

SAR Compliance Test Report

| | | | |
|---|---|--------------------------------|---|
| Test report no.: | Cph_SAR_0711_09 | Date of report: | 2007-03-20 |
| Template version: | 5.0 | Number of pages: | 50 |
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| Tested device: | RM-164 | | |
| FCC ID: | QMNRM-164 | IC: | 661X-RM164 |
| Supplement reports: | Cph_SAR_0713_08 | | |
| Testing has been carried out in accordance with: | <p>47CFR §2.1093 Radiofrequency Radiation Exposure Evaluation: Portable Devices FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields RSS-102 Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields IEEE 1528 - 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique</p> | | |
| Documentation: | The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia. | | |
| Test results: | The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory. | | |

Date and signatures:

For the contents:

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1. SUMMARY OF SAR TEST REPORT

1.1 Test Details

| | |
|--|--|
| Period of test | 2007-03-15 to 2007-03-20 |
| SN, HW and SW numbers of tested device | SN: 004401/01/024959/3, HW: 3601, SW: RM-164_03.31, DUT: 27946 |
| Batteries used in testing | BP-5M, DUT: 27947, 27948, 27949, 27950 |
| Headsets used in testing | HS-60 + AD-55, DUT: 28509, 27951 |
| Other accessories used in testing | - |
| State of sample | Prototype unit |
| Notes | - |

1.2 Maximum Results

The maximum measured SAR values for Head configuration and Body Worn configuration are given in section 1.2.1 and 1.2.2 respectively. The device conforms to the requirements of the standard(s) when the maximum measured SAR value is less than or equal to the limit.

1.2.1 Head Configuration

| Mode | Ch / f (MHz) | Radiated power | Position | Measured SAR value (1g avg) | Scaled* SAR value (1g avg) | SAR limit (1g avg) | Result |
|----------|--------------|----------------|--------------|-----------------------------|----------------------------|--------------------|---------------|
| GSM 850 | 251 / 848.8 | 27.6 dBm ERP | Right, Cheek | 0.595 W/kg | 0.67 W/kg | 1.6 W/kg | PASSED |
| GSM 1900 | 512 / 1850.2 | 29.4 dBm EIRP | Right, Cheek | 0.644 W/kg | 0.72 W/kg | 1.6 W/kg | PASSED |

1.2.2 Body Worn Configuration

| Mode | Ch / f (MHz) | Radiated power | Separation distance | Measured SAR value (1g avg) | Scaled* SAR value (1g avg) | SAR limit (1g avg) | Result |
|------------------|--------------|----------------|---------------------|-----------------------------|----------------------------|--------------------|---------------|
| 2-slot GPRS 850 | 251 / 848.8 | 27.6 dBm ERP | 2.2 cm | 0.467 W/kg | 0.52 W/kg | 1.6 W/kg | PASSED |
| 2-slot GPRS 1900 | 512 / 1850.2 | 29.3 dBm EIRP | 2.2 cm | 0.326 W/kg | 0.37 W/kg | 1.6 W/kg | PASSED |

*SAR values are scaled up by 12% to cover measurement drift.

1.2.3 Maximum Drift

| | |
|--|-----------------------------------|
| Maximum drift covered by 12% scaling up of the SAR values | Maximum drift during measurements |
| 0.5dB | 0.46 dB |

1.2.4 Measurement Uncertainty

| | |
|--------------------------------|---------|
| Expanded Uncertainty (k=2) 95% | ± 25.8% |
|--------------------------------|---------|

2. DESCRIPTION OF THE DEVICE UNDER TEST

| | |
|----------------------|-----------------------------------|
| Device category | Portable |
| Exposure environment | General population / uncontrolled |

| | | | | |
|-----------------------------------|--------------------------|--------------------------|--------------------------|-----------|
| Modes and Bands of Operation | GSM 850 / 1900 | GPRS 850 / 1900 | EGPRS 850 / 1900 | BT |
| Modulation Mode | GMSK | GMSK | GMSK / 8PSK | GFSK |
| Duty Cycle | 1/8 | 1/8 to 2/8 | 1/8 to 2/8 | |
| Transmitter Frequency Range (MHz) | 824 - 849 1850 - 1910 | 824 - 849 1850 - 1910 | 824 - 849 1850 - 1910 | 2402-2480 |

Outside of USA and Canada, the transmitter of the device is capable of operating also in 900 / 1800 MHz bands, which are not part of this filing.

8PSK EGPRS mode was not measured, because maximum averaged output power is lower in 8PSK EGPRS mode than in GPRS mode.

2.1 Description of the Antenna

The device has an internal antenna.

3. TEST CONDITIONS

3.1 Temperature and Humidity

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

3.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester. Communication between the device and the call tester was established by air link.

The device output power was set to maximum power level for all tests; a fully charged battery was used for every test sequence.

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

The radiated output power of the device was measured by a separate test laboratory on the same unit(s) as used for SAR testing.

4. DESCRIPTION OF THE TEST EQUIPMENT

4.1 Measurement System and Components

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

The following table lists calibration dates of SPEAG components:

| Test Equipment | Serial Number | Calibration interval | Calibration expiry |
|--------------------------------|---------------|----------------------|--------------------|
| DAE3 | 573 | 12 months | 2007-09 |
| DAE4 | 682 | 12 months | 2007-08 |
| DAE4 | 710 | 12 months | 2007-09 |
| E-field Probe ES3DV3 | 3116 | 12 months | 2007-08 |
| E-field Probe ES3DV3 | 3117 | 12 months | 2007-08 |
| E-field Probe ES3DV3 | 3118 | 12 months | 2007-08 |
| Dipole Validation Kit, D835V2 | 4d042 | 24 months | 2008-09 |
| Dipole Validation Kit, D1900V2 | 5d026 | 24 months | 2008-02 |
| DASY4 software | Version 4.7 | - | - |

Additional test equipment used in testing:

| Test Equipment | Model | Serial Number | Calibration interval | Calibration expiry |
|-------------------------|----------|---------------|----------------------|--------------------|
| Signal Generator | SME06 | 848650/011 | 36 months | 2008-07 |
| Amplifier | ZHL-42W | E012903 | - | - |
| Power Meter | NRP | 100808 | 24 months | 2008-03 |
| Power Sensor | NRP-Z51 | 100412 | 12 months | 2008-03 |
| Call Tester | CMU200 | 831593 | - | - |
| Call Tester | 4400M | 0411216 | - | - |
| BT Tester | CBT | 100263 | - | - |
| Vector Network Analyzer | AT8753ES | MY40001091 | 12 months | 2007-08 |
| Dielectric Probe Kit | HP85070B | US33020403 | - | - |

4.1.1 Isotropic E-field Probe Type ES3DV3

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

4.2 Phantoms

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

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

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

4.3 Tissue Simulants

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

The depth of the tissue simulant was 15.0 ± 0.5 cm measured from the ear reference point during system checking and device measurements.

4.3.1 Tissue Simulant Recipes

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

800MHz band

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

1900MHz band

| Ingredient | Head (% by weight) | Body (% by weight) |
|-----------------|-----------------------|-----------------------|
| Deionised Water | 54.88 | 69.02 |
| Butyl Diglycol | 44.91 | 30.76 |
| Salt | 0.21 | 0.22 |

4.3.2 System Checking

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

System checking, head tissue simulant

| f [MHz] | Description | SAR [W/kg], 1g | Dielectric Parameters | | Temp [°C] |
|---------|------------------|-------------------|-----------------------|----------------|--------------|
| | | | ϵ_r | σ [S/m] | |
| 835 | Reference result | 2.33 | 42.2 | 0.90 | |
| | ± 10% window | 2.10 - 2.56 | | | |
| | 2007-03-19 | 2.53 | 43.0 | 0.93 | 20.7 |
| 1900 | Reference result | 9.83 | 39.4 | 1.42 | |
| | ± 10% window | 8.85 - 10.81 | | | |
| | 2007-03-19 | 10.3 | 38.4 | 1.40 | 21.4 |

System checking, body tissue simulant

| f [MHz] | Description | SAR [W/kg], 1g | Dielectric Parameters | | Temp [°C] |
|---------|------------------|-------------------|-----------------------|----------------|--------------|
| | | | ϵ_r | σ [S/m] | |
| 835 | Reference result | 2.45 | 53.8 | 0.98 | |
| | ± 10% window | 2.20 - 2.70 | | | |
| | 2007-03-20 | 2.68 | 55.1 | 0.98 | 21.9 |
| 1900 | Reference result | 10.0 | 54.8 | 1.54 | |
| | ± 10% window | 9.0 - 11.0 | | | |
| | 2007-03-15 | 10.9 | 54.6 | 1.61 | 21.8 |

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

4.3.3 Tissue Simulants used in the Measurements

Head tissue simulant measurements

| f [MHz] | Description | Dielectric Parameters | | Temp [°C] |
|---------|-------------------|-----------------------|----------------|-----------|
| | | ϵ_r | σ [S/m] | |
| 836 | Recommended value | 41.5 | 0.90 | |
| | ± 5% window | 39.4 – 43.6 | 0.86 – 0.95 | |
| | 2007-03-19 | 43.0 | 0.93 | 20.7 |
| 1880 | Recommended value | 40.0 | 1.40 | |
| | ± 5% window | 38.0 – 42.0 | 1.33 – 1.47 | |
| | 2007-03-19 | 38.4 | 1.38 | 21.4 |

Body tissue simulant measurements

| f [MHz] | Description | Dielectric Parameters | | Temp [°C] |
|---------|-------------------|-----------------------|----------------|-----------|
| | | ϵ_r | σ [S/m] | |
| 836 | Recommended value | 55.2 | 0.97 | |
| | ± 5% window | 52.4 – 58.0 | 0.92 – 1.02 | |
| | 2007-03-20 | 55.1 | 0.98 | 21.9 |
| 1880 | Recommended value | 53.3 | 1.52 | |
| | ± 5% window | 50.6 – 56.0 | 1.44 – 1.60 | |
| | 2007-03-15 | 54.6 | 1.59 | 21.8 |

5. DESCRIPTION OF THE TEST PROCEDURE

5.1 Device Holder

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



Device holder supplied by SPEAG

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



Nokia spacer

5.1 Test Positions

5.1.1 Against Phantom Head

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

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

5.1.2 Body Worn Configuration

The device was placed in the SPEAG holder using the Nokia spacer and placed below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance indicated in Section 1.2.2 using a separate flat spacer that was removed before the start of the measurements. The device was oriented with its antenna facing the phantom since this orientation gives higher results.

5.2 Scan Procedures

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

5.3 SAR Averaging Methods

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

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

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

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

6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

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

7. RESULTS

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

850 MHz Head SAR results

| Option used | Test configuration | | SAR, averaged over 1g (W/kg) | | |
|--------------|------------------------|-------|------------------------------|--------------------|---------------------|
| | | | Ch 128 824.2 MHz | Ch190 836.6 MHz | Ch 251 848.8 MHz |
| GSM | Power | | 27.7 dBm | 27.1 dBm | 27.6 dBm |
| Slide closed | Left | Cheek | - | 0.439 | - |
| | | Tilt | - | 0.208 | - |
| | Right | Cheek | 0.438 | 0.538 | 0.595 |
| | | Tilt | - | 0.248 | - |
| GSM | Power | | 30.4 dBm | 29.7 dBm | 29.7 dBm |
| Slide open | Left | Cheek | - | 0.365 | - |
| | | Tilt | - | 0.160 | - |
| | Right | Cheek | - | 0.405 | - |
| | | Tilt | - | 0.218 | - |
| Slide closed | Right Cheek, BT active | | - | - | 0.585 |

1900 MHz Head SAR results

| Option used | Test configuration | | SAR, averaged over 1g (W/kg) | | |
|--------------|------------------------|-------|------------------------------|---------------------|----------------------|
| | | | Ch 512 1850.2 MHz | Ch661 1880.0 MHz | Ch 810 1909.8 MHz |
| GSM | Power | | 29.4 dBm | 30.5 dBm | 29.4 dBm |
| Slide closed | Left | Cheek | - | 0.478 | - |
| | | Tilt | - | 0.332 | - |
| | Right | Cheek | 0.644 | 0.492 | 0.583 |
| | | Tilt | - | 0.284 | - |
| GSM | Power | | 31.1 dBm | 33.0 dBm | 31.5 dBm |
| Slide open | Left | Cheek | - | 0.358 | - |
| | | Tilt | - | 0.297 | - |
| | Right | Cheek | - | 0.438 | - |
| | | Tilt | - | 0.231 | - |
| Slide closed | Right Cheek, BT active | | 0.644 | - | - |

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

850 MHz Body SAR results

| Option used | Test configuration | SAR, averaged over 1g (W/kg) | | |
|------------------------------------|------------------------------|------------------------------|--------------------|---------------------|
| | | Ch 128 824.2 MHz | Ch190 836.6 MHz | Ch 251 848.8 MHz |
| GSM | Power | 27.7 dBm | 27.1 dBm | 27.6 dBm |
| Slide closed | Without headset | - | 0.221 | - |
| | Headset HS-60 + AD-55 | - | - | - |
| 2-slot GPRS | Power | 27.6 dBm | 27.0 dBm | 27.6 dBm |
| Slide closed | Without headset | 0.313 | 0.403 | 0.459 |
| | Headset HS-60 + AD-55 | 0.332 | 0.405 | 0.458 |
| 2-slot GPRS Slide closed | Without headset BT active | - | - | 0.467 |

1900 MHz Body SAR results

| Option used | Test configuration | SAR, averaged over 1g (W/kg) | | |
|------------------------------------|------------------------------------|------------------------------|---------------------|----------------------|
| | | Ch 512 1850.2 MHz | Ch661 1880.0 MHz | Ch 810 1909.8 MHz |
| GSM | Power | 29.4 dBm | 30.5 dBm | 29.4 dBm |
| Slide closed | Without headset | - | 0.163 | - |
| | Headset HS-60 + AD-55 | - | - | - |
| 2-slot GPRS | Power | 29.3 dBm | 30.4dBm | 29.2 dBm |
| Slide closed | Without headset | 0.325 | 0.298 | 0.235 |
| | Headset HS-60 + AD-55 | 0.326 | 0.292 | 0.232 |
| 2-slot GPRS Slide closed | Headset HS-60 + AD-55 BT active | 0.310 | - | - |

Plots of the Measurement scans are given in Appendix B.

APPENDIX A: SYSTEM CHECKING SCANS

See the following pages

Date/Time: 2007-03-19 16:20:35

Test Laboratory: TCC Copenhagen

Type: D835V2; Serial: 4d042

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 835 MHz; $\sigma = 0.926$ mho/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 2.71 mW/g

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

Reference Value = 55.2 V/m

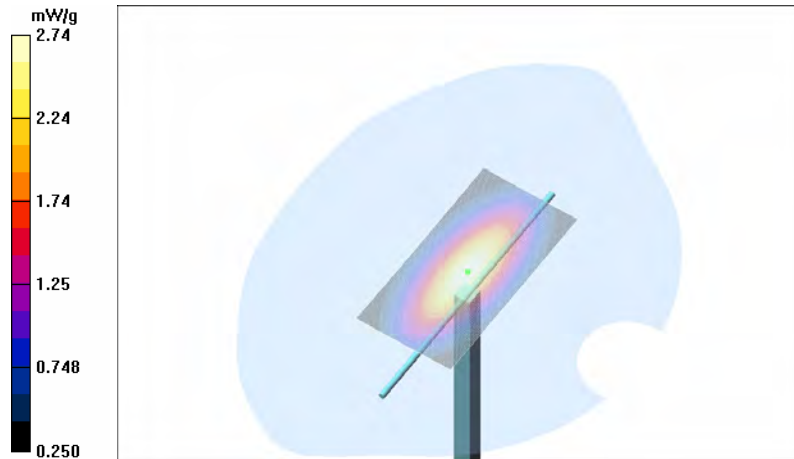
Peak SAR (extrapolated) = 3.71 W/kg

SAR(1 g) = 2.53 mW/g

SAR(10 g) = 1.65 mW/g

Power Drift = -0.003 dB

Maximum value of SAR (measured) = 2.74 mW/g



Date/Time: 2007-03-19 10:06:43

Test Laboratory: TCC Copenhagen

Type: D1900V2; Serial: 5d026

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1900 MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 94.2 V/m

Peak SAR (extrapolated) = 18.9 W/kg

SAR(1 g) = 10.3 mW/g

SAR(10 g) = 5.38 mW/g

Power Drift = 0.001 dB

Maximum value of SAR (measured) = 11.7 mW/g



Date/Time: 2007-03-20 15:23:44

Test Laboratory: TCC Copenhagen

Type: D835V2; Serial: 4d042

Communication System: CW835

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.9\text{ C}$

Medium parameters used: $f = 835\text{ MHz}$; $\sigma = 0.977\text{ mho/m}$; $\epsilon_r = 55.1$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2006-08-31
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2006-09-08
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (interpolated) = 2.89 mW/g

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

Reference Value = 55.0 V/m

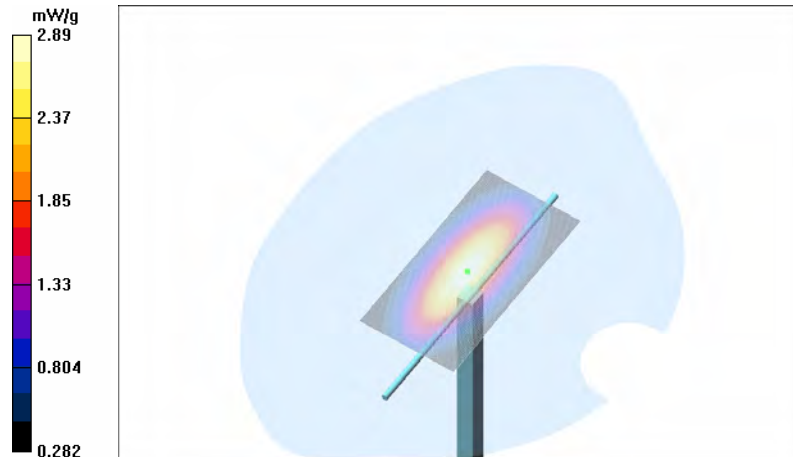
Peak SAR (extrapolated) = 3.95 W/kg

SAR(1 g) = 2.68 mW/g

SAR(10 g) = 1.76 mW/g

Power Drift = 0.019 dB

Maximum value of SAR (measured) = 2.89 mW/g



Date/Time: 2007-03-15 15:37:49

Test Laboratory: TCC Copenhagen

Type: D1900V2; Serial: 5d026

Communication System: CW1900

Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 1900 MHz; $\sigma = 1.61$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.66, 4.66, 4.66); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

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

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

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

Reference Value = 89.4 V/m

Peak SAR (extrapolated) = 20.0 W/kg

SAR(1 g) = 10.9 mW/g

SAR(10 g) = 5.63 mW/g

Power Drift = -0.002 dB

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



APPENDIX B: MEASUREMENT SCANS

See the following pages

Date/Time: 2007-03-19 17:15:24

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

Cheek position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.66 V/m

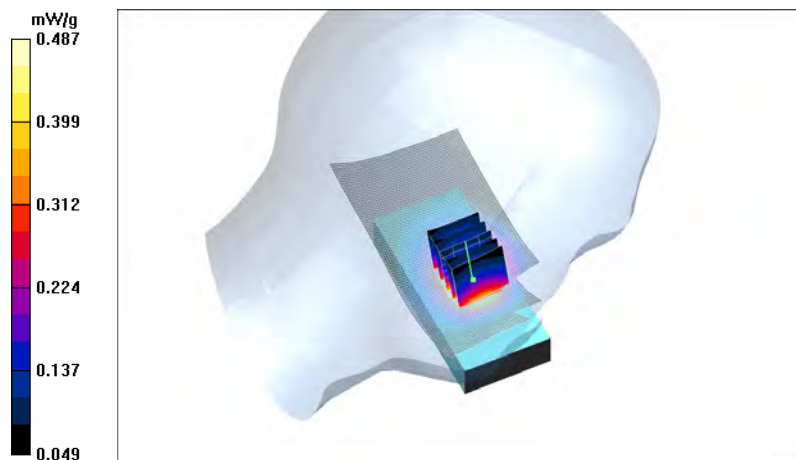
Peak SAR (extrapolated) = 0.593 W/kg

SAR(1 g) = 0.439 mW/g

SAR(10 g) = 0.308 mW/g

Power Drift = -0.160 dB

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



Date/Time: 2007-03-19 17:28:27

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.221 mW/g

Tilt position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.9 V/m

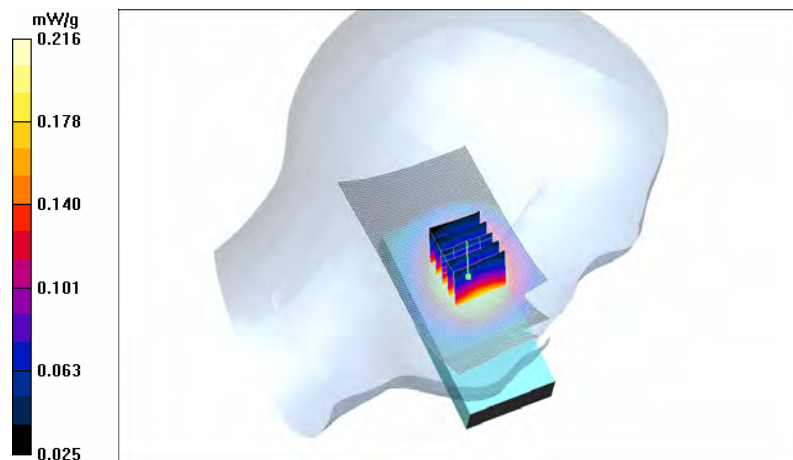
Peak SAR (extrapolated) = 0.264 W/kg

SAR(1 g) = 0.208 mW/g

SAR(10 g) = 0.155 mW/g

Power Drift = -0.275 dB

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



Date/Time: 2007-03-19 19:20:29

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 849 MHz; $\sigma = 0.938$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - High - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.625 mW/g

Cheek position - High - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.5 V/m

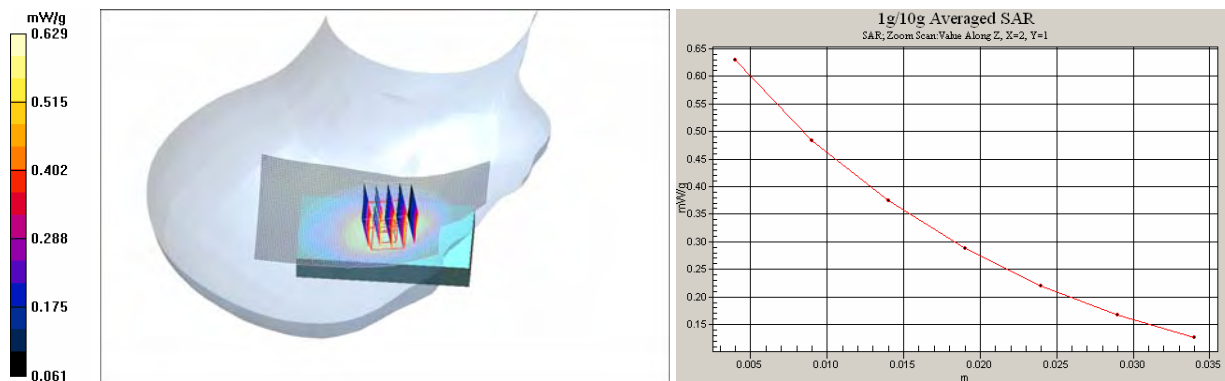
Peak SAR (extrapolated) = 0.779 W/kg

SAR(1 g) = 0.595 mW/g

SAR(10 g) = 0.423 mW/g

Power Drift = -0.001 dB

Maximum value of SAR (measured) = 0.629 mW/g



Date/Time: 2007-03-19 19:05:40

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.263 mW/g

Tilt position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.0 V/m

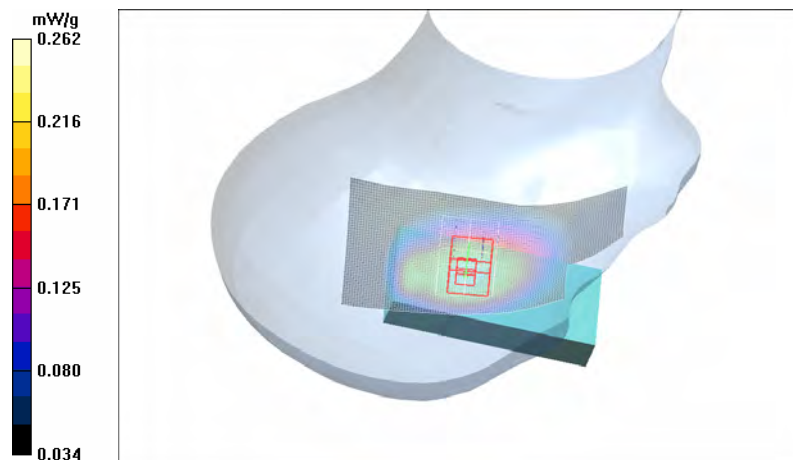
Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.248 mW/g

SAR(10 g) = 0.182 mW/g

Power Drift = -0.037 dB

Maximum value of SAR (measured) = 0.262 mW/g



Date/Time: 2007-03-19 18:22:05

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle - Slide open/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.399 mW/g

Cheek position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.97 V/m

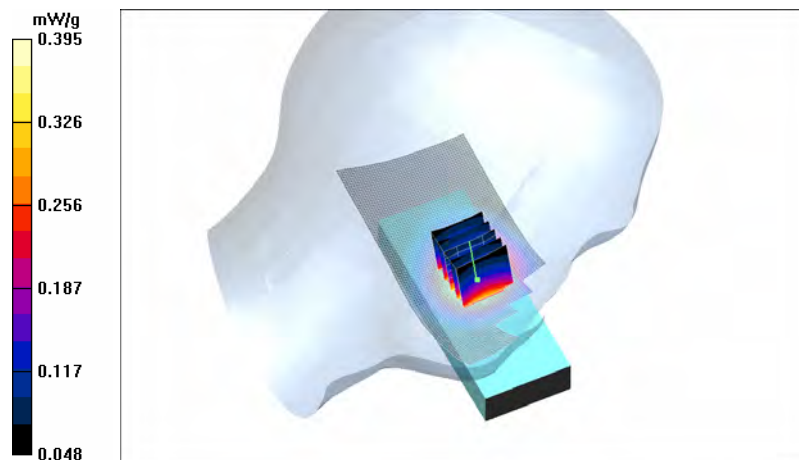
Peak SAR (extrapolated) = 0.476 W/kg

SAR(1 g) = 0.365 mW/g

SAR(10 g) = 0.262 mW/g

Power Drift = -0.031 dB

Maximum value of SAR (measured) = 0.395 mW/g



Date/Time: 2007-03-19 18:37:00

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide open/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.170 mW/g

Tilt position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.57 V/m

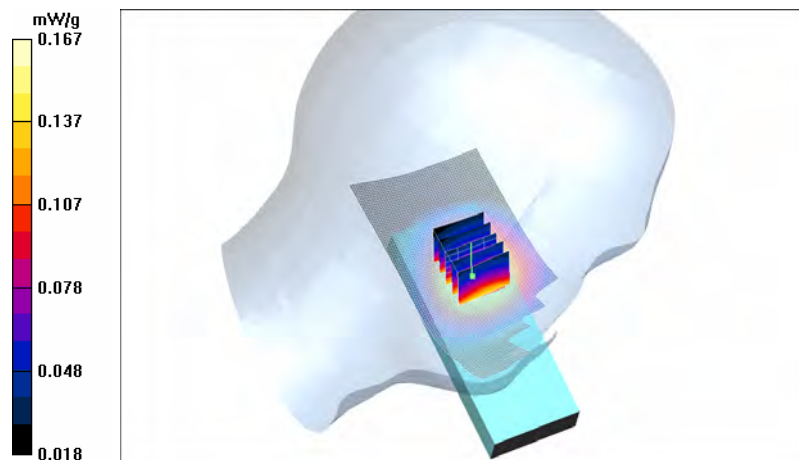
Peak SAR (extrapolated) = 0.201 W/kg

SAR(1 g) = 0.160 mW/g

SAR(10 g) = 0.120 mW/g

Power Drift = -0.062 dB

Maximum value of SAR (measured) = 0.167 mW/g



Date/Time: 2007-03-19 19:44:35

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle - Slide open/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.415 mW/g

Cheek position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.6 V/m

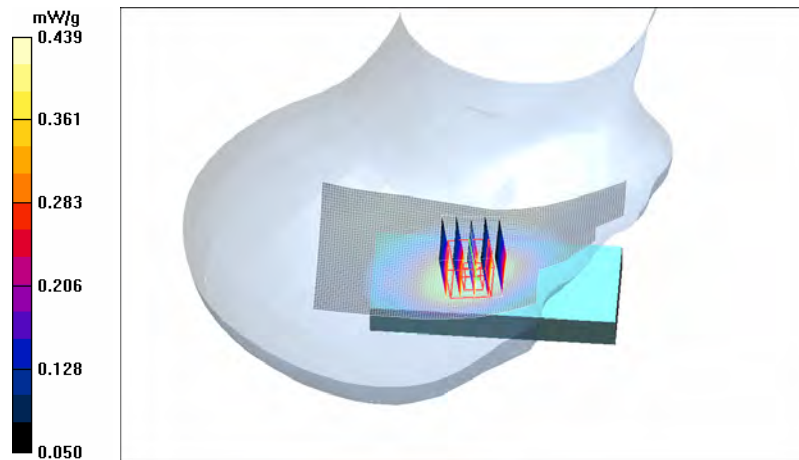
Peak SAR (extrapolated) = 0.532 W/kg

SAR(1 g) = 0.405 mW/g

SAR(10 g) = 0.287 mW/g

Power Drift = -0.009 dB

Maximum value of SAR (measured) = 0.439 mW/g



Date/Time: 2007-03-19 19:59:16

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 837 MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 42.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide open/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.231 mW/g

Tilt position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.6 V/m

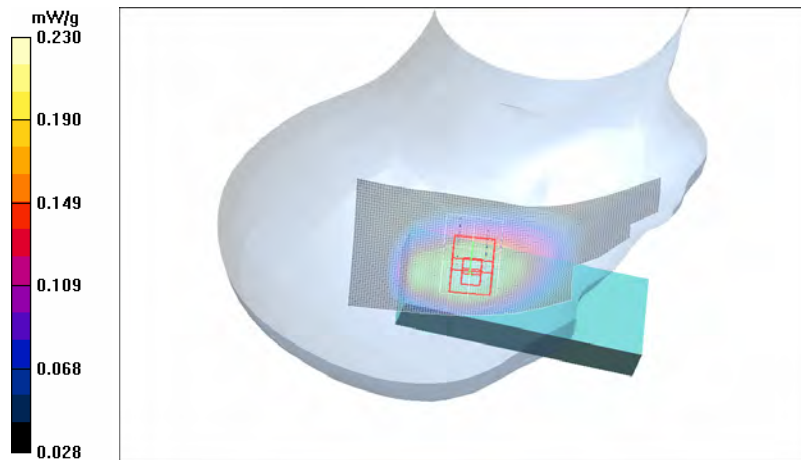
Peak SAR (extrapolated) = 0.279 W/kg

SAR(1 g) = 0.218 mW/g

SAR(10 g) = 0.159 mW/g

Power Drift = -0.062 dB

Maximum value of SAR (measured) = 0.230 mW/g



Date/Time: 2007-03-19 21:00:51

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: Head 850; Medium Notes: Medium Temperature: t=20.7 C

Medium parameters used: f = 849 MHz; $\sigma = 0.938$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(5.78, 5.78, 5.78); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 1; Type: Twin Phantom; Serial: TP-1215
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - High - Slide closed - BT active/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.647 mW/g

Cheek position - High - Slide closed - BT active/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.2 V/m

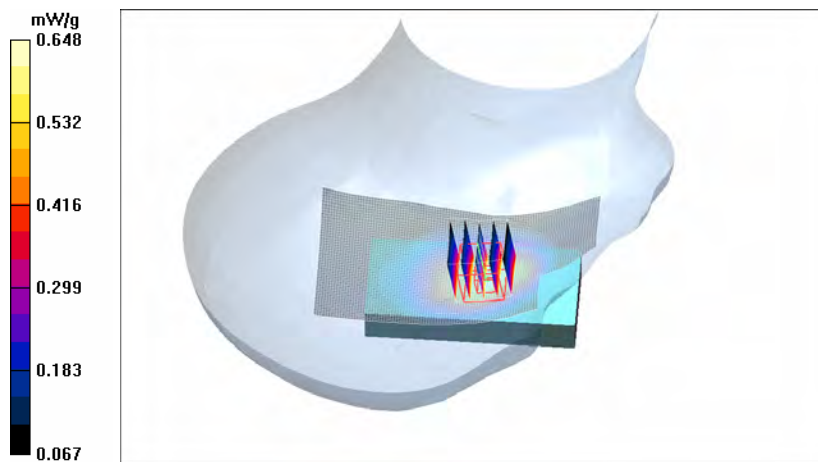
Peak SAR (extrapolated) = 0.791 W/kg

SAR(1 g) = 0.585 mW/g

SAR(10 g) = 0.410 mW/g

Power Drift = 0.009 dB

Maximum value of SAR (measured) = 0.648 mW/g



Date/Time: 2007-03-19 11:34:04

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle – Slide closed/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.502 mW/g

Cheek position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.86 V/m

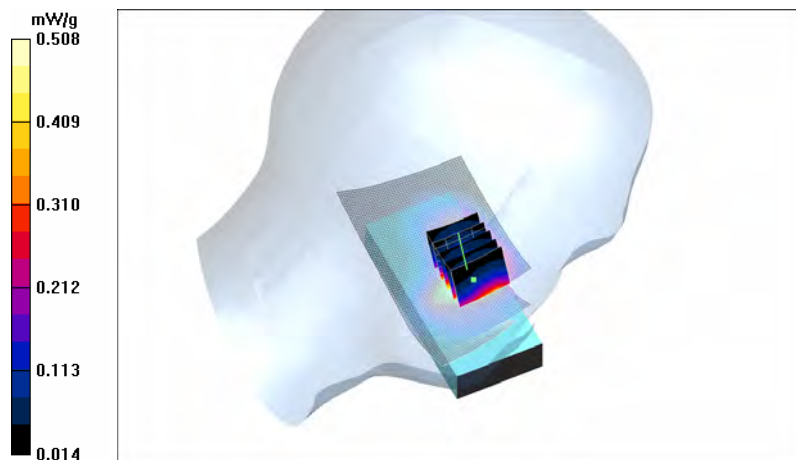
Peak SAR (extrapolated) = 0.703 W/kg

SAR(1 g) = 0.478 mW/g

SAR(10 g) = 0.299 mW/g

Power Drift = -0.187 dB

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



Date/Time: 2007-03-19 11:47:40

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide closed/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

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

Tilt position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.7 V/m

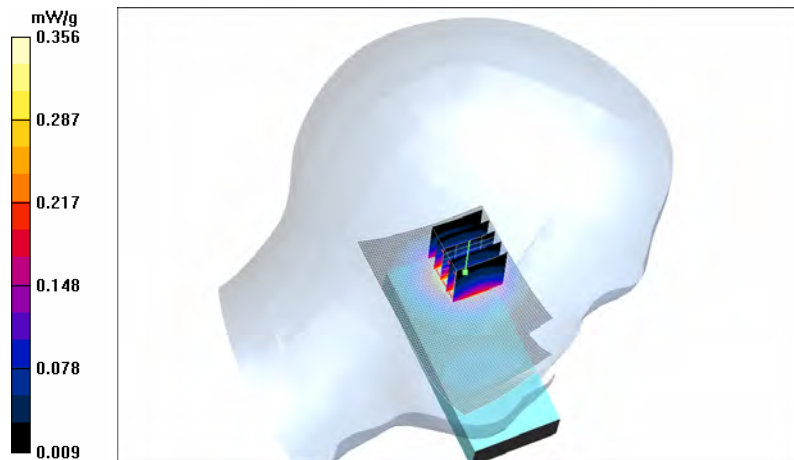
Peak SAR (extrapolated) = 0.500 W/kg

SAR(1 g) = 0.332 mW/g

SAR(10 g) = 0.203 mW/g

Power Drift = 0.047 dB

Maximum value of SAR (measured) = 0.356 mW/g



Date/Time: 2007-03-19 13:27:16

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Low - Slide closed/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.708 mW/g

Cheek position - Low - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.15 V/m

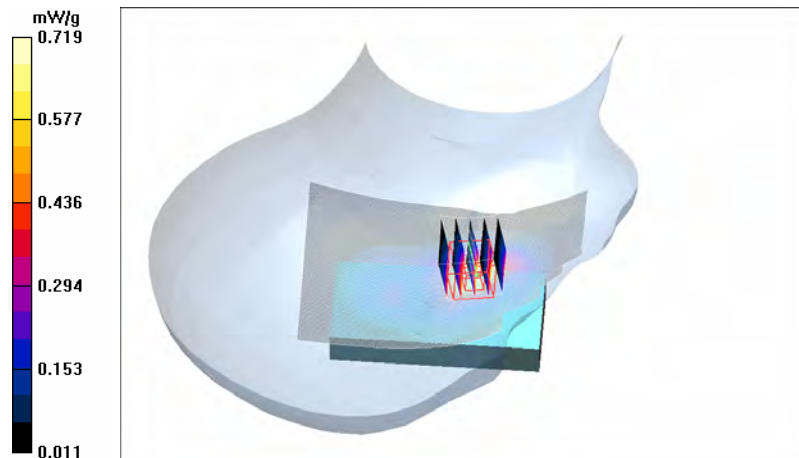
Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.644 mW/g

SAR(10 g) = 0.378 mW/g

Power Drift = 0.158 dB

Maximum value of SAR (measured) = 0.719 mW/g



Date/Time: 2007-03-19 13:09:09

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ϵ_r = 38.4; ρ = 1000 kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.355 mW/g

Tilt position - Middle - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.7 V/m

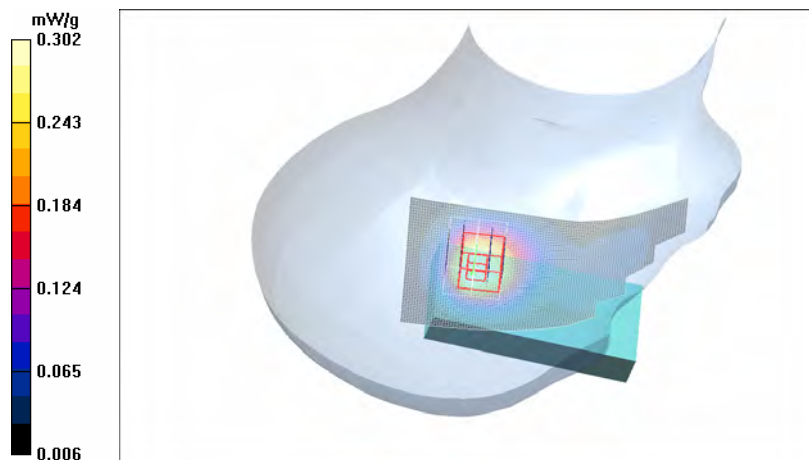
Peak SAR (extrapolated) = 0.400 W/kg

SAR(1 g) = 0.284 mW/g

SAR(10 g) = 0.181 mW/g

Power Drift = -0.039 dB

Maximum value of SAR (measured) = 0.302 mW/g



Date/Time: 2007-03-19 14:40:34

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle - Slide open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.400 mW/g

Cheek position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.23 V/m

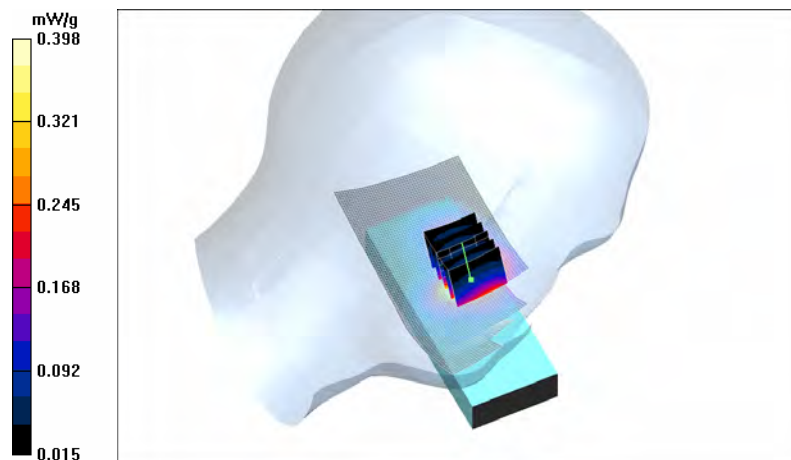
Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.358 mW/g

SAR(10 g) = 0.217 mW/g

Power Drift = 0.078 dB

Maximum value of SAR (measured) = 0.398 mW/g



Date/Time: 2007-03-19 14:54:18

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

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

Tilt position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.0 V/m

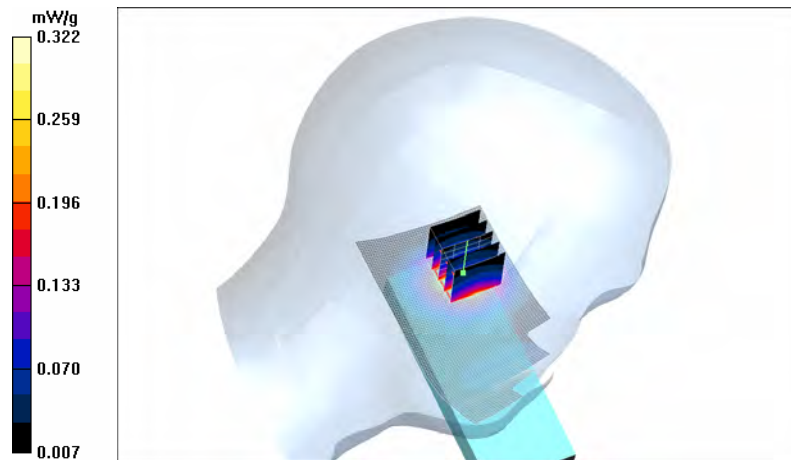
Peak SAR (extrapolated) = 0.442 W/kg

SAR(1 g) = 0.297 mW/g

SAR(10 g) = 0.181 mW/g

Power Drift = 0.034 dB

Maximum value of SAR (measured) = 0.322 mW/g



Date/Time: 2007-03-19 15:07:54

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Middle - Slide open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.469 mW/g

Cheek position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.83 V/m

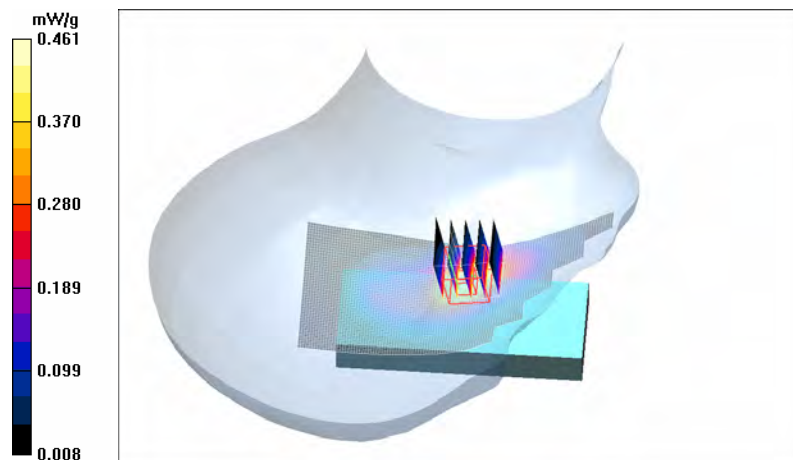
Peak SAR (extrapolated) = 0.683 W/kg

SAR(1 g) = 0.438 mW/g

SAR(10 g) = 0.259 mW/g

Power Drift = -0.009 dB

Maximum value of SAR (measured) = 0.461 mW/g



Date/Time: 2007-03-19 15:21:55

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Tilt position - Middle - Slide open/Area Scan (51x111x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.292 mW/g

Tilt position - Middle - Slide open/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.67 V/m

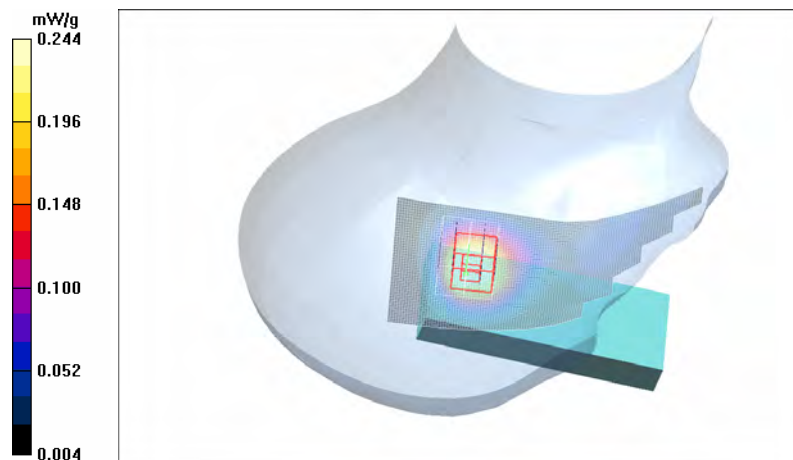
Peak SAR (extrapolated) = 0.324 W/kg

SAR(1 g) = 0.231 mW/g

SAR(10 g) = 0.149 mW/g

Power Drift = 0.001 dB

Maximum value of SAR (measured) = 0.244 mW/g



Date/Time: 2007-03-19 14:01:51

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: Head 1900; Medium Notes: Medium Temperature: t=21.4 C

Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3117; Probe Notes:
- ConvF(5.02, 5.02, 5.02); Calibrated: 2006-08-29
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn710; Calibrated: 2006-09-13
- Phantom: SAM 6; Type: SAM Twin Phantom; Serial: TP-1301
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Cheek position - Low – Slide closed - BT active/Area Scan (91x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.704 mW/g

Cheek position - Low – Slide closed - BT active/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.31 V/m

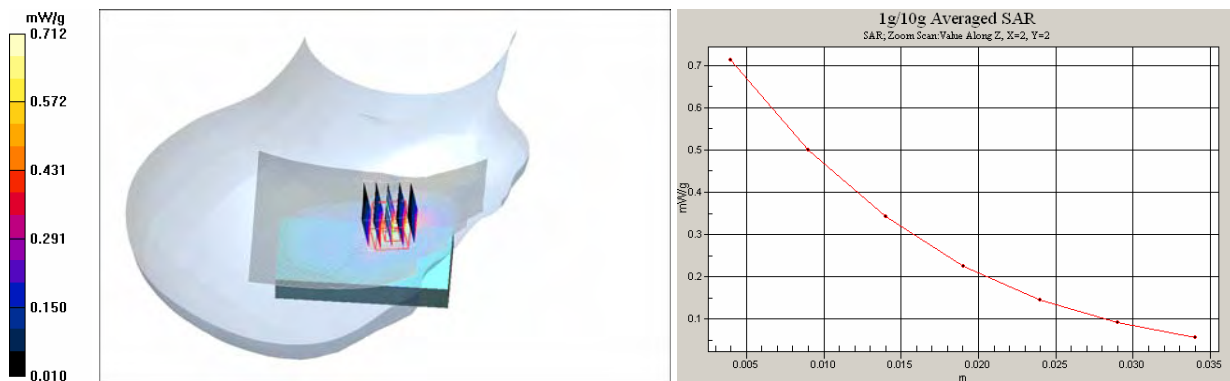
Peak SAR (extrapolated) = 0.936 W/kg

SAR(1 g) = 0.644 mW/g

SAR(10 g) = 0.380 mW/g

Power Drift = 0.055 dB

Maximum value of SAR (measured) = 0.712 mW/g



Date/Time: 2007-03-20 15:55:25

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM850

Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.9$ C

Medium parameters used: $f = 837$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r = 55$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2006-08-31
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2006-09-08
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - Middle - No Accessory - Slide closed/Area Scan (51x101x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 0.238 mW/g

Body - Middle - No Accessory - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.66 V/m

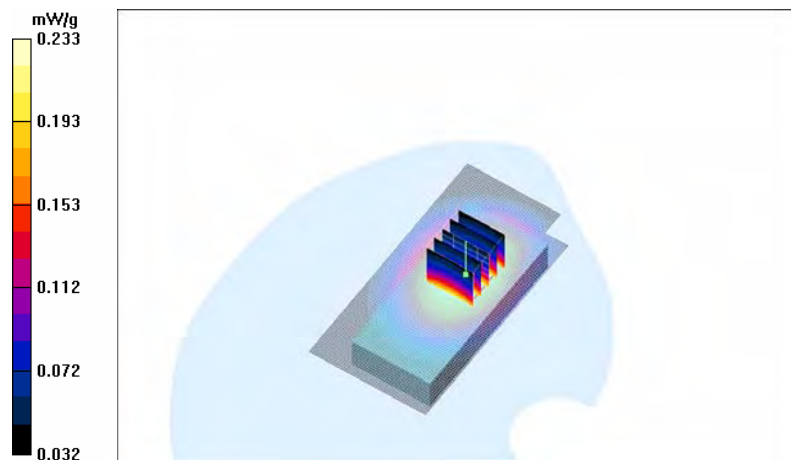
Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.221 mW/g

SAR(10 g) = 0.162 mW/g

Power Drift = -0.209 dB

Maximum value of SAR (measured) = 0.233 mW/g



Date/Time: 2007-03-20 16:22:18

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: $t = 21.9$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 0.989$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2006-08-31
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2006-09-08
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - High - No Accessory - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.491 mW/g

Body - High - No Accessory - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.0 V/m

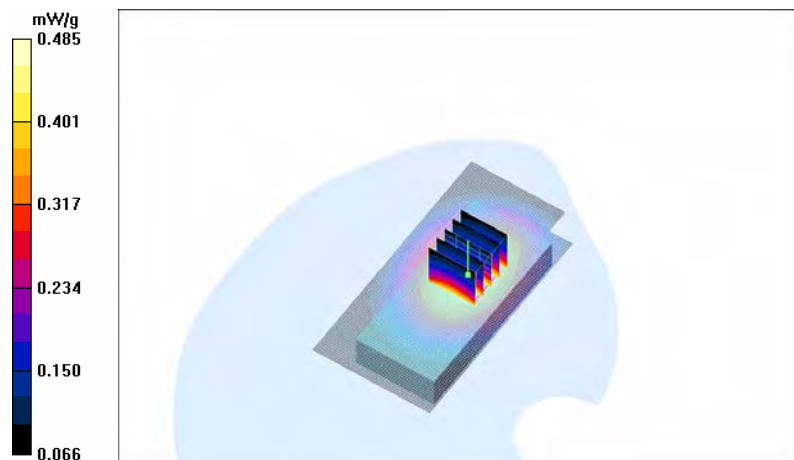
Peak SAR (extrapolated) = 0.604 W/kg

SAR(1 g) = 0.459 mW/g

SAR(10 g) = 0.335 mW/g

Power Drift = -0.049 dB

Maximum value of SAR (measured) = 0.485 mW/g



Date/Time: 2007-03-20 17:14:07

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: t= 21.9 C

Medium parameters used: f = 849 MHz; σ = 0.989 mho/m; ϵ_r = 54.9; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2006-08-31
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2006-09-08
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - High - HS-60 + AD-55 - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.486 mW/g

Body - High - HS-60 + AD-55 - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.9 V/m

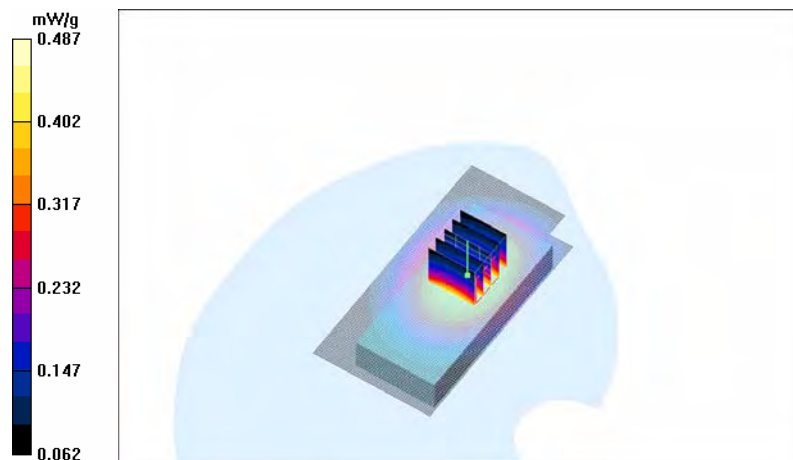
Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.458 mW/g

SAR(10 g) = 0.334 mW/g

Power Drift = -0.064 dB

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



Date/Time: 2007-03-20 17:33:30

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.2

Medium: Body 850; Medium Notes: Medium Temperature: t= 21.9 C

Medium parameters used: f = 849 MHz; $\sigma = 0.989$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3118; Probe Notes:
- ConvF(5.65, 5.65, 5.65); Calibrated: 2006-08-31
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn573; Calibrated: 2006-09-08
- Phantom: SAM 5; Type: Twin Phantom; Serial: TP-1412
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - High - No Accessory - Slide closed - BT active/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

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

Body - High - No Accessory - Slide closed - BT active/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.2 V/m

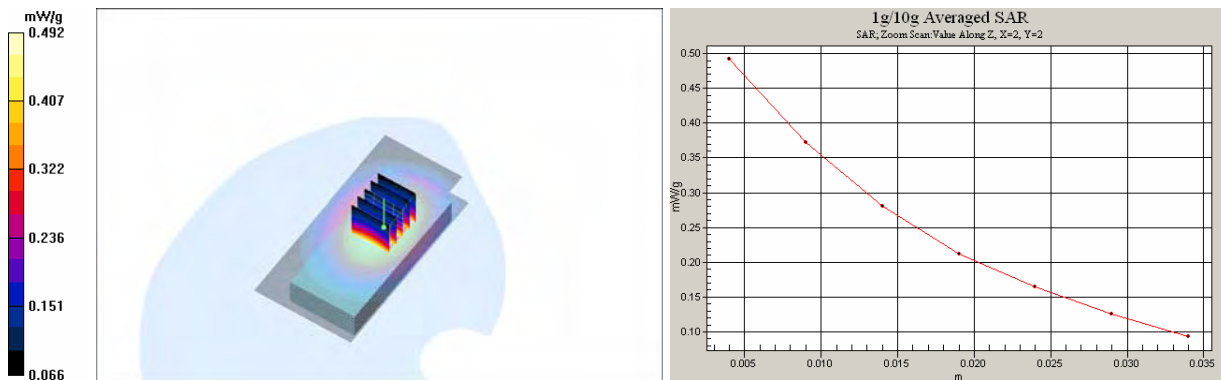
Peak SAR (extrapolated) = 0.650 W/kg

SAR(1 g) = 0.467 mW/g

SAR(10 g) = 0.340 mW/g

Power Drift = -0.111 dB

Maximum value of SAR (measured) = 0.492 mW/g



Date/Time: 2007-03-15 16:15:13

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: GSM 1900

Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used: f = 1880 MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.66, 4.66, 4.66); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - Middle - No Accessory - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.178 mW/g

Body - Middle - No Accessory - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.02 V/m

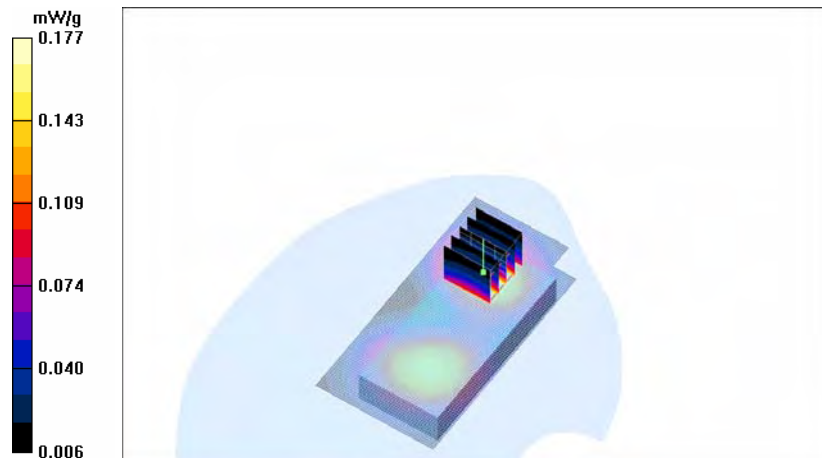
Peak SAR (extrapolated) = 0.262 W/kg

SAR(1 g) = 0.163 mW/g

SAR(10 g) = 0.100 mW/g

Power Drift = -0.047 dB

Maximum value of SAR (measured) = 0.177 mW/g



Date/Time: 2007-03-15 16:54:38

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.2

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.66, 4.66, 4.66); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - Low - No Accessory - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.357 mW/g

Body - Low - No Accessory - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.9 V/m

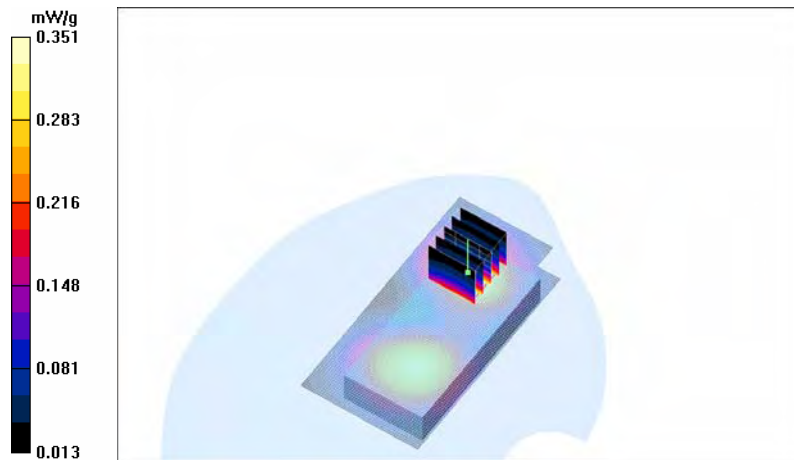
Peak SAR (extrapolated) = 0.521 W/kg

SAR(1 g) = 0.325 mW/g

SAR(10 g) = 0.199 mW/g

Power Drift = -0.009 dB

Maximum value of SAR (measured) = 0.351 mW/g



Date/Time: 2007-03-15 17:15:25

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.2

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.56 mho/m; ϵ_r = 54.7; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.66, 4.66, 4.66); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - Low - HS-60 + AD-55 - Slide closed/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.353 mW/g

Body - Low - HS-60 + AD-55 - Slide closed/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.6 V/m

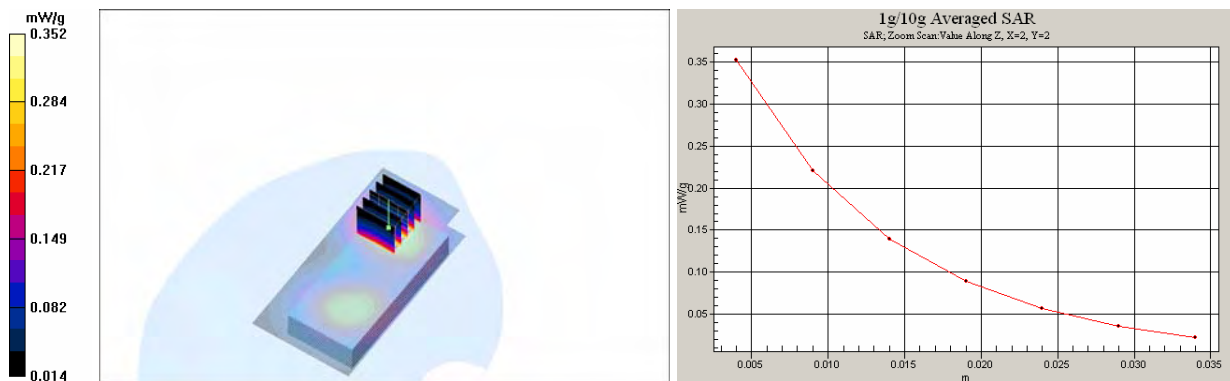
Peak SAR (extrapolated) = 0.518 W/kg

SAR(1 g) = 0.326 mW/g

SAR(10 g) = 0.202 mW/g

Power Drift = -0.115 dB

Maximum value of SAR (measured) = 0.352 mW/g



Date/Time: 2007-03-15 18:13:36

Test Laboratory: TCC Copenhagen
Type: RM-164; Serial: 004401/01/024959/3

Communication System: 2-slot GPRS1900

Frequency: 1850.2 MHz; Duty Cycle: 1:4.2

Medium: Body 1900; Medium Notes: Medium Temperature: t=21.8 C

Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 54.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3116; Probe Notes:
- ConvF(4.66, 4.66, 4.66); Calibrated: 2006-08-18
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn682; Calibrated: 2006-08-09
- Phantom: SAM 2; Type: Twin Phantom; Serial: TP-1037
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body - Low - HS-60 + AD-55 - Slide closed - BT active/Area Scan (51x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.341 mW/g

Body - Low - HS-60 + AD-55 - Slide closed - BT active/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.1 V/m

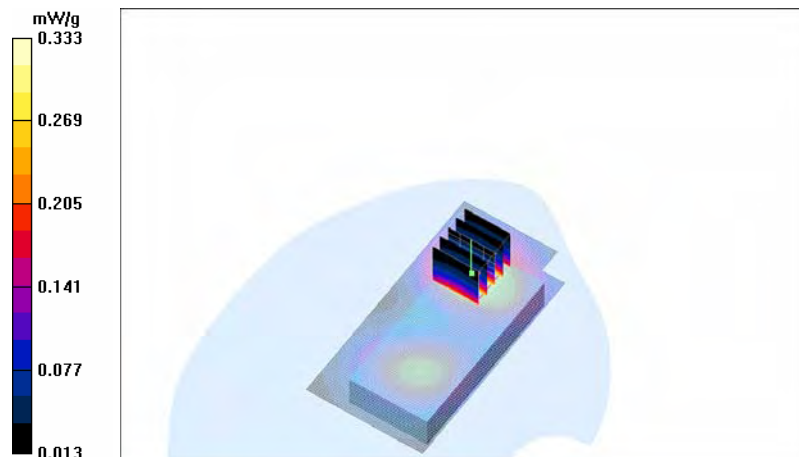
Peak SAR (extrapolated) = 0.492 W/kg

SAR(1 g) = 0.310 mW/g

SAR(10 g) = 0.192 mW/g

Power Drift = -0.112 dB

Maximum value of SAR (measured) = 0.333 mW/g



APPENDIX C: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)

See the following pages



Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Nokia DK TCC**

Certificate No: **ES3-3116_Aug06**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3116**

Calibration procedure(s) **QA CAL-01.v5
Calibration procedure for dosimetric E-field probes**

Calibration date: **August 18, 2006**

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 E4419B | GB41293874 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41495277 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41498087 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 10-Aug-06 (METAS, No. 217-00592) | Aug-07 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 4-Apr-06 (METAS, No. 251-00558) | Apr-07 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 10-Aug-06 (METAS, No. 217-00593) | Aug-07 |
| Reference Probe ES3DV2 | SN: 3013 | 2-Jan-06 (SPEAG, No. ES3-3013_Jan06) | Jan-07 |
| DAE4 | SN: 654 | 21-Jun-06 (SPEAG, No. DAE4-654_Jun06) | Jun-07 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Nov-05) | In house check: Nov 06 |

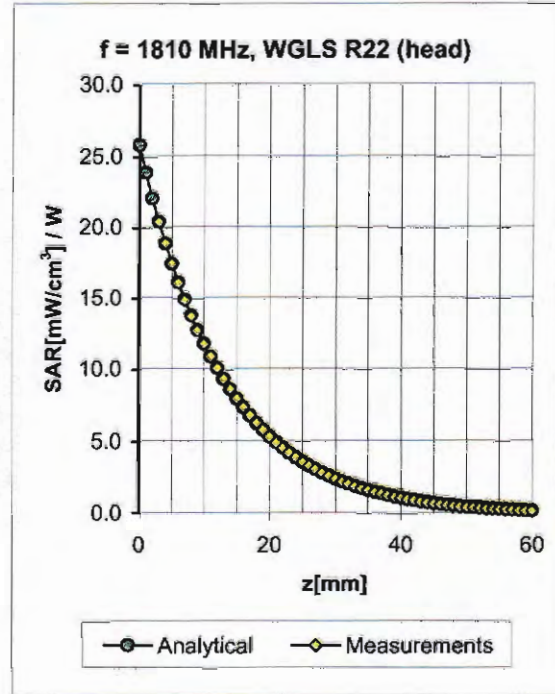
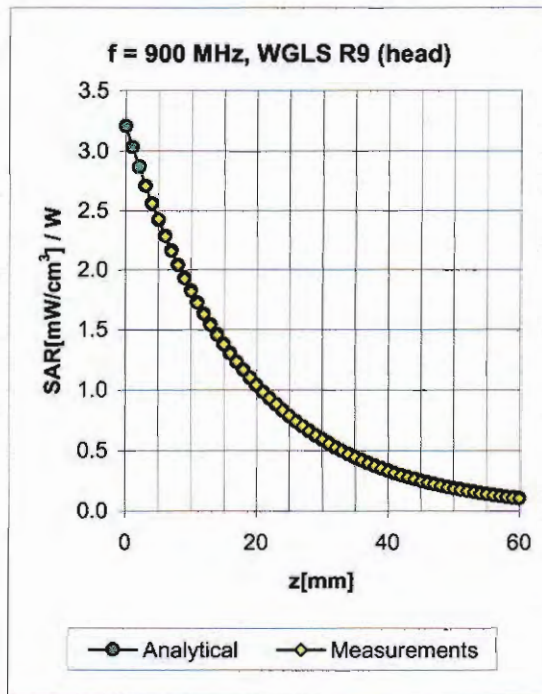
Calibrated by: **Katja Pokovic** Technical Manager

Approved by: **Niels Kuster** Quality Manager

Issued: August 30, 2006

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Conversion Factor Assessment



| f [MHz] | Validity [MHz] ^c | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF Uncertainty |
|---------|-----------------------------|------|--------------|--------------|-------|-------|--------------------|
| 900 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.97 ± 5% | 0.48 | 1.48 | 5.78 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.99 | 1.10 | 5.09 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.60 | 1.35 | 4.78 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.95 | 1.15 | 4.43 ± 11.8% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.80 | 1.32 | 5.70 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.50 | 1.53 | 4.66 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.93 | 1.21 | 4.51 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.89 | 1.13 | 4.20 ± 11.8% (k=2) |

^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.



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Accreditation No.: **SCS 108**

Client **Nokia DK TCC**

Certificate No: **ES3-3117_Aug06**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3117**

Calibration procedure(s) **QA CAL-01.v5
Calibration procedure for dosimetric E-field probes**

Calibration date: **August 29, 2006**

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)

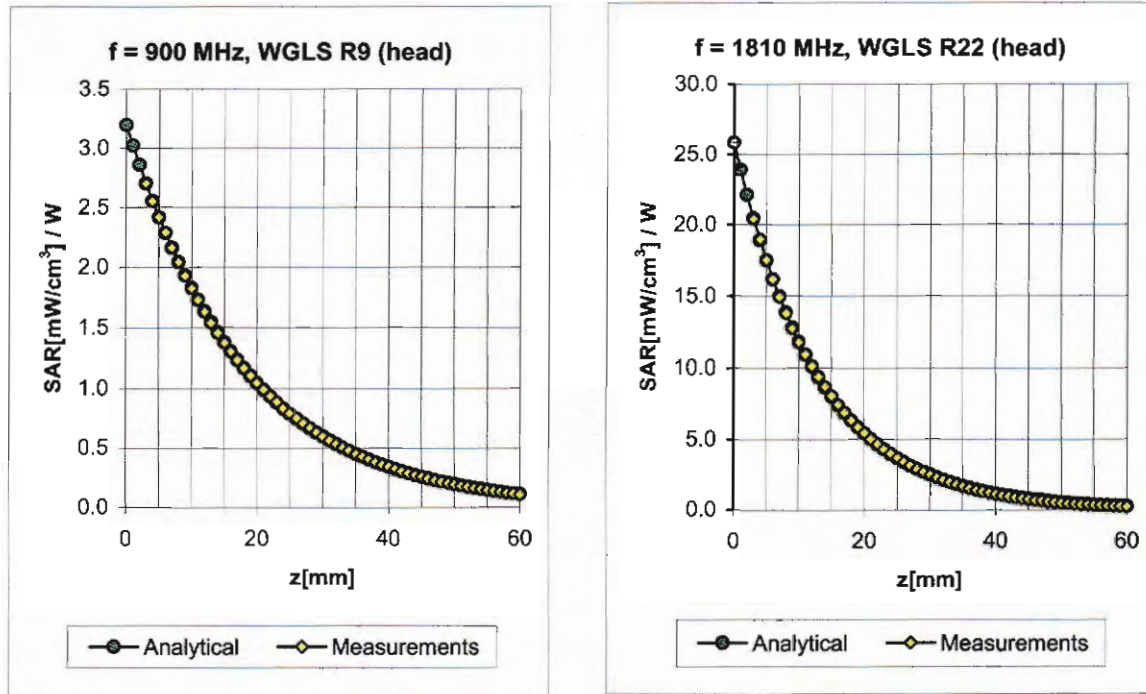
| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|----------------------------|-----------------|---|------------------------|
| Power meter E4419B | GB41293874 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41495277 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41498087 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 10-Aug-06 (METAS, No. 217-00592) | Aug-07 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 4-Apr-06 (METAS, No. 251-00558) | Apr-07 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 10-Aug-06 (METAS, No. 217-00593) | Aug-07 |
| Reference Probe ES3DV2 | SN: 3013 | 2-Jan-06 (SPEAG, No. ES3-3013_Jan06) | Jan-07 |
| DAE4 | SN: 654 | 21-Jun-06 (SPEAG, No. DAE4-654_Jun06) | Jun-07 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Nov-05) | In house check: Nov 06 |

| | Name | Function | Signature |
|----------------|---------------|-------------------|-----------|
| Calibrated by: | Katja Pokovic | Technical Manager | |
| Approved by: | Niels Kuster | Quality Manager | |

Issued: August 30, 2006

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Conversion Factor Assessment



| f [MHz] | Validity [MHz] ^c | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF Uncertainty |
|---------|-----------------------------|------|--------------|--------------|-------|-------|--------------------|
| 900 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.97 ± 5% | 0.47 | 1.42 | 5.95 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.46 | 1.71 | 5.02 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.30 | 1.97 | 4.76 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.48 | 1.48 | 4.37 ± 11.8% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.64 | 1.24 | 5.71 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.35 | 2.14 | 4.67 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.82 | 1.32 | 4.44 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.99 | 1.00 | 4.16 ± 11.8% (k=2) |

^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.



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Accreditation No.: **SCS 108**

Client **Nokia DK R&D**

Certificate No: **ES3-3118_Aug06**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3118**

Calibration procedure(s) **QA CAL-01.v5
Calibration procedure for dosimetric E-field probes**

Calibration date: **August 31, 2006**

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 E4419B | GB41293874 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41495277 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Power sensor E4412A | MY41498087 | 5-Apr-06 (METAS, No. 251-00557) | Apr-07 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 10-Aug-06 (METAS, No. 217-00592) | Aug-07 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 4-Apr-06 (METAS, No. 251-00558) | Apr-07 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 10-Aug-06 (METAS, No. 217-00593) | Aug-07 |
| Reference Probe ES3DV2 | SN: 3013 | 2-Jan-06 (SPEAG, No. ES3-3013_Jan06) | Jan-07 |
| DAE4 | SN: 654 | 21-Jun-06 (SPEAG, No. DAE4-654_Jun06) | Jun-07 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Nov-05) | In house check: Nov 06 |

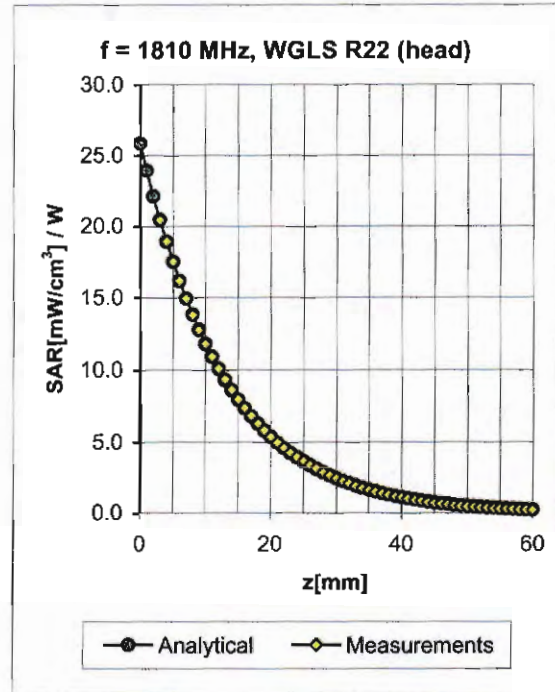
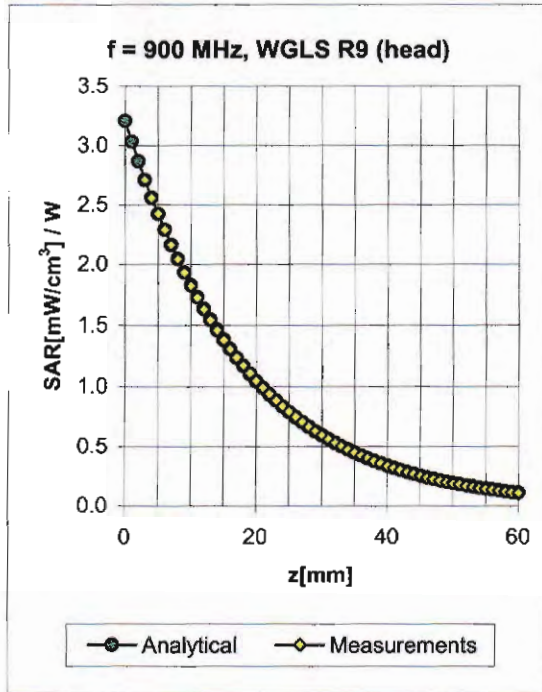
Calibrated by: **Name: Katja Pokovic, Function: Technical Manager**

Approved by: **Name: Niels Kuster, Function: Quality Manager**

Issued: September 8, 2006

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Conversion Factor Assessment



| f [MHz] | Validity [MHz] ^c | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF Uncertainty |
|---------|-----------------------------|------|--------------|--------------|-------|-------|--------------------|
| 900 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.97 ± 5% | 0.64 | 1.26 | 5.77 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.99 | 1.15 | 4.92 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.97 | 1.14 | 4.68 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.82 | 1.25 | 4.31 ± 11.8% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.54 | 1.34 | 5.65 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.72 | 1.56 | 4.62 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.73 | 1.51 | 4.40 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.99 | 1.00 | 4.15 ± 11.8% (k=2) |

^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.

APPENDIX D: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)

See the following pages



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Accreditation No.: **SCS 108**

Client **Nokia DK R&D**

Certificate No: **D835V2-4d042_Sep06**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 4d042**

Calibration procedure(s) **QA CAL-05.v6
Calibration procedure for dipole validation kits**

Calibration date: **September 19, 2006**

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 | 04-Oct-05 (METAS, No. 251-00516) | Oct-06 |
| Power sensor HP 8481A | US37292783 | 04-Oct-05 (METAS, No. 251-00516) | Oct-06 |
| Reference 20 dB Attenuator | SN: 5086 (20g) | 10-Aug-06 (METAS, No 217-00591) | Aug-07 |
| Reference 10 dB Attenuator | SN: 5047.2 (10r) | 10-Aug-06 (METAS, No 217-00591) | Aug-07 |
| Reference Probe ET3DV6 | SN 1507 | 28-Oct-05 (SPEAG, No. ET3-1507_Oct05) | Oct-06 |
| DAE4 | SN 601 | 15-Dec-05 (SPEAG, No. DAE4-601_Dec05) | Dec-06 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (SPEAG, in house check Oct-05) | In house check: Oct-07 |
| RF generator Agilent E4421B | MY41000675 | 11-May-05 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (SPEAG, in house check Nov-05) | In house check: Nov-06 |

| Name | Function | Signature |
|-----------------------------------|-----------------------|----------------------|
| Calibrated by: Mike Meili | Laboratory Technician | <i>M. Meili</i> |
| Approved by: Katja Pokovic | Technical Manager | <i>Katja Pokovic</i> |

Issued: September 19, 2006

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DASY4 Validation Report for Head TSL

Date/Time: 14.08.2006 14:29:57

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d042

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL900;

Medium parameters used: $f = 835$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(6.09, 6.09, 6.09); Calibrated: 28.10.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 15.12.2005
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:

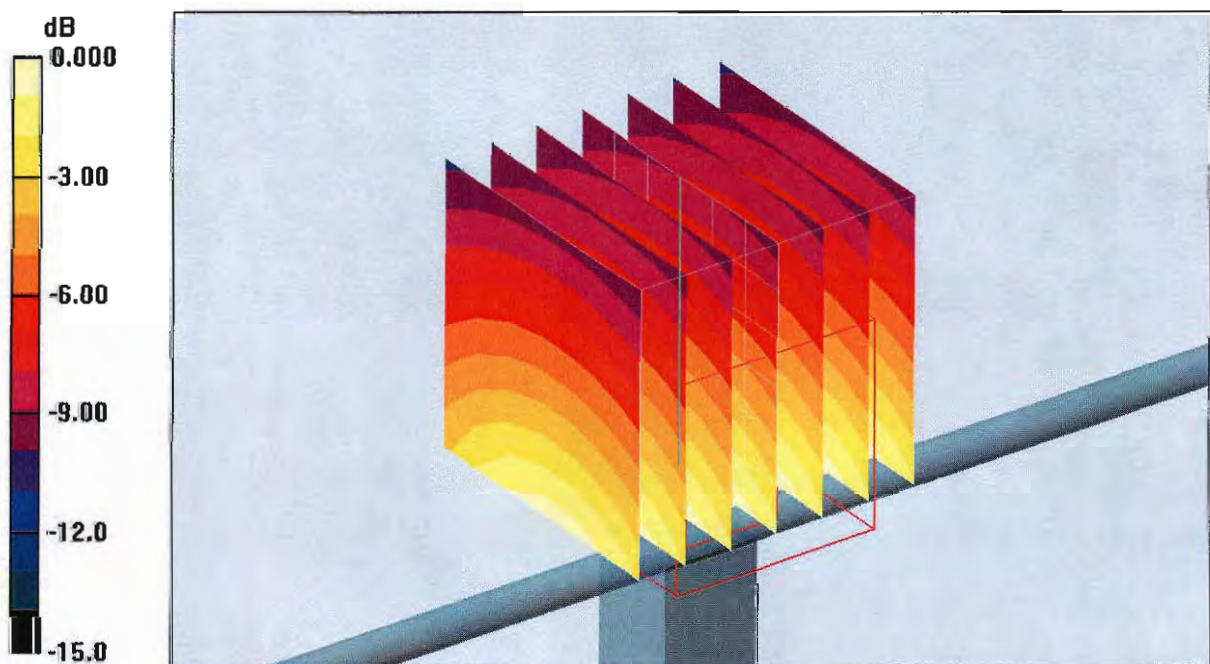
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.3 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 3.46 W/kg

SAR(1 g) = 2.33 mW/g; SAR(10 g) = 1.53 mW/g

Maximum value of SAR (measured) = 2.52 mW/g



0 dB = 2.52mW/g

DASY4 Validation Report for Body TSL

Date/Time: 19.09.2006 15:10:39

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d042

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: MSL 900;

Medium parameters used: $f = 835$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(5.84, 5.84, 5.84); Calibrated: 28.10.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 15.12.2005
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:

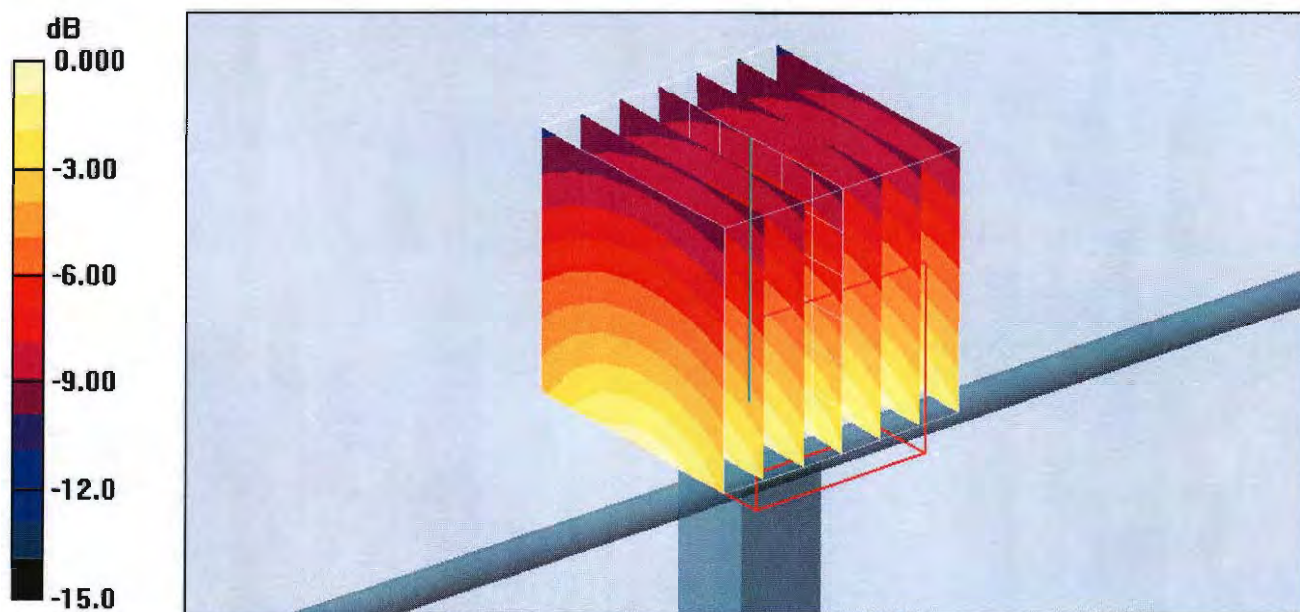
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.8 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 3.54 W/kg

SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.62 mW/g

Maximum value of SAR (measured) = 2.61 mW/g



0 dB = 2.61mW/g



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Accreditation No.: **SCS 108**

Client **Nokia Denmark A/S**

Certificate No: **D1900V2-5d026_Feb06/2**

CALIBRATION CERTIFICATE (Replacement of No: D1900V2-5d026_Feb06)

Object: **D1900V2 - SN: 5d026**

Calibration procedure(s): **QA CAL-05.v6
Calibration procedure for dipole validation kits**

Calibration date: **February 21, 2006**

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 | 04-Oct-05 (METAS, No. 251-00516) | Oct-06 |
| Power sensor HP 8481A | US37292783 | 04-Oct-05 (METAS, No. 251-00516) | Oct-06 |
| Reference 20 dB Attenuator | SN: 5086 (20g) | 11-Aug-05 (METAS, No 251-00498) | Aug-06 |
| Reference 10 dB Attenuator | SN: 5047.2 (10r) | 11-Aug-05 (METAS, No 251-00498) | Aug-06 |
| Reference Probe ET3DV6 | SN 1507 | 28-Oct-05 (SPEAG, No. ET3-1507_Oct05) | Oct-06 |
| DAE4 | SN 601 | 15-Dec-05 (SPEAG, No. DAE4-601_Dec05) | Dec-06 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (SPEAG, in house check Oct-05) | In house check: Oct-07 |
| RF generator Agilent E4421B | MY41000675 | 11-May-05 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (SPEAG, in house check Nov-05) | In house check: Nov-06 |

| | | | |
|----------------|---------------|-----------------------|----------------------|
| | Name | Function | Signature |
| Calibrated by: | Mike Meili | Laboratory Technician | <i>M. Meili</i> |
| Approved by: | Katja Pokovic | Technical Manager | <i>Katja Pokovic</i> |

Issued: March 9, 2006

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

DASY4 Validation Report for Head TSL

Date/Time: 21.02.2006 13:52:34

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d026

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL U10 BB;

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(4.74, 4.74, 4.74); Calibrated: 28.10.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 15.12.2005
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA
- Measurement SW: DASY4, V4.6 Build 57; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin = 250 mW; d = 10 mm/Area Scan (71x71x1):

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

Maximum value of SAR (interpolated) = 11.1 mW/g

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:

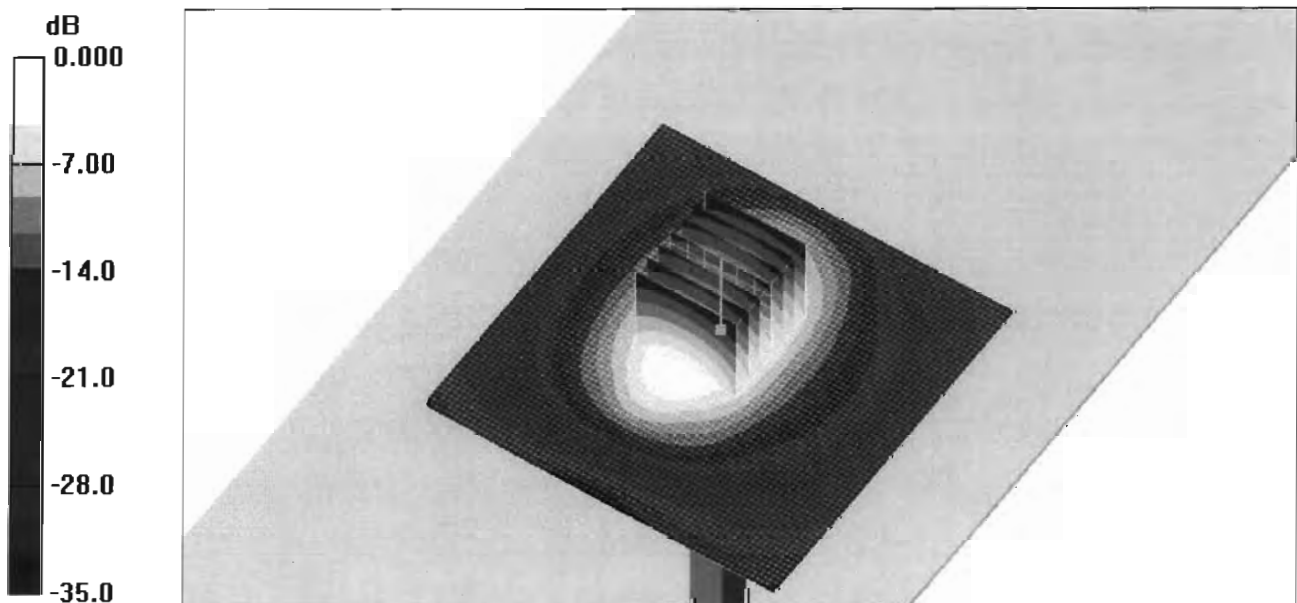
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 84.2 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 9.83 mW/g; SAR(10 g) = 5.2 mW/g

Maximum value of SAR (measured) = 11.0 mW/g



0 dB = 11.0mW/g

DASY4 Validation Report for Body TSL

Date/Time: 21.02.2006 15:46:28

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d026

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL U10;

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 54.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(4.3, 4.3, 4.3); Calibrated: 28.10.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 15.12.2005
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA
- Measurement SW: DASY4, V4.6 Build 57; Postprocessing SW: SEMCAD, V1.8 Build 160

Pin = 250 mW; d = 10 mm/Area Scan (71x71x1):

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

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

Pin = 250 mW; d = 10 mm/Zoom Scan 2 (7x7x7)/Cube 0:

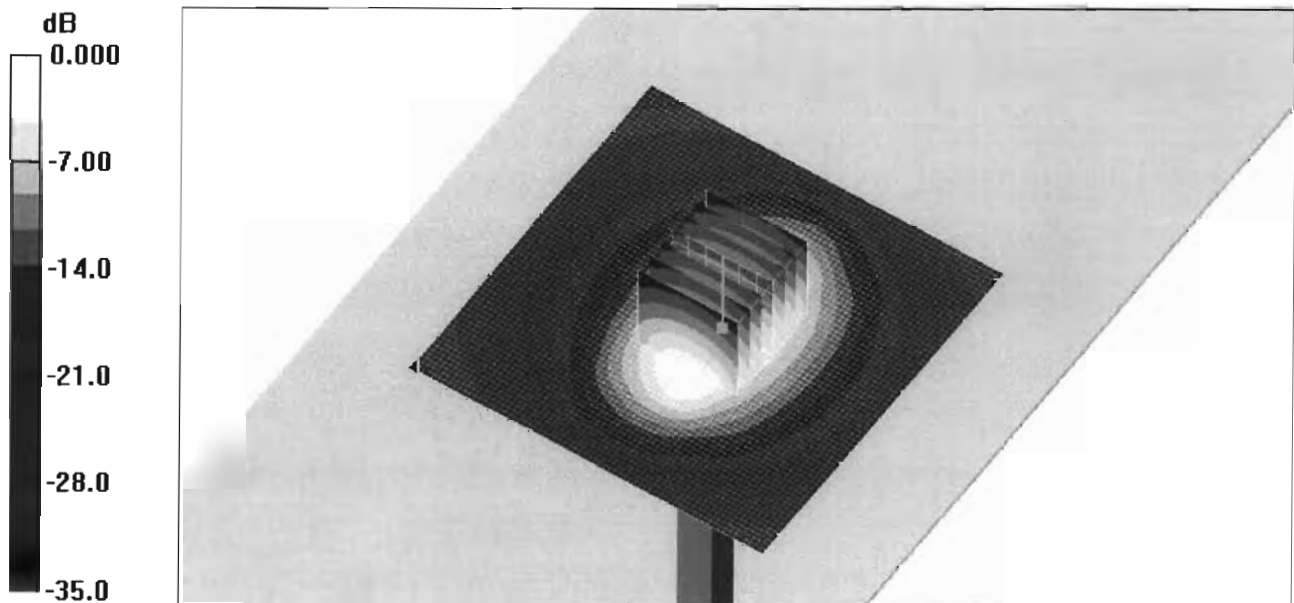
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 83.1 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 10 mW/g; SAR(10 g) = 5.38 mW/g

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



0 dB = 11.5mW/g