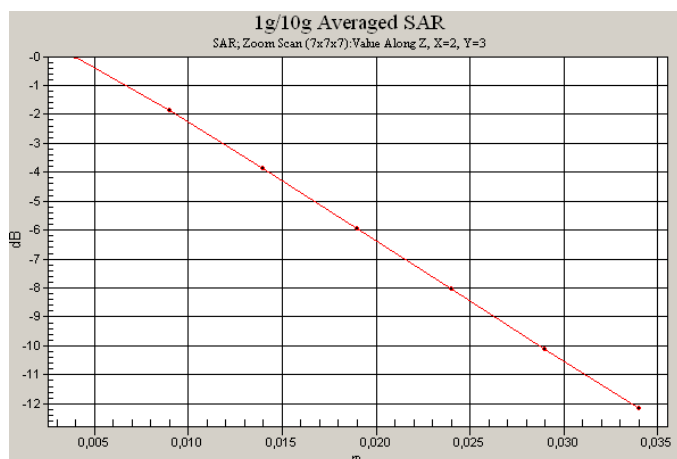
SAR(1 g) = 0.914 mW/g ; SAR(10 g) = 0.546 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.995 mW/g



0 dB = 0.995 mW/g



WCDMA Band II – Left hand side – Cheek position – Highest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Left-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.6$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.834 mW/g

Worst position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

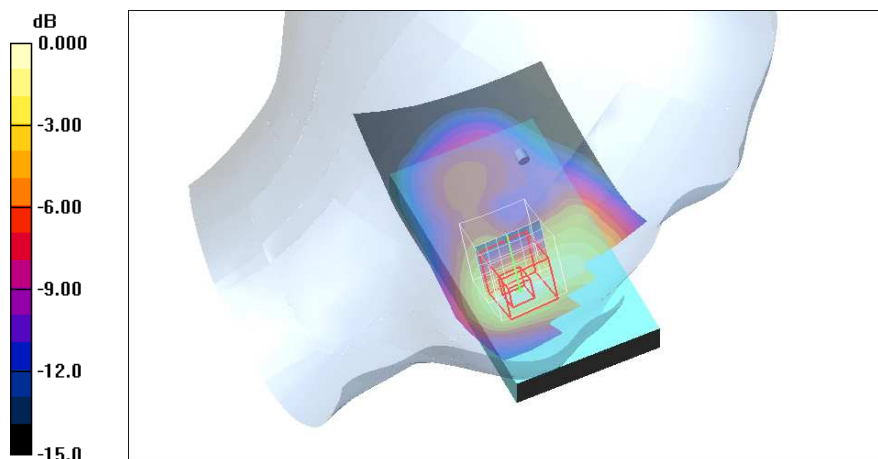
Reference Value = 10.2 V/m; Power Drift = 0.078 dB

Peak SAR (extrapolated) = 1.22 W/kg

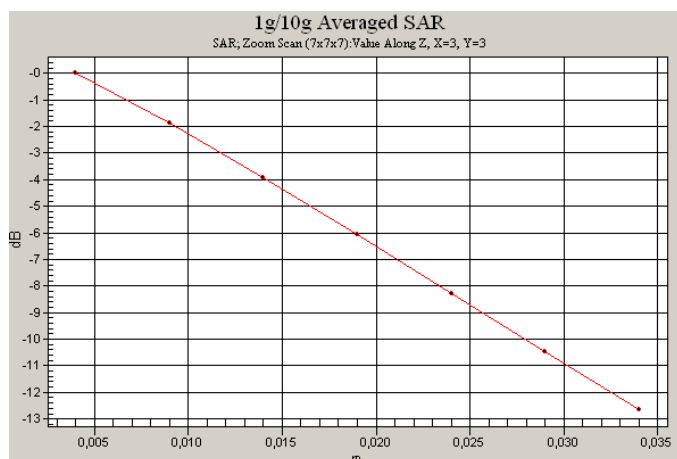
SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.454 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.855 mW/g



0 dB = 0.855mW/g



WCDMA Band II – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0000162

Program Name: UMTS BAND II (Left-Hand Side)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 39.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.81, 4.81, 4.81); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.266 mW/g

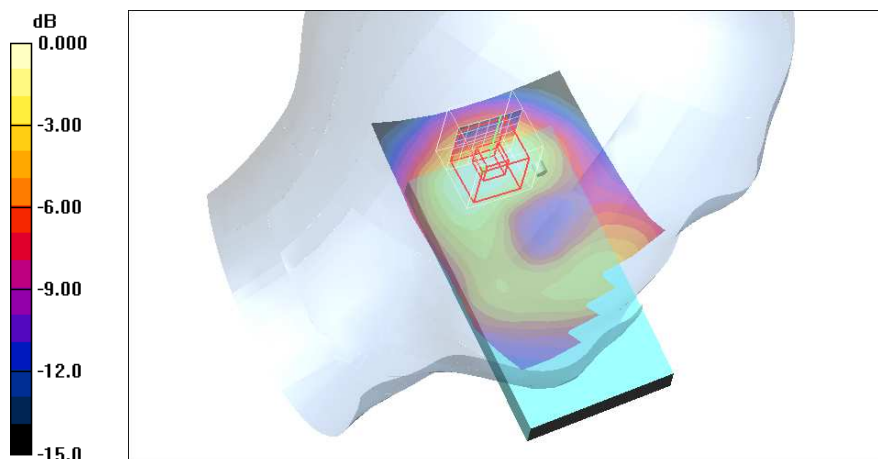
Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.4 V/m; Power Drift = -0.146 dB

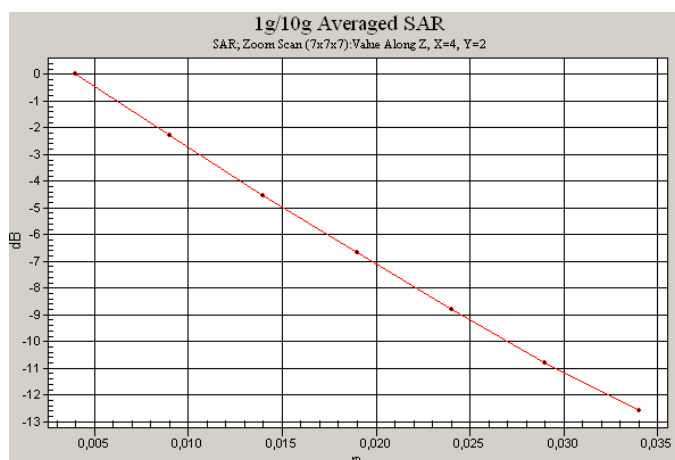
Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.131 mW/g

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



0 dB = 0.246mW/g



WCDMA Band II – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Body)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm 2/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.749 mW/g

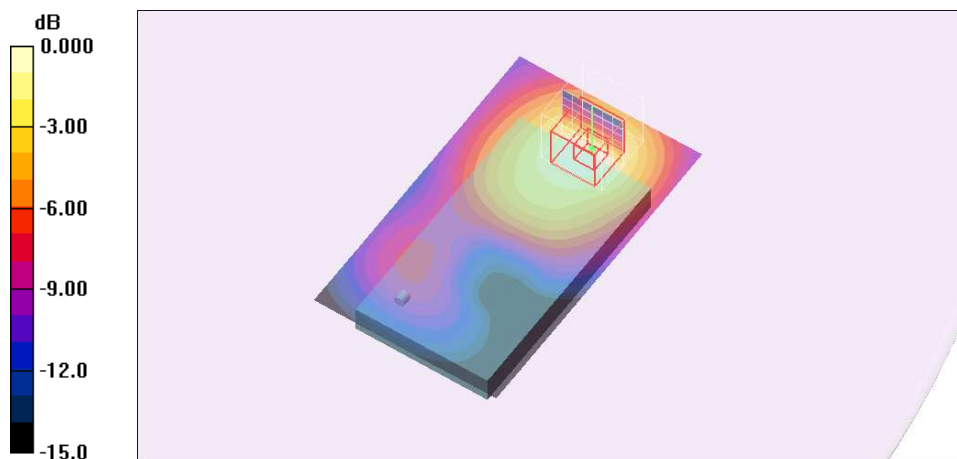
Back face, Middle CH, d = 15mm 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.22 V/m; Power Drift = -0.018 dB

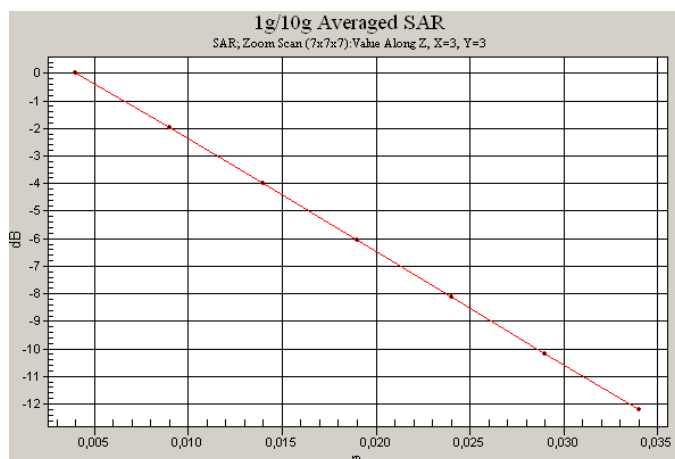
Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.699 mW/g; SAR(10 g) = 0.420 mW/g

Maximum value of SAR (measured) = 0.761 mW/g



0 dB = 0.761mW/g



WCDMA Band II – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001940

Program Name: UMTS BAND II (Body)

Communication System: W-CDMA 1800 (Band II); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 52.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.43, 4.43, 4.43); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.770 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

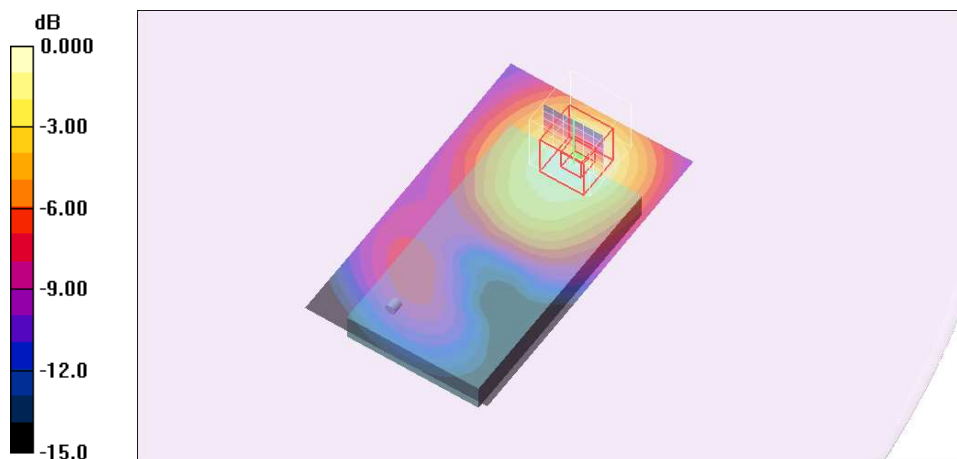
dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.91 V/m; Power Drift = 0.006 dB

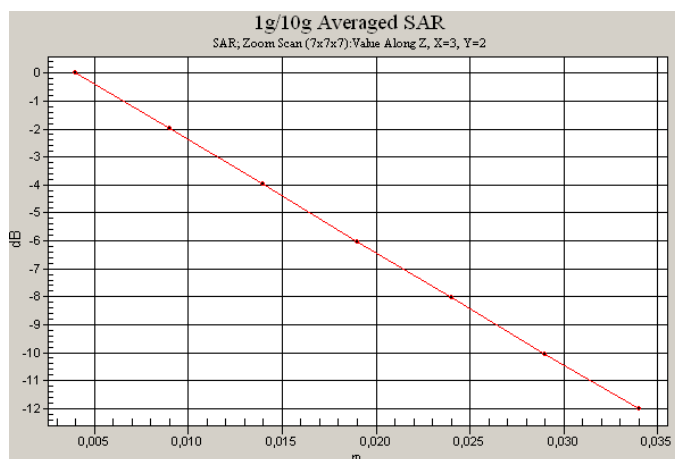
Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.716 mW/g; SAR(10 g) = 0.435 mW/g

Maximum value of SAR (measured) = 0.769 mW/g



0 dB = 0.769mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.13 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

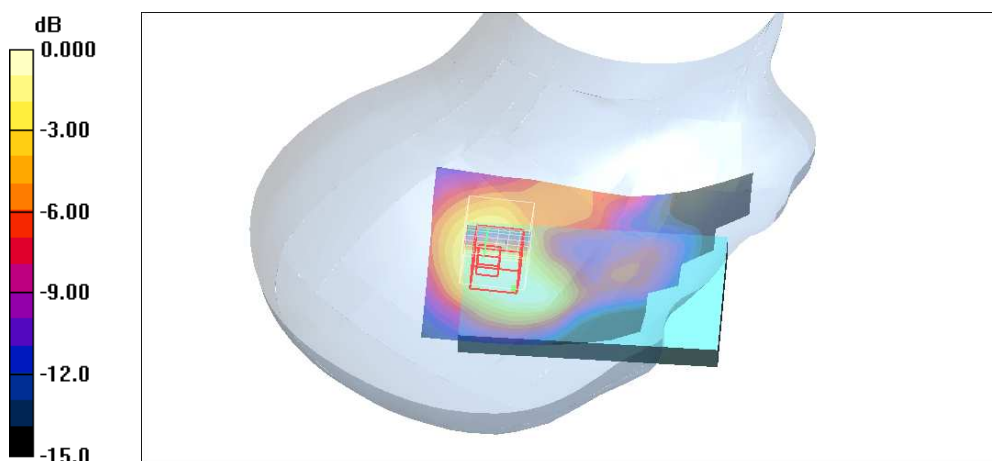
Reference Value = 26.9 V/m; Power Drift = -0.159 dB

Peak SAR (extrapolated) = 1.74 W/kg

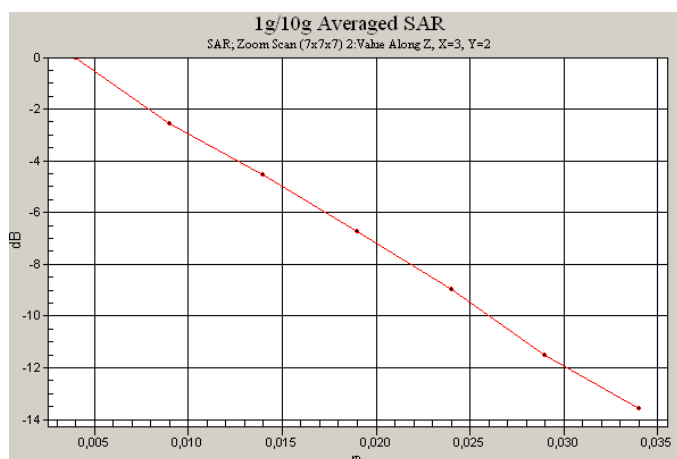
SAR(1 g) = 0.974 mW/g; SAR(10 g) = 0.587 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.49 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

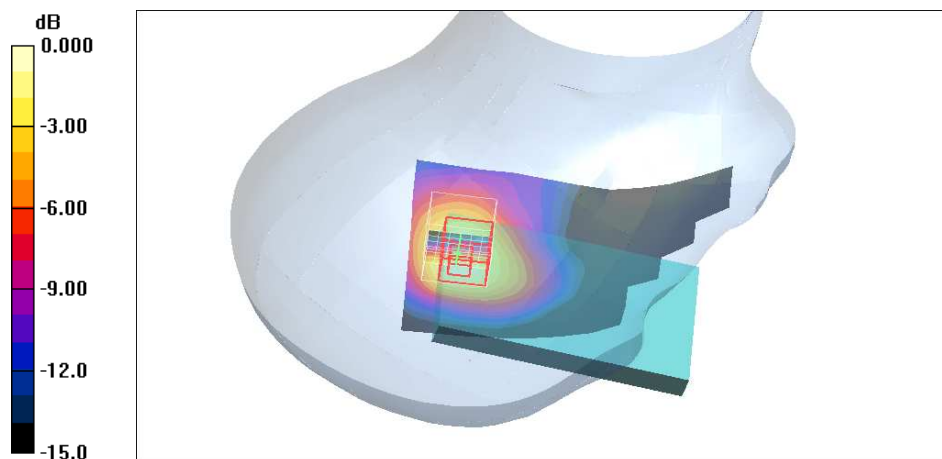
Reference Value = 32.8 V/m; Power Drift = 0.108 dB

Peak SAR (extrapolated) = 2.57 W/kg

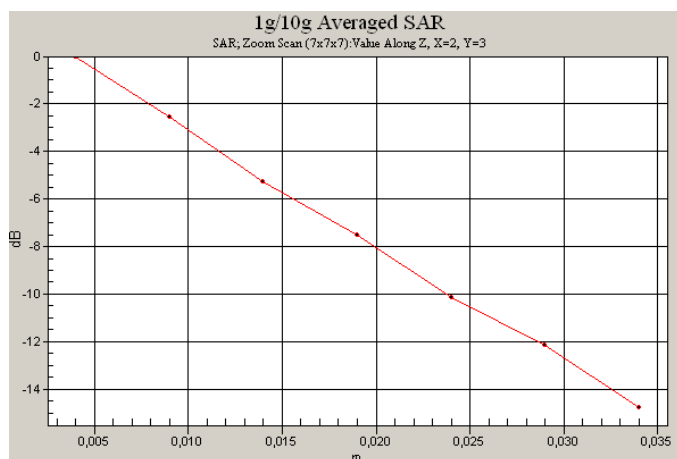
SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.760 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.55 mW/g



0 dB = 1.55mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Right hand side – Tilt position – Lowest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2000.02 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2000.02$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.49 mW/g

Worst position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

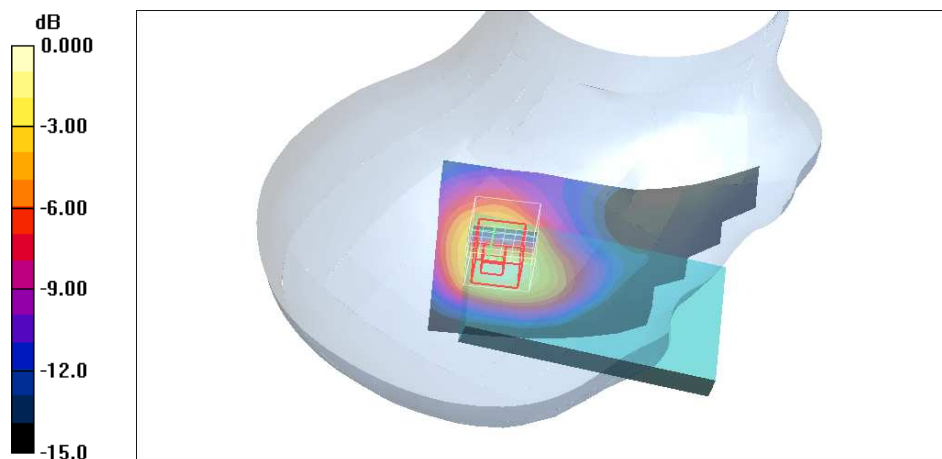
Reference Value = 33.0 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 2.46 W/kg

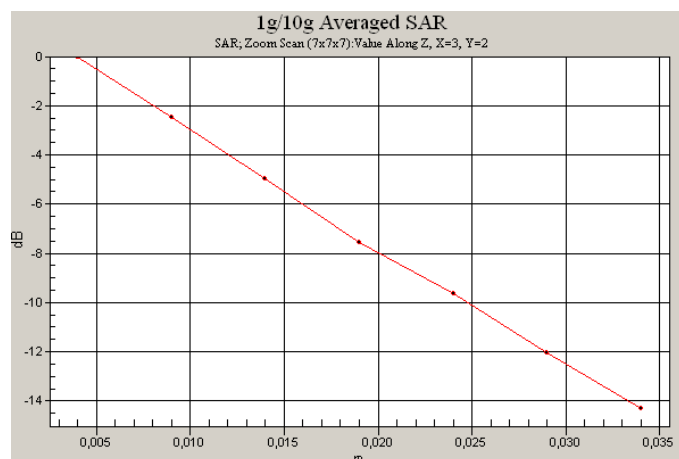
SAR(1 g) = 1.41 mW/g; SAR(10 g) = 0.785 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.58 mW/g



0 dB = 1.58mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Right hand side – Tilt position – Highest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2019.98 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 2020$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - High/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 1.35 mW/g

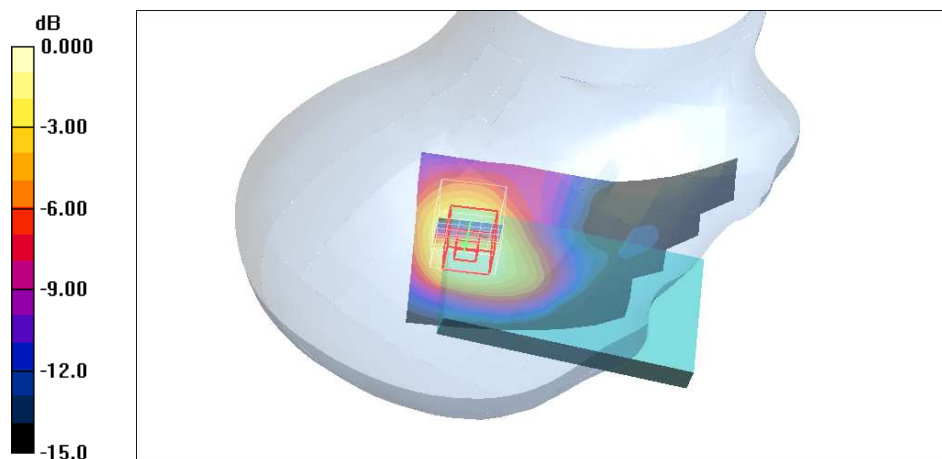
Worst position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 30.9 V/m; Power Drift = -0.058 dB

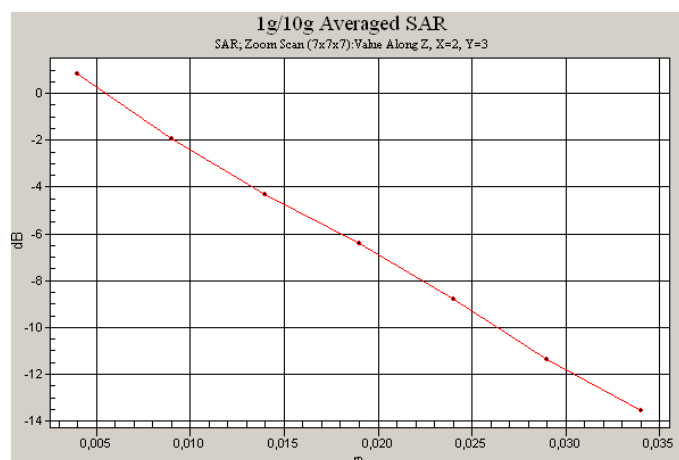
Peak SAR (extrapolated) = 2.19 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.684 mW/g

Maximum value of SAR (measured) = 1.37 mW/g



0 dB = 1.13mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK 31.25 kHz (Left-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Low/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.07 mW/g

Touch position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

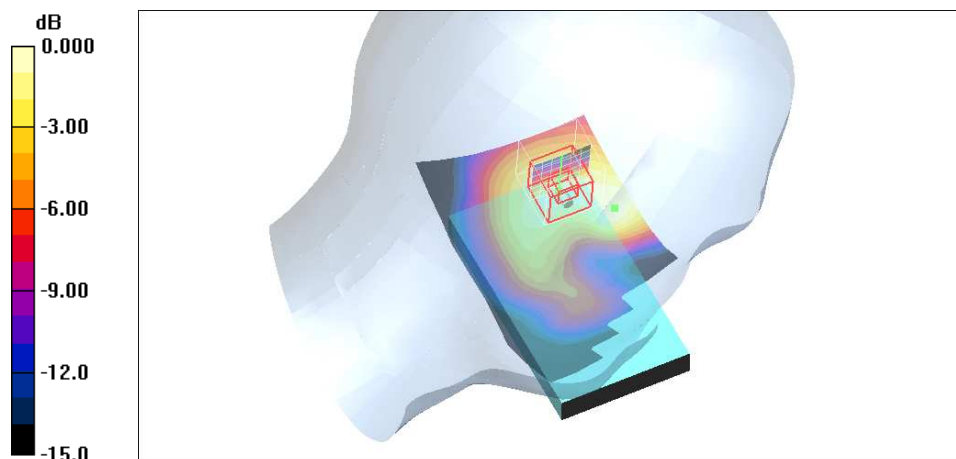
Reference Value = 21.5 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 1.62 W/kg

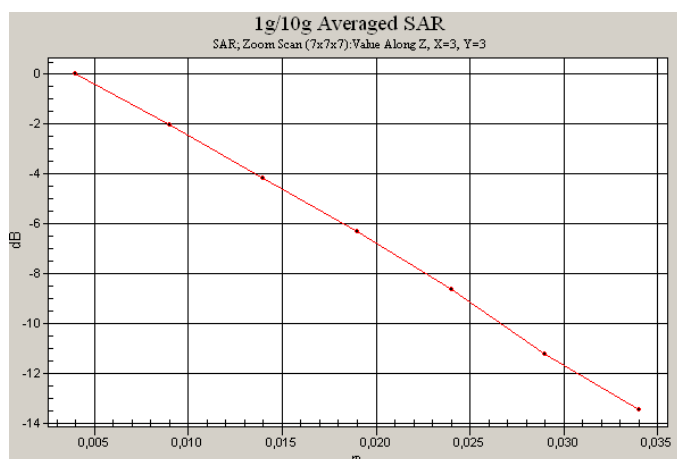
SAR(1 g) = 0.950 mW/g; SAR(10 g) = 0.534 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK 31.25 kHz (Left-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.11 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

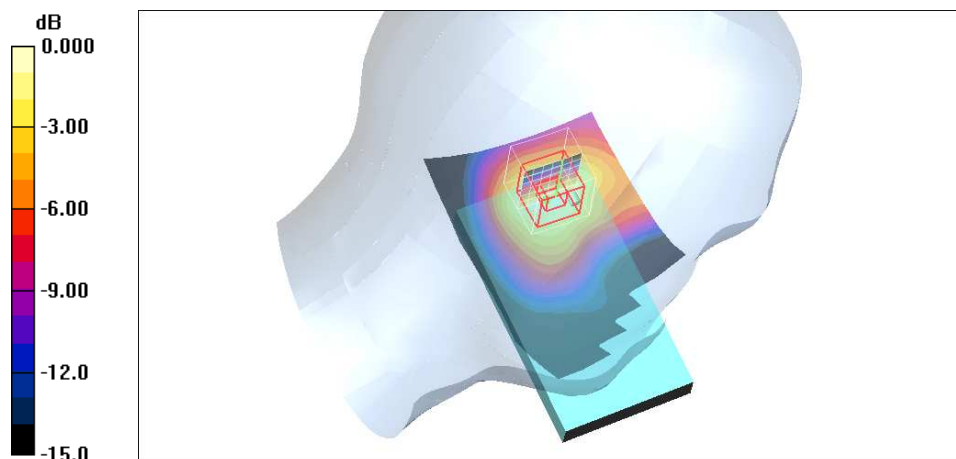
Reference Value = 26.4 V/m; Power Drift = 0.160 dB

Peak SAR (extrapolated) = 2.01 W/kg

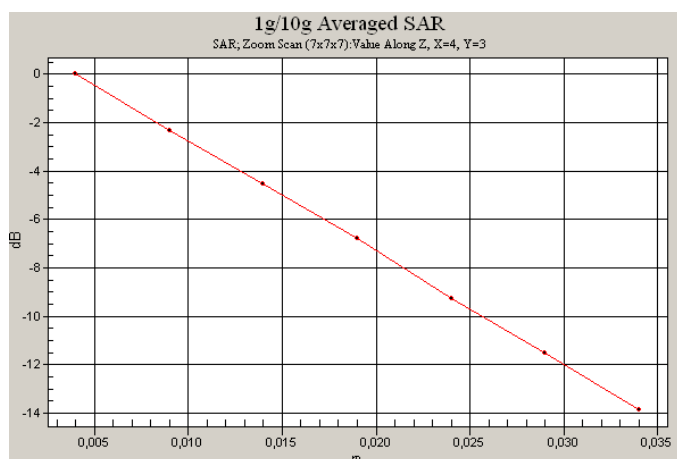
SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.631 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK 31.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

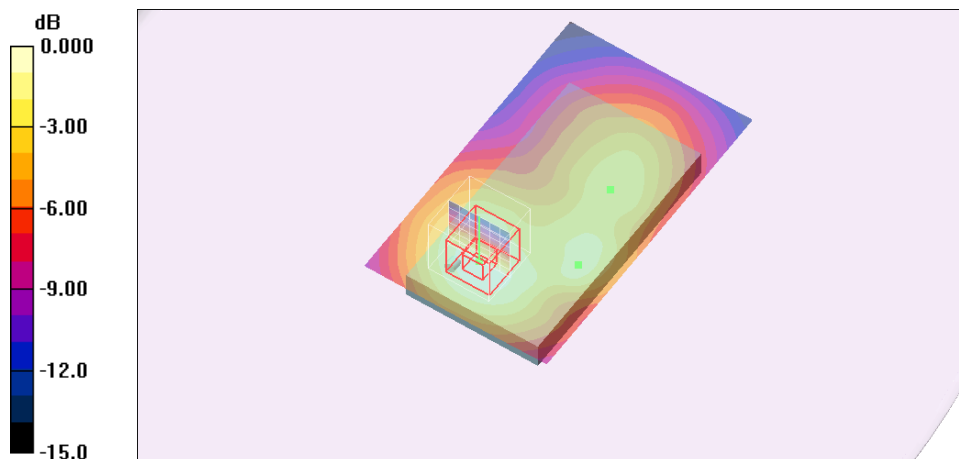
Reference Value = 21.5 V/m; Power Drift = -0.270 dB

Peak SAR (extrapolated) = 1.17 W/kg

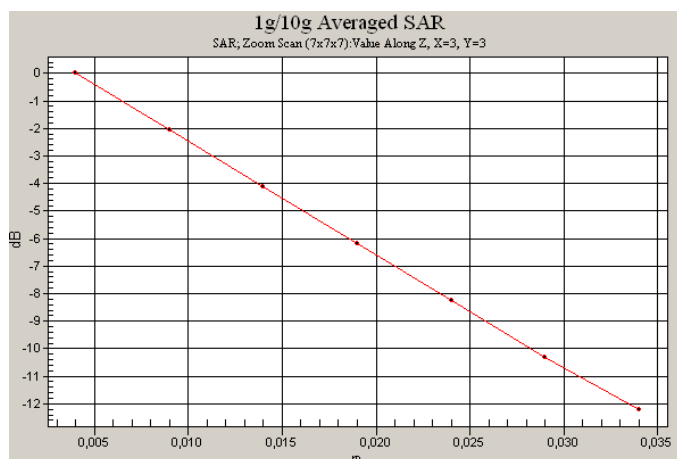
SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.462 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.842 mW/g



0 dB = 0.842mW/g



Satellite $\pi/2$ BPSK (31.25kHz BW) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/2$ BPSK 31.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, $d = 15$ mm/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.772 mW/g

Back face with headset, Middle CH, $d = 15$ mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

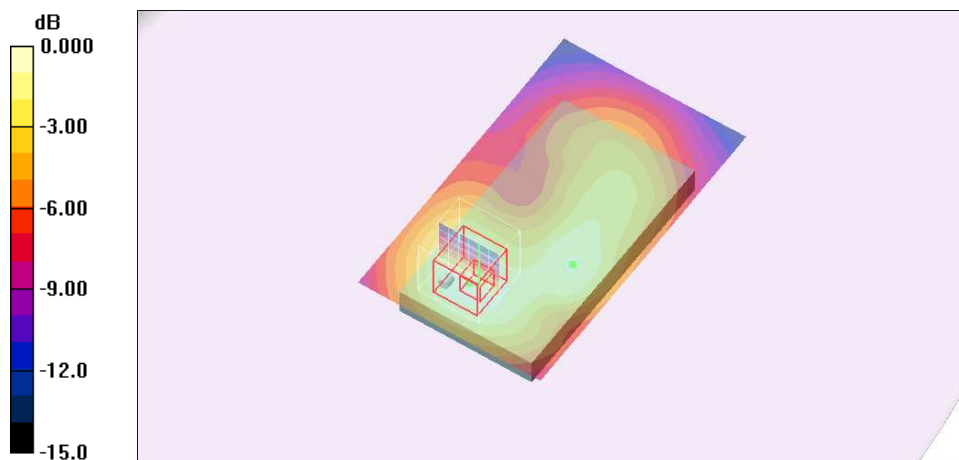
Reference Value = 20.1 V/m; Power Drift = 0.288 dB

Peak SAR (extrapolated) = 1.21 W/kg

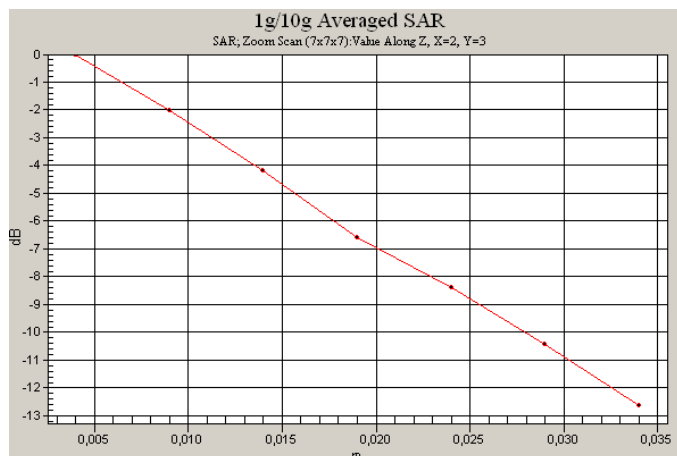
SAR(1 g) = 0.740 mW/g; SAR(10 g) = 0.455 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



0 dB = 0.815mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Right hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.07 mW/g

Touch position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

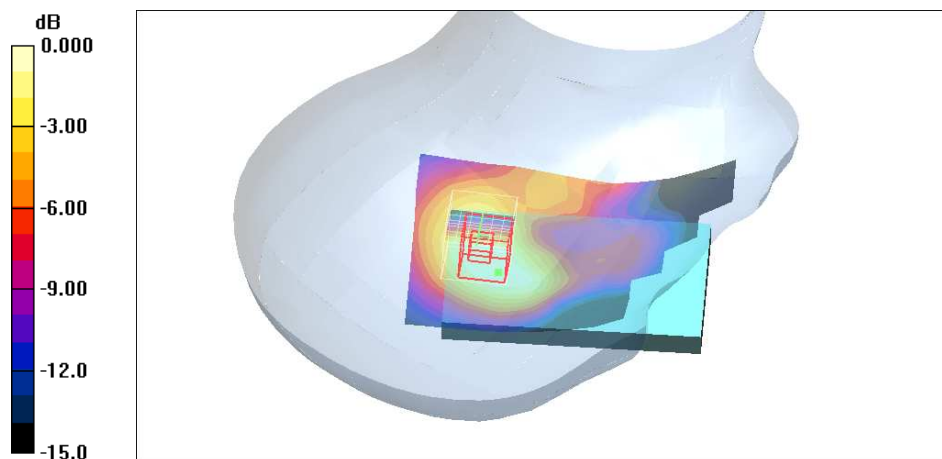
Reference Value = 26.9 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 1.62 W/kg

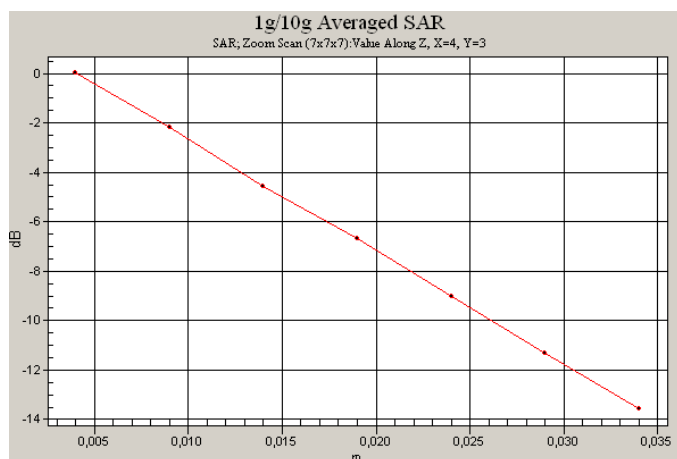
SAR(1 g) = 0.974 mW/g; SAR(10 g) = 0.584 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.06mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Right hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.55 mW/g

Tilt position - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

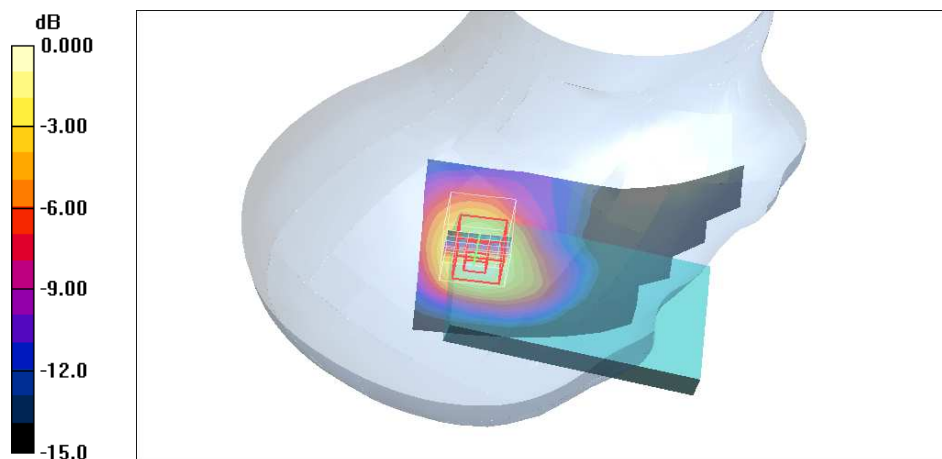
Reference Value = 33.7 V/m; Power Drift = 0.196 dB

Peak SAR (extrapolated) = 2.69 W/kg

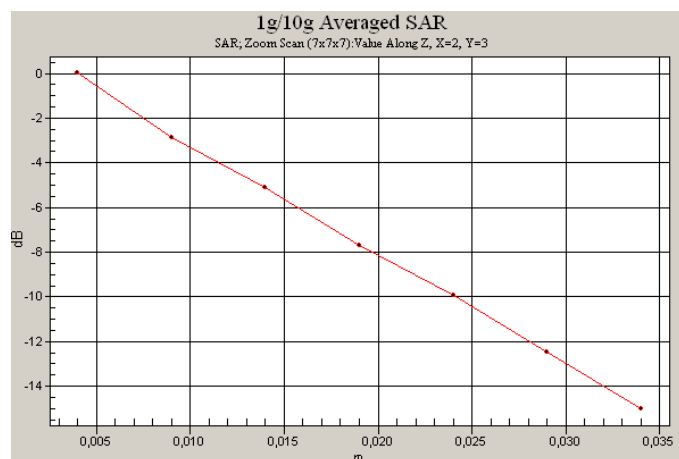
SAR(1 g) = 1.4 mW/g; SAR(10 g) = 0.784 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.60 mW/g



0 dB = 1.60mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Right hand side – Tilt position – Lowest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2000.02 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2000.02$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.39 mW/g

Worst position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

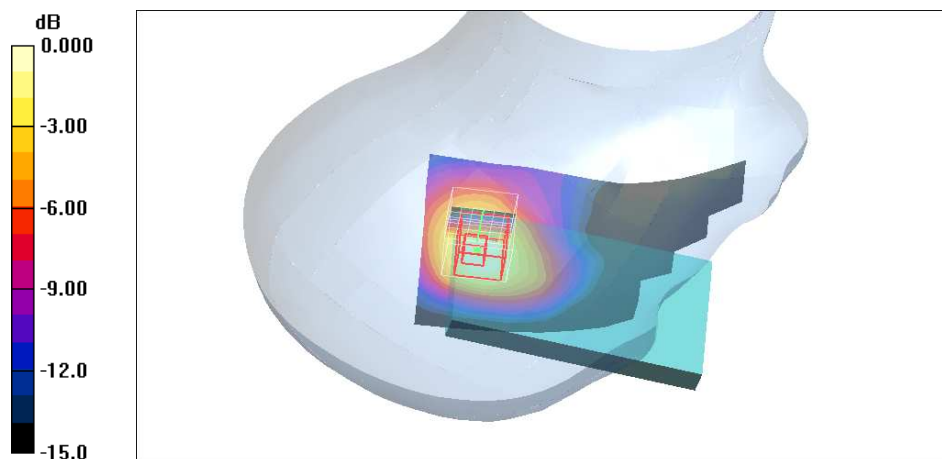
Reference Value = 32.5 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 2.34 W/kg

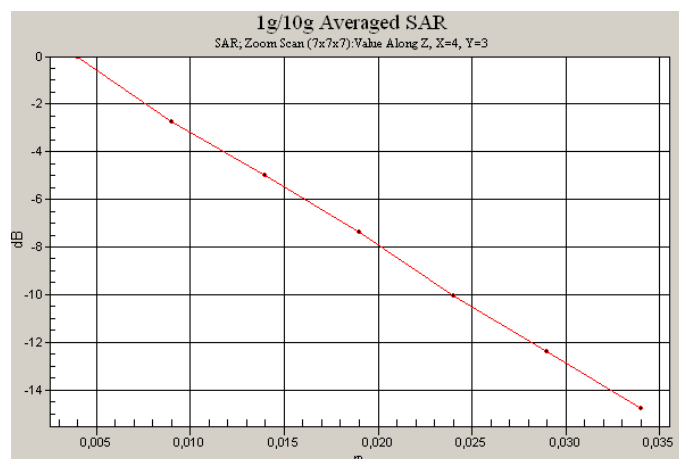
SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.760 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.49 mW/g



0 dB = 1.49mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Right hand side – Tilt position – Highest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK, 31.25kHz (Right-Hand Side)

Communication System: Satellite; Frequency: 2019.98 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 2020$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn669; Calibrated: 26/10/2009

- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst position - High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.41 mW/g

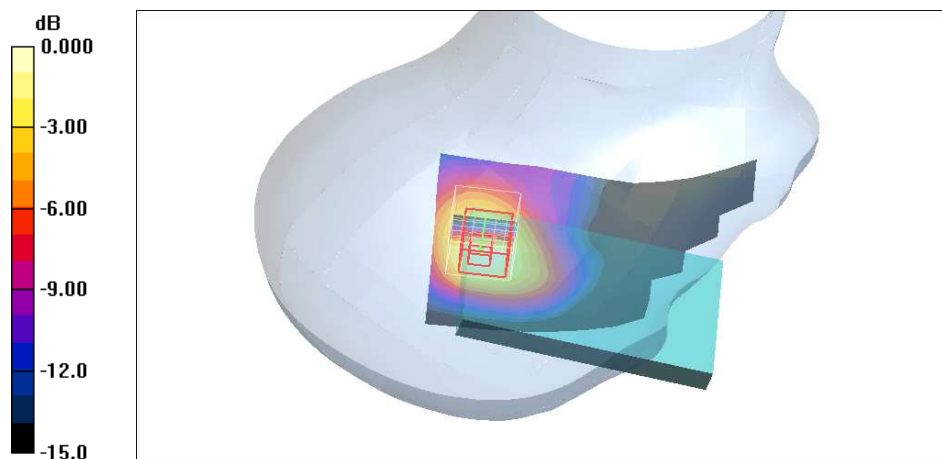
Worst position - High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.9 V/m; Power Drift = -0.035 dB

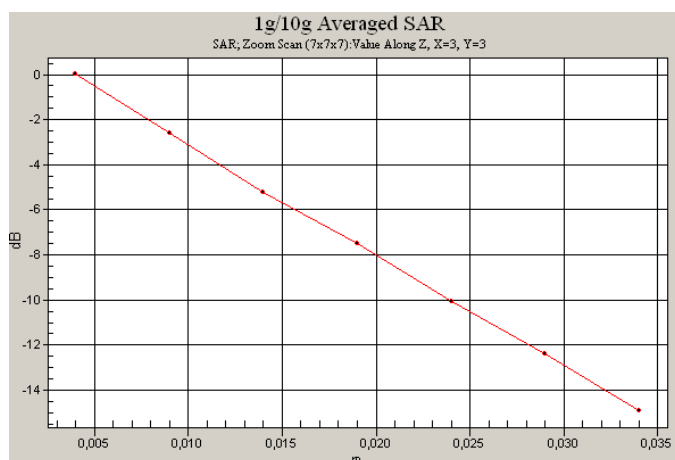
Peak SAR (extrapolated) = 2.30 W/kg

SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.686 mW/g

Maximum value of SAR (measured) = 1.43 mW/g



0 dB = 1.43mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Left hand side – Cheek position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 31.25 kHz (Left-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Touch position - Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.982 mW/g

Touch position - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

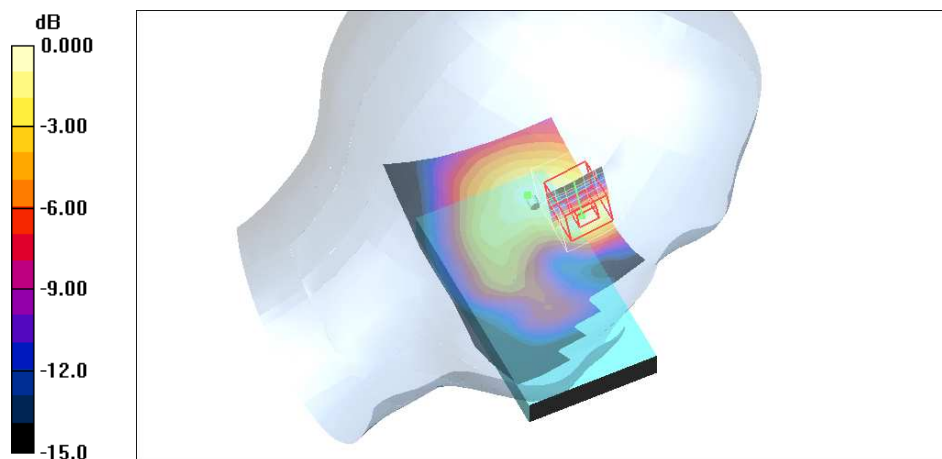
Reference Value = 19.4 V/m; Power Drift = -0.154 dB

Peak SAR (extrapolated) = 1.88 W/kg

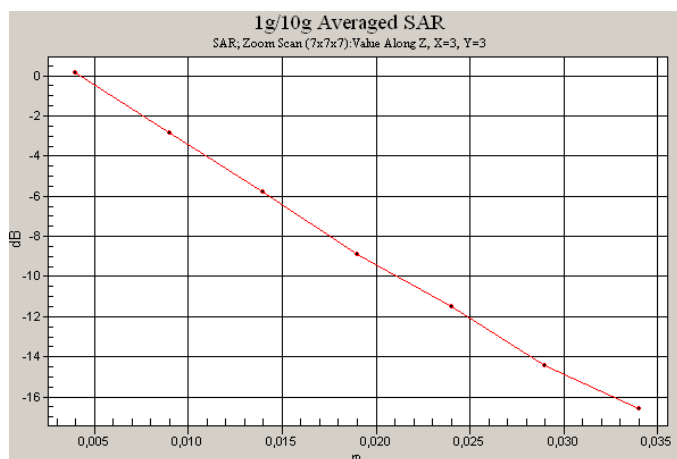
SAR(1 g) = 0.912 mW/g; SAR(10 g) = 0.465 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.00mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Left hand side – Tilt position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 31.25 kHz (Left-Hand Side)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.69, 4.69, 4.69); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: SAM head-body simulator ; Type: Twin SAM V4.0; Serial: ---
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt position - Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.18 mW/g

Tilt position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

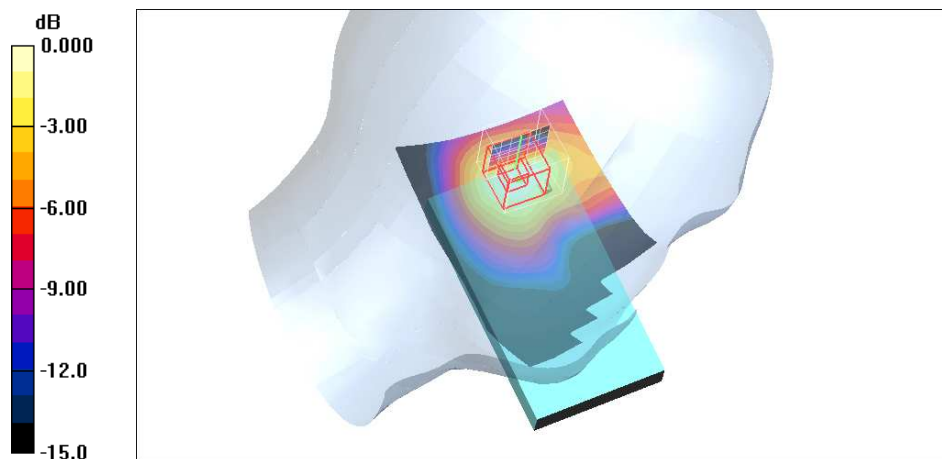
Reference Value = 27.5 V/m; Power Drift = 0.192 dB

Peak SAR (extrapolated) = 2.10 W/kg

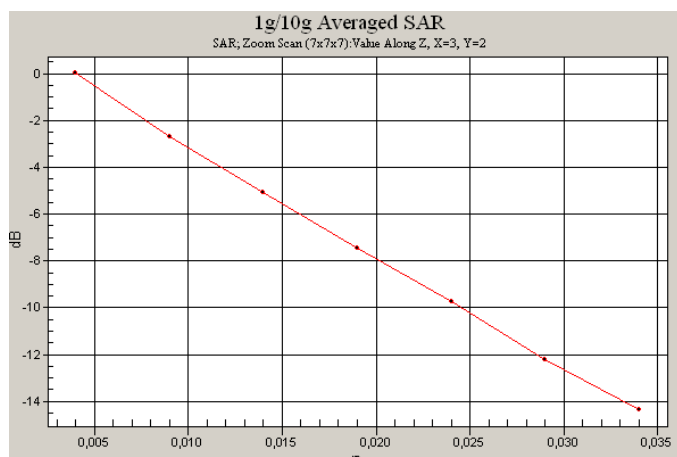
SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.624 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 31.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.763 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

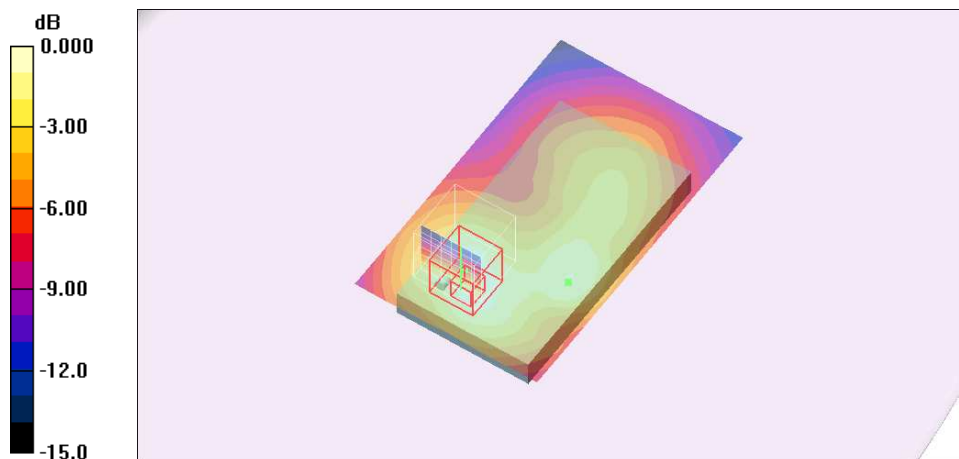
Reference Value = 20.4 V/m; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 1.20 W/kg

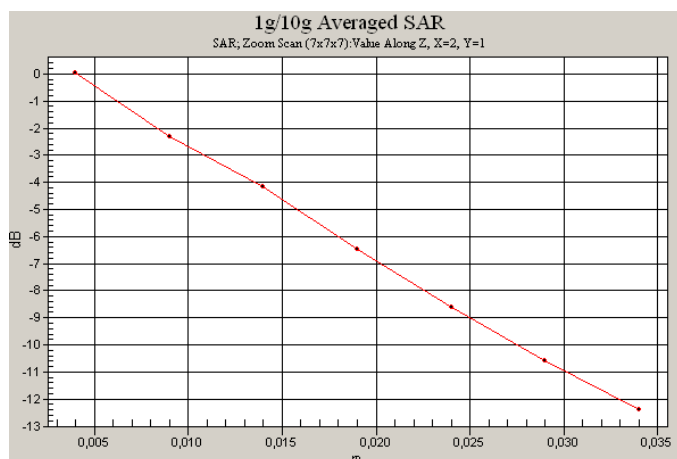
SAR(1 g) = 0.695 mW/g; SAR(10 g) = 0.432 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.761 mW/g



0 dB = 0.761mW/g



Satellite $\pi/4$ QPSK (31.25kHz BW) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 31.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, $d = 15$ mm/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.769 mW/g

Back face with headset, Middle CH, $d = 15$ mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

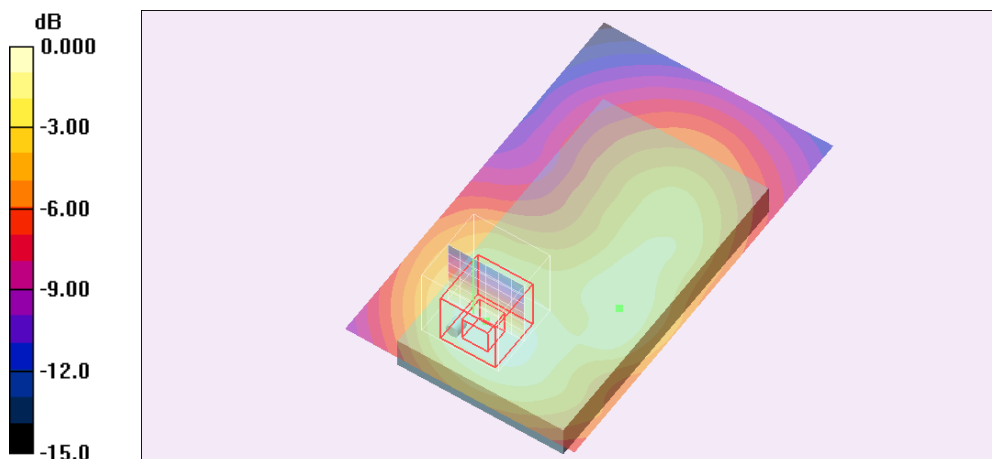
Reference Value = 20.2 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 1.21 W/kg

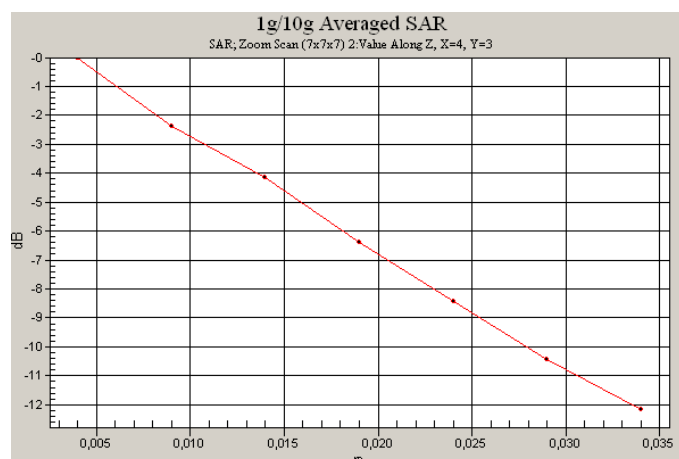
SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.429 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.766 mW/g



0 dB = 0.766mW/g



Satellite $\pi/4$ QPSK (62.5kHz BW) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 62.5 kHz (Body)

Communication System: Satellite; Frequency: 2010 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2010$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.822 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

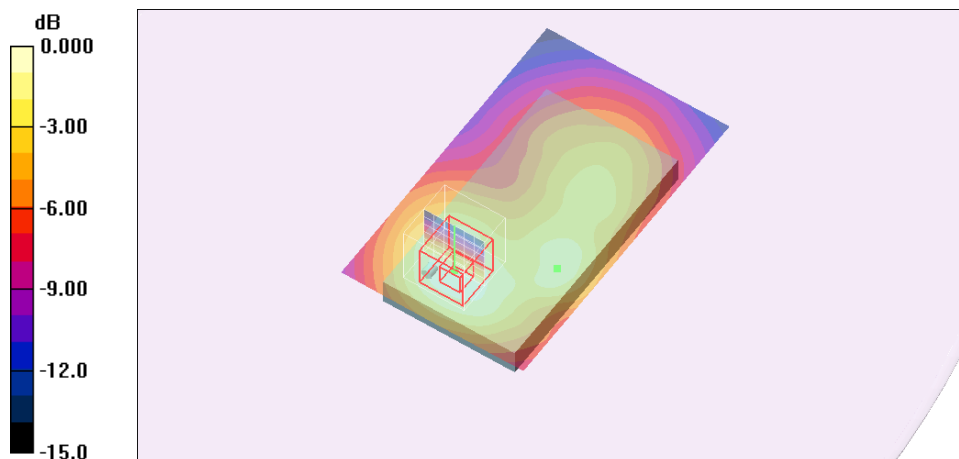
Reference Value = 23.7 V/m; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 1.36 W/kg

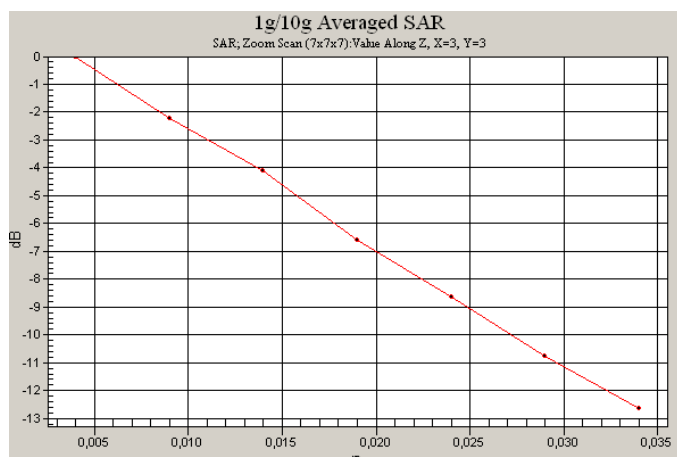
SAR(1 g) = 0.800 mW/g; SAR(10 g) = 0.483 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.870 mW/g



0 dB = 0.870mW/g



Satellite $\pi/4$ QPSK (62.5kHz BW) – Body – Back Face position – Lowest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 62.5 kHz (Body)

Communication System: Satellite; Frequency: 2000.03 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2000.03$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst case, Low CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.789 mW/g

Worst case, Low CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

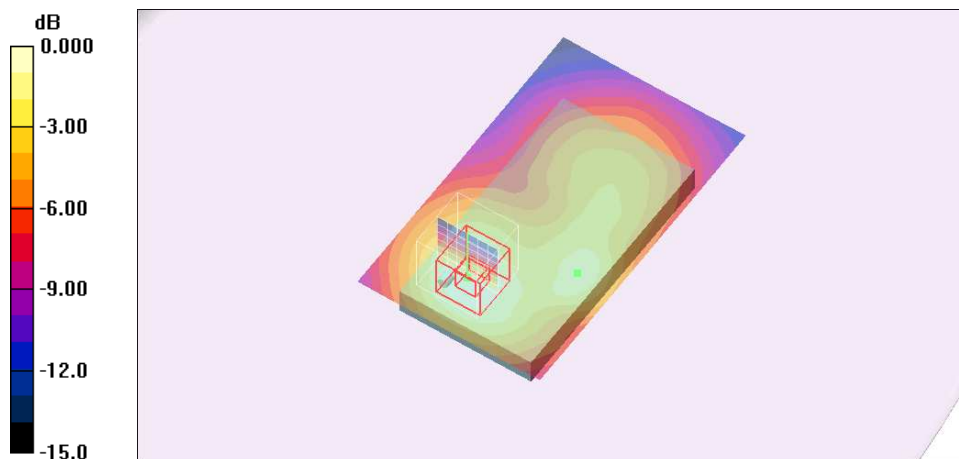
Reference Value = 20.5 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 1.26 W/kg

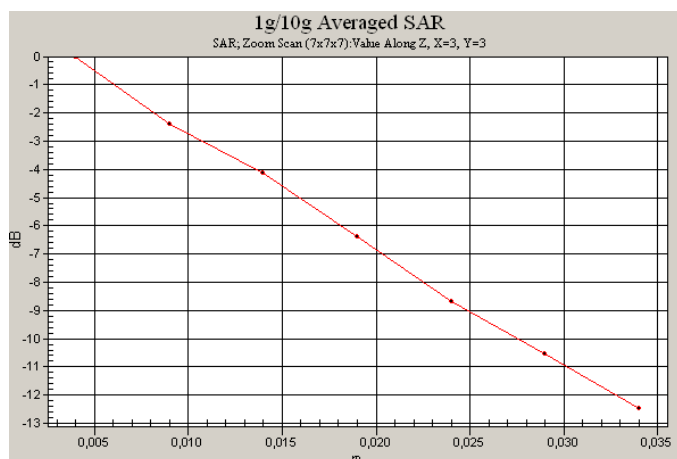
SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.448 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.808 mW/g



0 dB = 0.808mW/g



Satellite $\pi/4$ QPSK (62.5kHz BW) – Body – Back Face position – Highest Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 62.5 kHz (Body)

Communication System: Satellite; Frequency: 2019.97 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 2020$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Worst case, High CH, $d = 15$ mm/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 0.790 mW/g

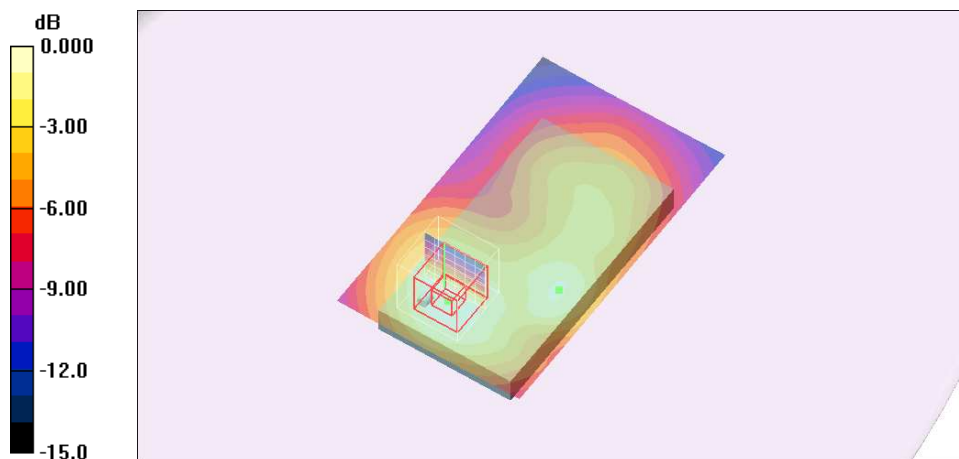
Worst case, High CH, $d = 15$ mm/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 21.8 V/m; Power Drift = -0.065 dB

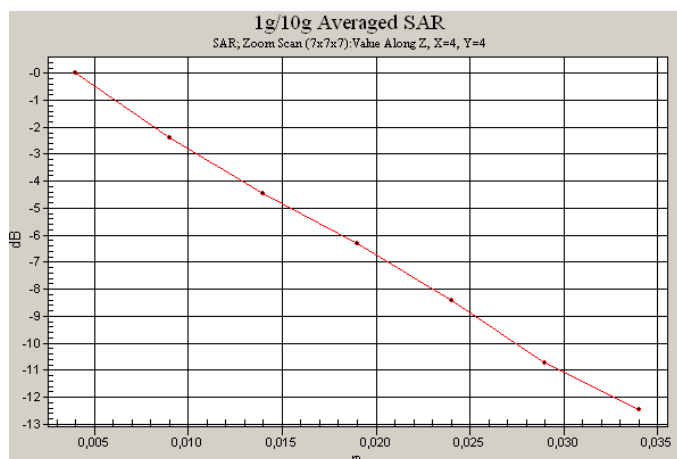
Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.756 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.828 mW/g



0 dB = 0.828mW/g



Satellite $\pi/4$ QPSK (62.5kHz BW) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 62.5 kHz (Body)

Communication System: Satellite; Frequency: 2010 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2010$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, $d = 15$ mm/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.793 mW/g

Back face with headset, Middle CH, $d = 15$ mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

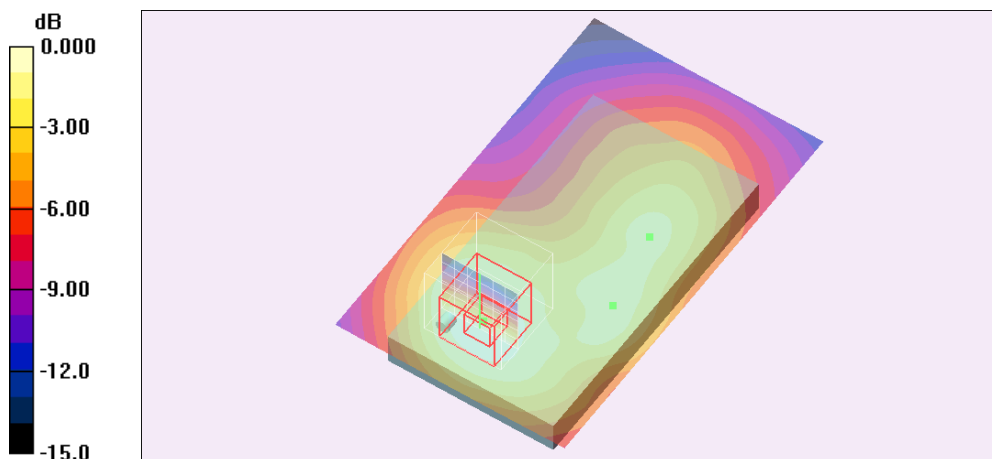
Reference Value = 21.2 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 1.25 W/kg

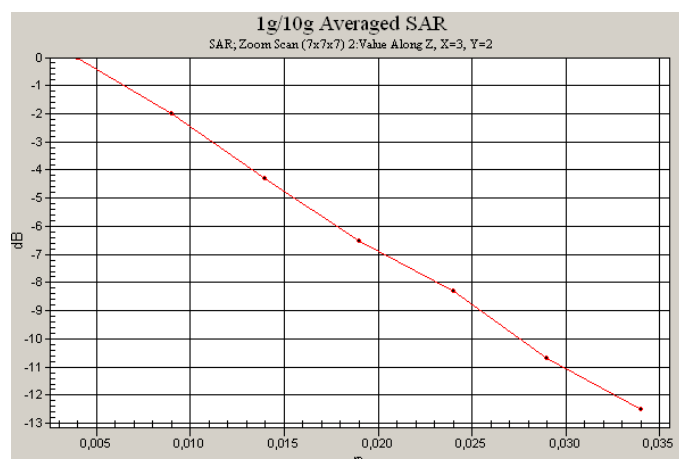
SAR(1 g) = 0.749 mW/g; SAR(10 g) = 0.463 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.817 mW/g



0 dB = 0.817mW/g



Satellite $\pi/4$ QPSK (156.25kHz BW) – Body – Back Face position – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 156.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.798 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

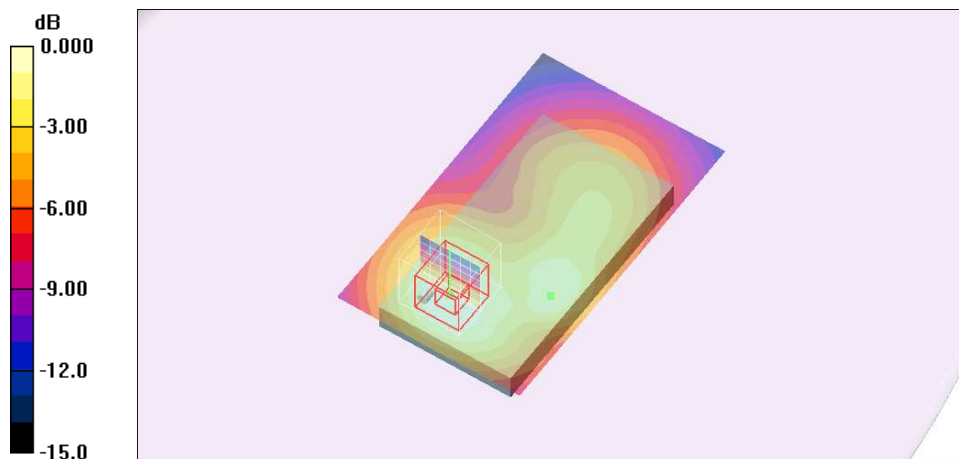
Reference Value = 21.2 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 1.16 W/kg

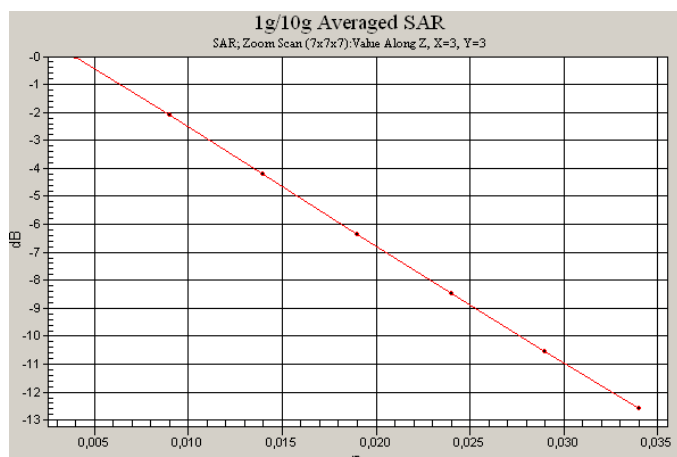
SAR(1 g) = 0.741 mW/g; SAR(10 g) = 0.455 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.802 mW/g



0 dB = 0.808mW/g



Satellite $\pi/4$ QPSK (156.25kHz BW) – Body – Back Face position with Headset – Middle Channel

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001893

Program Name: $\pi/4$ QPSK 156.25 kHz (Body)

Communication System: Satellite; Frequency: 2009.98 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): $f = 2009.98$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.46, 4.46, 4.46); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, $d = 15$ mm/Area Scan (61x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.808 mW/g

Back face with headset, Middle CH, $d = 15$ mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

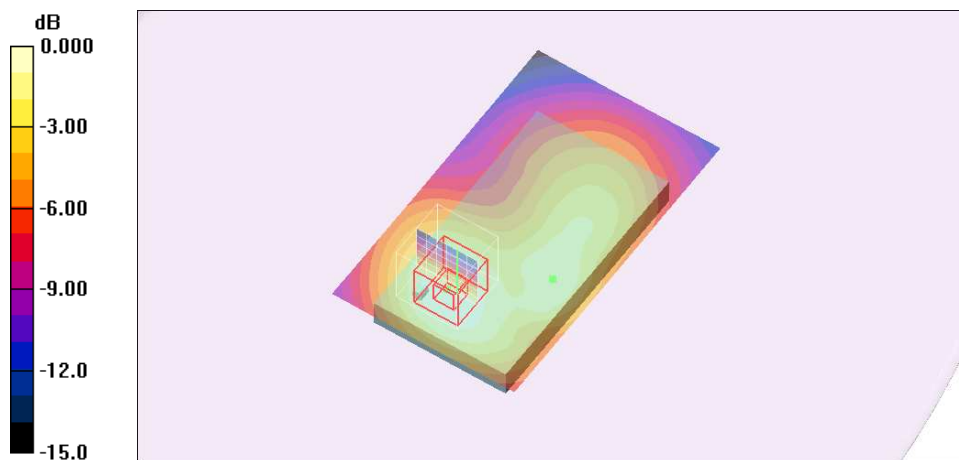
Reference Value = 21.5 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 1.18 W/kg

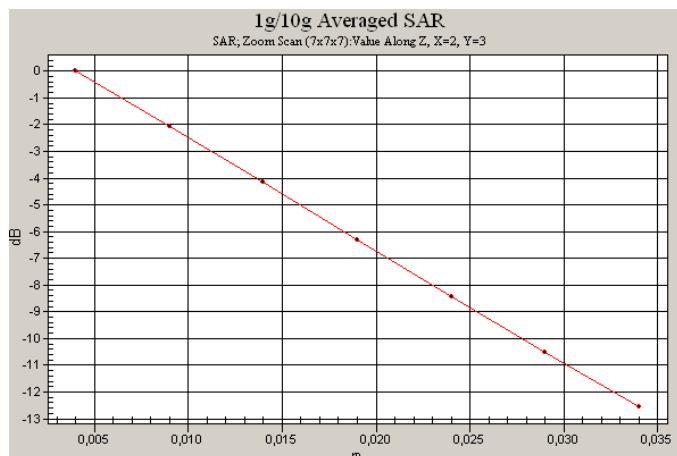
SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.465 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.809 mW/g



0 dB = 0.809mW/g



802.11b – Body – Back Face position – Channel 6

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001821

Program Name: 802.11b (Body)

Communication System: 802.11; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.06, 4.06, 4.06); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.066 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

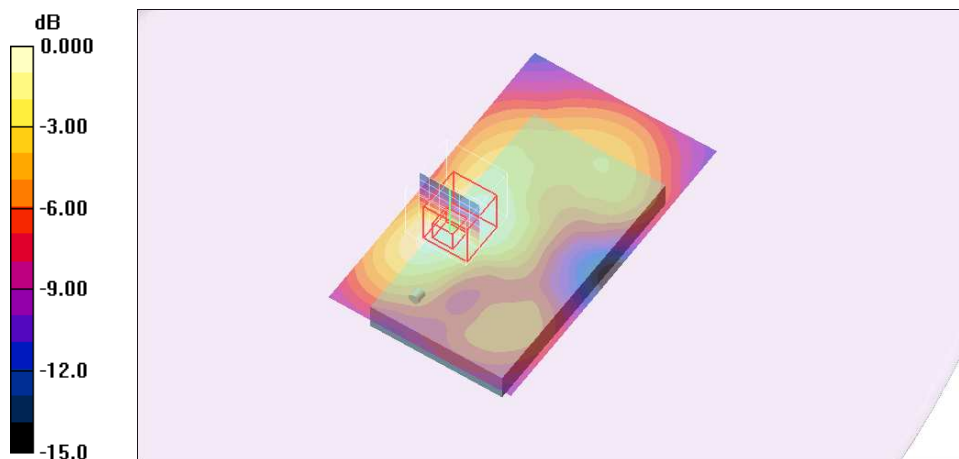
Reference Value = 2.63 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.109 W/kg

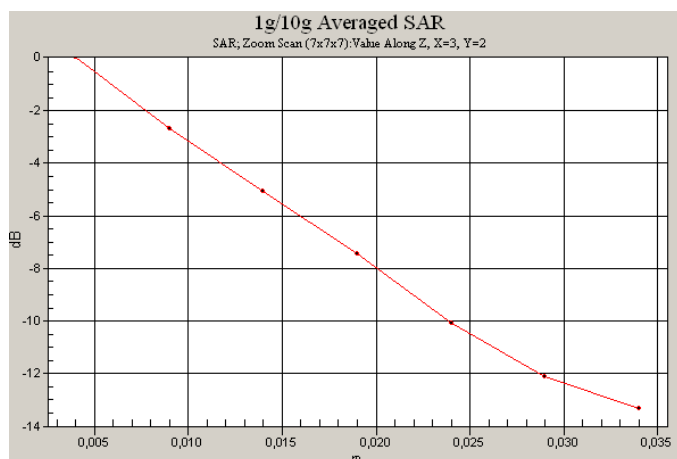
SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.033 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.064 mW/g



0 dB = 0.064mW/g



802.11b – Body – Back Face position with Headset – Channel 6

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001821

Program Name: 802.11b (Body)

Communication System: 802.11; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.06, 4.06, 4.06); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.069 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

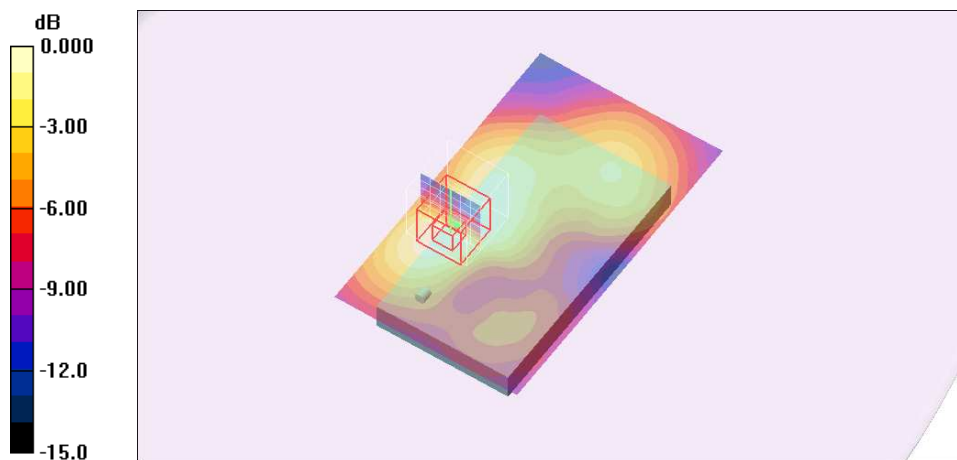
Reference Value = 2.72 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.118 W/kg

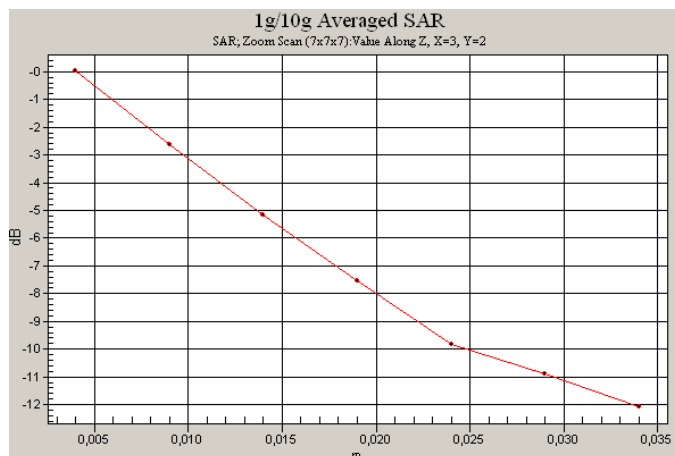
SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.036 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.067 mW/g



0 dB = 0.067mW/g



802.11g – Body – Back Face position – Channel 6

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001821

Program Name: 802.11g (Body)

Communication System: 802.11; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.06, 4.06, 4.06); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.031 mW/g

Back face, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

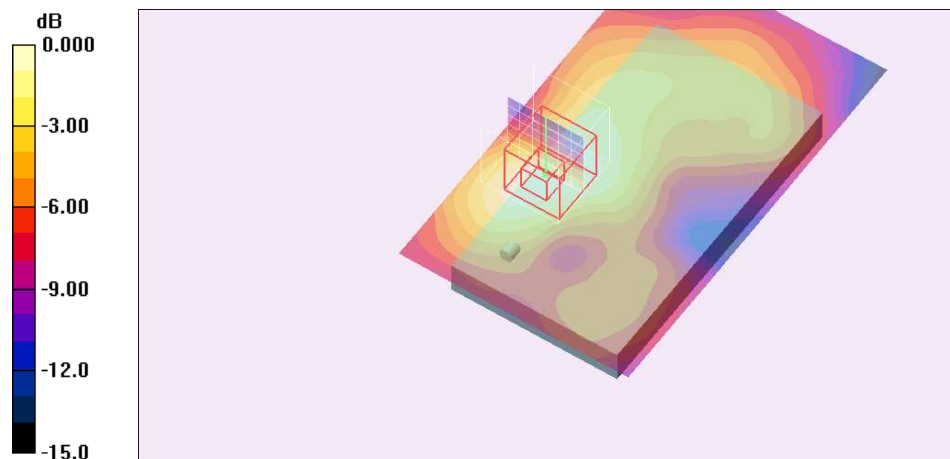
Reference Value = 1.75 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 0.053 W/kg

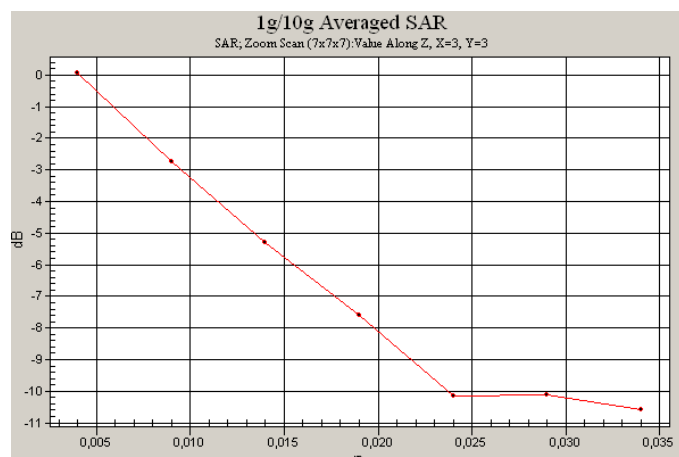
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.016 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.030 mW/g



0 dB = 0.030mW/g



802.11g – Body – Back Face position with Headset – Channel 6

DUT: Genus TSN-1; Type: Handset; Serial: EBL0001821

Program Name: 802.11g (Body)

Communication System: 802.11; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3052; ConvF(4.06, 4.06, 4.06); Calibrated: 27/10/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn669; Calibrated: 26/10/2009
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1060
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Back face with headset, Middle CH, d = 15mm/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.034 mW/g

Back face with headset, Middle CH, d = 15mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

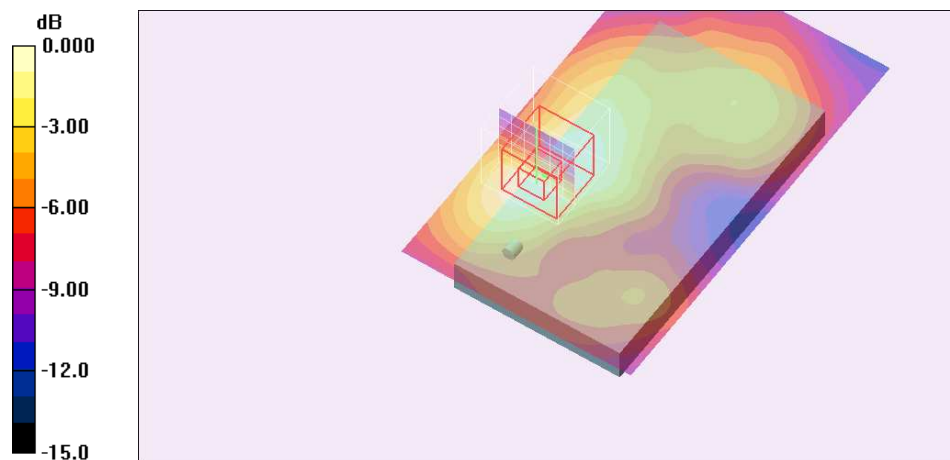
Reference Value = 2.08 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.060 W/kg

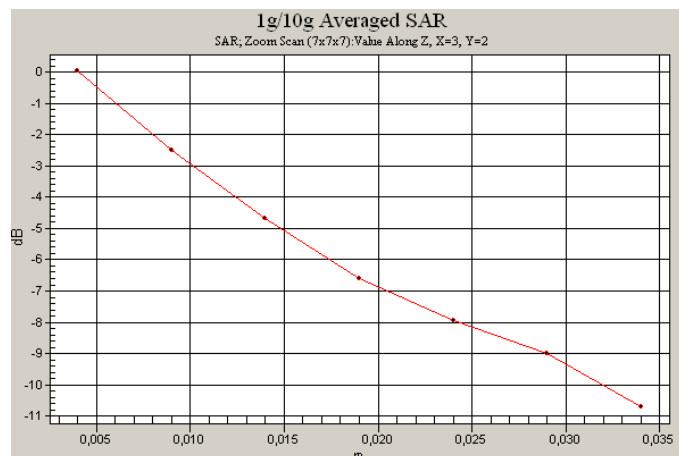
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.018 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.033 mW/g



0 dB = 0.033mW/g



APPENDIX D: Photographs

EUT Front face view:



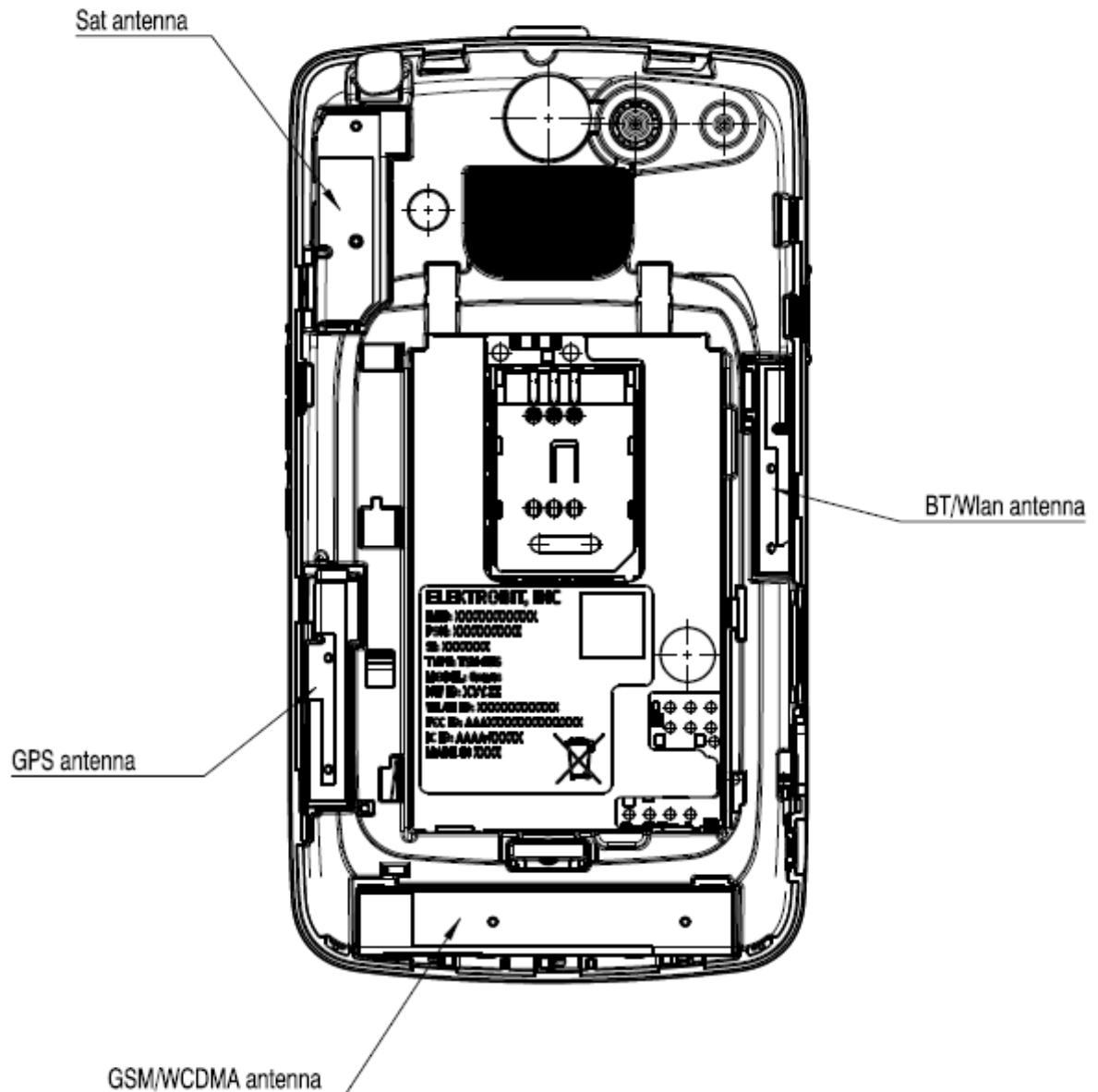
EUT Back face view:



EUT for conducted measurements:



Antennas location diagram (EUT back face):



Test set views:

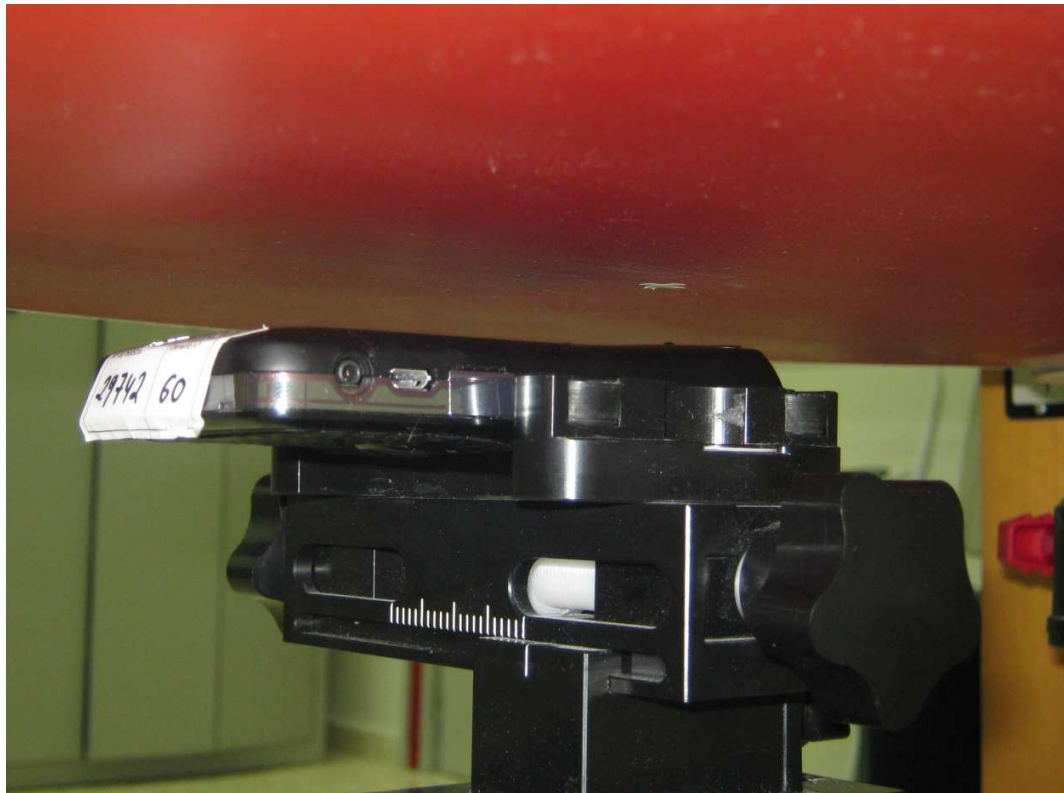
Head cheek position:



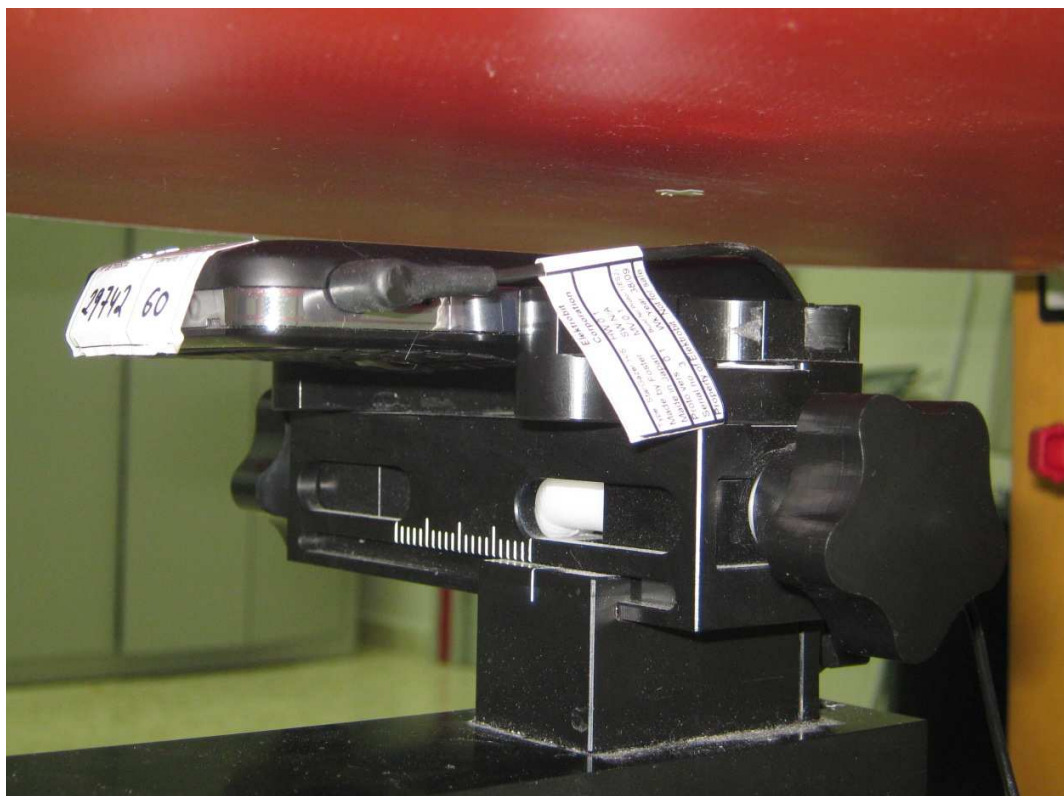
Head tilt position:



Body worn back face position:



Body worn back face position with headset:



General test set for head positions:



General test set for body-worn positions:



APPENDIX E: Calibration Data

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



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
 The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **AT4 wireless**

Certificate No: **ES3-3052_Oct09**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3052**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2
 Calibration procedure for dosimetric E-field probes**

Calibration date: **October 27, 2009**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 860	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

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

Issued: October 27, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: **ES3-3052_Oct09**

Page 1 of 11

ES3DV3 SN:3052

October 27, 2009

DASY - Parameters of Probe: ES3DV3 SN:3052

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	5.83	5.83	5.83	0.76	1.13 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	5.65	5.65	5.65	0.69	1.17 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	4.99	4.99	4.99	0.39	1.65 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.81	4.81	4.81	0.43	1.61 ± 11.0%
2000	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.69	4.69	4.69	0.45	1.62 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.26	4.26	4.26	0.31	2.22 ± 11.0%

^C The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

ES3DV3 SN:3052

October 27, 2009

DASY - Parameters of Probe: ES3DV3 SN:3052

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.71	5.71	5.71	0.70	1.18 ± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	5.55	5.55	5.55	0.78	1.16 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.66	4.66	4.66	0.26	2.59 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.43	4.43	4.43	0.30	2.45 ± 11.0%
2000	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.46	4.46	4.46	0.25	2.90 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.06	4.06	4.06	0.49	1.49 ± 11.0%

^C The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **AT4 Wireless**

Certificate No: **D900V2-1d007_Jun09**

CALIBRATION CERTIFICATE

Object **D900V2 - SN: 1d007**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **June 16, 2009**

Condition of the calibrated item **In Tolerance**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

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

Issued: June 17, 2009

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Certificate No: D900V2-1d007_Jun09

Page 1 of 9

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	900 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.97 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	39.8 $\pm$ 6 %	0.94 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.0 $\pm$ 0.2) °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.65 mW / g
SAR normalized	normalized to 1W	10.6 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	10.7 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.71 mW / g
SAR normalized	normalized to 1W	6.84 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	6.92 mW / g $\pm$ 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.0	1.05 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.4 ± 6 %	1.06 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	---	---

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.80 mW / g
SAR normalized	normalized to 1W	11.2 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	11.0 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.81 mW / g
SAR normalized	normalized to 1W	7.24 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	7.16 mW / g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Accreditation No.: **SCS 108**

Client **AT4 Wireless**

Certificate No: **D1800V2-2d099_Jun09**

CALIBRATION CERTIFICATE

Object **D1800V2 - SN: 2d099**

Calibration procedure(s) **QA CAL-05.v7**
Calibration procedure for dipole validation kits

Calibration date: **June 18, 2009**

Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

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

Issued: June 19, 2009

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Certificate No: D1800V2-2d099_Jun09

Page 1 of 9

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1800 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.1 $\pm$ 6 %	1.37 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.0 $\pm$ 0.2) °C	----	-----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	condition	
SAR measured	250 mW input power	9.53 mW /g
SAR normalized	normalized to 1W	38.1 mW /g
SAR for nominal Head TSL parameters [†]	normalized to 1W	38.9 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.07 mW /g
SAR normalized	normalized to 1W	20.3 mW /g
SAR for nominal Head TSL parameters [†]	normalized to 1W	20.5 mW / g $\pm$ 16.5 % (k=2)

[†] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.0 ± 6 %	1.49 mho/m ± 6 %
Body TSL temperature during test	(22.2 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	condition	
SAR measured	250 mW input power	9.66 mW /g
SAR normalized	normalized to 1W	38.6 mW /g
SAR for nominal Body TSL parameters ²	normalized to 1W	39.2 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.17 mW /g
SAR normalized	normalized to 1W	20.7 mW /g
SAR for nominal Body TSL parameters ²	normalized to 1W	20.8 mW / g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Accreditation No.: **SCS 108**

Client **AT4 Wireless**

Certificate No: **D2000V2-1021_Jun09**

CALIBRATION CERTIFICATE

Object **D2000V2 – SN:1021**

Calibration procedure(s) **QA CAL-05.v7**
Calibration procedure for dipole validation kits

Calibration date: **June 22, 2009**

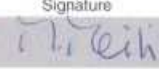
Condition of the calibrated item **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

	Name	Function	Signature
Calibrated by:	Mike Meili	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: June 22, 2009

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Certificate No: D2000V2-1021_Jun09

Page 1 of 9

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2000 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	39.3 $\pm$ 6 %	1.43 mho/m $\pm$ 6 %
Head TSL temperature during test	(21.4 $\pm$ 0.2) °C	-----	-----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	condition	
SAR measured	250 mW input power	10.9 mW / g
SAR normalized	normalized to 1W	43.6 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	42.7 mW / g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.57 mW / g
SAR normalized	normalized to 1W	22.3 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	22.0 mW / g $\pm$ 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.9 ± 6 %	1.59 mho/m ± 6 %
Body TSL temperature during test	(21.6 ± 0.2) °C	-----	-----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	condition	
SAR measured	250 mW input power	11.0 mW / g
SAR normalized	normalized to 1W	44.0 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	42.7 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.68 mW / g
SAR normalized	normalized to 1W	22.7 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	22.4 mW / g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

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Accreditation No.: **SCS 108**

Client: **AT4wireless**

Certificate No: **D2450V2-756_Jun09**

CALIBRATION CERTIFICATE

Object: **D2450V2 - SN: 756**

Calibration procedure(s): **QA CAL-05.v7**
Calibration procedure for dipole validation kits

Calibration date: **June 19, 2009**

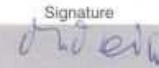
Condition of the calibrated item: **In Tolerance**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
Reference Probe ES3DV2	SN: 3025	30-Apr-09 (No. ES3-3025_Apr09)	Apr-10
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by:	Name: Mike Meili	Function: Laboratory Technician	Signature: 
Approved by:	Name: Katja Pokovic	Function: Technical Manager	Signature: 

Issued: June 19, 2009

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Certificate No: D2450V2-756_Jun09

Page 1 of 9

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	40.4 $\pm$ 6 %	1.78 mho/m $\pm$ 6 %
Head TSL temperature during test	(22.4 $\pm$ 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 mW / g
SAR normalized	normalized to 1W	53.2 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	53.9 mW /g $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.29 mW / g
SAR normalized	normalized to 1W	25.2 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	25.3 mW /g $\pm$ 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.2 ± 6 %	2.00 mho/m ± 6 %
Body TSL temperature during test	(21.5 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.4 mW / g
SAR normalized	normalized to 1W	53.6 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	53.0 mW /g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.27 mW / g
SAR normalized	normalized to 1W	25.1 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	25.0 mW /g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"