TCC
Nokia

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Finnish Accreditation Service
T117 (EN ISO/IEC 17025)

# SAR Compliance Test Report

| | | | |
|---|---|---|---|
| **Test report no.:** | FCC_RM-685_01 | **Date of report:** | 2010-03-19 |
| **Template version:** | 14.0 | **Number of pages:** | 26 |
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| **Responsible test engineer:** | Liang Dong | **Product contact person:** | Xu Helen |
| **Measurements made by:** | Liang Dong | | |
| **Tested device:** | RM-685 | | |
| **FCC ID:** | QMNRM-685 | **IC:** | - |
| **Supplement reports:** | SAR_Photo_RM-685_02 | | |

**Testing has been carried out in accordance with:**

**47CFR §2.1093**
Radiofrequency Radiation Exposure Evaluation: Portable Devices
**FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)**
Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
**RSS-102**
Evaluation Procedure for Mobile and Portable Radio Transmitters with Respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields
**IEEE 1528 - 2003**
IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Technique

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

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

## Date and signatures:

For the contents:

Liang Dong

Digitally signed by Liang Dong
DN: cn=Liang Dong, c=CN, o=Nokia, ou=CertT, email=dong.liang@nokia.com
Date: 2010.03.22 16:10:23 +08'00'

CONTENTS

# 1. SUMMARY OF SAR TEST REPORT

## 1.1 Test Details

| | |
|---|---|
| Period of test | 2010-03-18 |
| SN, HW and SW numbers of tested device | SN: A0000001C8FB23, HW: 1000, SW: WT_0100B07_TLC_0100T_R800, DUT: 51193 |
| Batteries used in testing | BL-4C, DUT: 51201, 51202, 51203 |
| Headsets used in testing | HS-105, DUT: 51196 |
| 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) | Conducted power | Position | Measured SAR value (1g avg) | Scaled* SAR value (1g avg) | SAR limit (1g avg) | Result |
|---|---|---|---|---|---|---|---|
| CDMA800 | 384 / 836.52 | 24.12 dBm | Left, Cheek | 0.838 W/kg | **0.94 W/kg** | 1.6 W/kg | PASSED |

### 1.2.2 Body Worn Configuration

| Mode | Ch / *f* (MHz) | Conducted power | Separation distance | Measured SAR value (1g avg) | Scaled* SAR value (1g avg) | SAR limit (1g avg) | Result |
|---|---|---|---|---|---|---|---|
| CDMA800 | 1013 / 824.70 | 24.19 dBm | 1.5 cm | 1.04 W/kg | **1.16 W/kg** | 1.6 W/kg | PASSED |

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

### 1.2.3 Maximum Drift

| Maximum drift covered by 12% scaling up of the SAR values | Maximum drift during measurements |
|---|---|
| 0.5dB | 0.36dB |

### 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 of Operation | Bands | Modulation Mode | Duty Cycle | Transmitter Frequency Range (MHz) |
|---|---|---|---|---|
| CDMA | 800 | QPSK | 1 | 824 – 849 |

This is a CDMA 1 x RTT device.

### 2.1 Description of the Antenna

The device has an internal antenna for cellular use. The cellular antenna is located at the bottom underneath the back cover.

## 3. TEST CONDITIONS

### 3.1 Temperature and Humidity

| | |
|---|---|
| Ambient temperature (°C): | 21.0 to 22.0 |
| Ambient humidity (RH %): | 40 to 50 |

### 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.

## 3.3 Test Cases and Test Minimisation

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

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

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

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

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

In the results tables in Section 7, the maximum SAR value for the ‘basic’ tests (i.e. left cheek, left tilt, right cheek and right tilt in Head SAR testing; with and without headset with the back &/or

display side facing the flat phantom in Body SAR testing) is bolded for each band. In some cases, after full testing of the basic SAR test configurations has been completed, additional checking SAR tests are made. These checking tests are always based on the bolded result from the 'basic' testing. When the SAR value of a checking test exceeds the maximum value from the basic tests, it is also bolded and used as the basis for any further checking tests that might be needed.

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

# 4. DESCRIPTION OF THE TEST EQUIPMENT

## 4.1 Measurement System and Components

The measurements were performed using an automated 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 |
|---|---|---|---|
| DAE 4 | 480 | 12 months | 2010-09 |
| E-field Probe ET3DV6 | 1652 | 12 months | 2010-09 |
| Dipole Validation Kit, D835V2 | 479 | 24 months | 2011-02 |
| DASY4 software | Version 4.7 | - | - |

Additional test equipment used in testing:

| Test Equipment | Model | Serial Number | Calibration interval | Calibration expiry |
|---|---|---|---|---|
| Signal Generator | 8648C | 3847M00258 | 12 months | 2010-05 |
| Call Tester | Agilent 8960 | GB43304340 | - | - |
| Amplifier | AR 5SIG4M3 | 302339 | 12 months | 2010-05 |
| RF Network Analyzer | 8753ES | My40002096 | 12 months | 2010-05 |
| Dielectric Probe Kit | 85070C | 01033717 | - | - |
| Power Meter | Agilent E4419B | My41291520 | 12 months | 2010-05 |
| Power Sensor | Agilent 8482A | US37295411 | 12 months | 2010-05 |

### 4.1.1 Isotropic E-field Probe Type ET3DV6

| | |
|---|---|
| **Construction** | Symmetrical design with triangular core<br>Built-in optical fiber for surface detection system<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., butyl diglycol) |
| **Calibration** | Calibration certificate in Appendix C |
| **Frequency** | 10 MHz to 3 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 3 GHz) |
| **Optical Surface Detection** | ± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces |
| **Directivity** | ± 0.2 dB in HSL (rotation around probe axis)<br>± 0.4 dB in HSL (rotation normal to probe axis) |
| **Dynamic Range** | 5 μW/g to > 100 mW/g; Linearity: ± 0.2 dB |
| **Dimensions** | Overall length: 330 mm<br>Tip length: 16 mm<br>Body diameter: 12 mm<br>Tip diameter: 6.8 mm<br>Distance from probe tip to dipole centers: 2.7 mm |
| **Application** | General dosimetry up to 3 GHz<br>Compliance tests of mobile phones<br>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 ± 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 simulant(s):

**800MHz band**

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

### 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 $\varepsilon_r$ | Dielectric Parameters $\sigma$ [S/m] | Temp [°C] |
|---|---|---|---|---|---|
| 835 | Reference result | 2.39 | 40.2 | 0.88 | |
| | ± 10% window | 2.15 – 2.63 | | | |
| | 2010-03-18 | 2.32 | 40.9 | 0.87 | 21.6 |

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 $\varepsilon_r$ | Dielectric Parameters $\sigma$ [S/m] | Temp [°C] |
|---|---|---|---|---|
| 836 | Recommended value | 41.5 | 0.90 | |
| | ± 5% window | 39.4 – 43.6 | 0.86 – 0.95 | |
| | 2010-03-18 | 40.9 | 0.87 | 21.6 |

**Body tissue simulant measurements**

| f [MHz] | Description | Dielectric Parameters $\varepsilon_r$ | Dielectric Parameters $\sigma$ [S/m] | Temp [°C] |
|---|---|---|---|---|
| 836 | Recommended value | 55.2 | 0.97 | |
| | ± 5% window | 52.4 – 58.0 | 0.92 – 1.02 | |
| | 2010-03-18 | 53.0 | 0.96 | 21.0 |

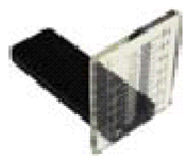
# 5. DESCRIPTION OF THE TEST PROCEDURE

## 5.1 Device Holder

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

Device holder supplied by SPEAG

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



Nokia spacer

## 5.2 Test Positions

### 5.2.1 Against Phantom Head

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

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

### 5.2.2 Body Worn Configuration

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

### 5.3 Scan Procedures

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

### 5.4 SAR Averaging Methods

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

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

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

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

## 6. MEASUREMENT UNCERTAINTY

Table 6.1 – Measurement uncertainty evaluation

| Uncertainty Component | Section in IEEE 1528 | Tol. (%) | Prob Dist | Div | $c_i$ | $c_i . u_i$ (%) | $v_i$ |
|---|---|---|---|---|---|---|---|
| **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:

**CDMA800 Head SAR results**

| Mode | Test configuration | | SAR, averaged over 1g (W/kg) | | |
|---|---|---|---|---|---|
| | | | Ch 1013 824.70 MHz | Ch 384 836.52 MHz | Ch 777 848.31 MHz |
| RC3 / SO55 | Power | | 24.19 dBm | 24.12 dBm | 24.11 dBm |
| | Left | Cheek | 0.672 | **0.838** | 0.773 |
| | | Tilt | - | 0.473 | - |
| | Right | Cheek | 0.685 | 0.830 | 0.782 |
| | | Tilt | - | 0.449 | - |

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

**CDMA800 Body SAR results**

| Mode | Option used | Test configuration | SAR, averaged over 1g (W/kg) | | |
|---|---|---|---|---|---|
| | | | Ch 1013 824.70 MHz | Ch 384 836.52 MHz | Ch 777 848.31 MHz |
| RC3 / SO55 | | Power | 24.19 dBm | 24.12 dBm | 24.11 dBm |
| | Display facing phantom | Without headset | - | - | - |
| | | Headset HS-105 | - | - | - |
| | Back facing phantom | Without headset | **1.04** | 0.946 | 0.895 |
| | | Headset HS-105 | 0.648 | 0.810 | 0.763 |

Plots of the Measurement scans are given in Appendix B.

## APPENDIX A: SYSTEM CHECKING SCANS

Date/Time: 2010-03-18 9:38:07 AM

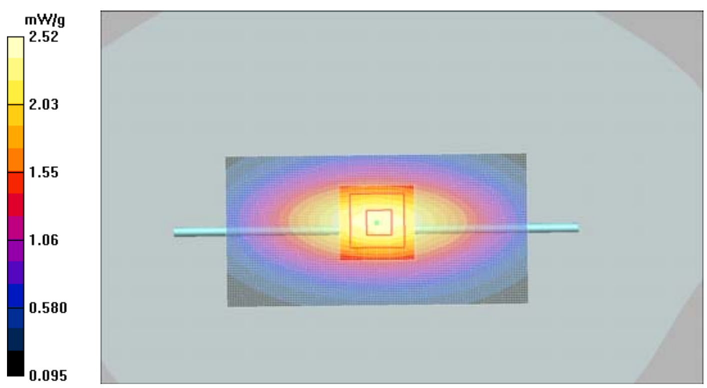
Test Laboratory: TCC Nokia
**Type: D835V2; Serial: 479**

**Communication System: CW835**
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: t= 21.6 C
Medium parameters used: f = 835 MHz; $\sigma$ = 0.869 mho/m; $\varepsilon_r$ = 40.9; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.19, 6.19, 6.19); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=15mm, Pin=250mW/Area Scan (61x121x1):** Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.52 mW/g

**d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.5 V/m
Peak SAR (extrapolated) = 3.42 W/kg
**SAR(1 g) = 2.32 mW/g**
**SAR(10 g) = 1.52 mW/g**
**Power Drift = -0.038 dB**
Maximum value of SAR (measured) = 2.51 mW/g



## APPENDIX B: MEASUREMENT SCANS

Date/Time: 2010-03-18 10:12:38 AM

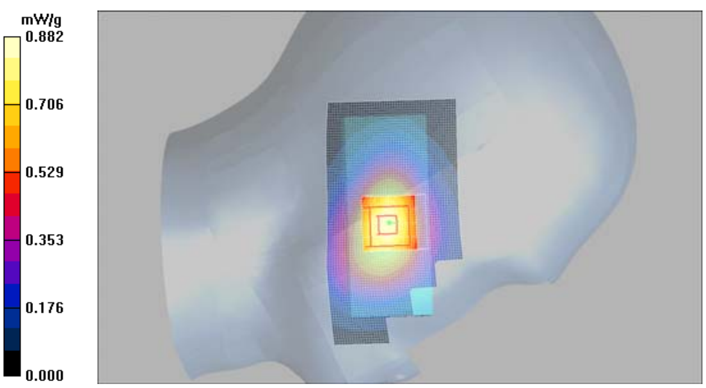
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

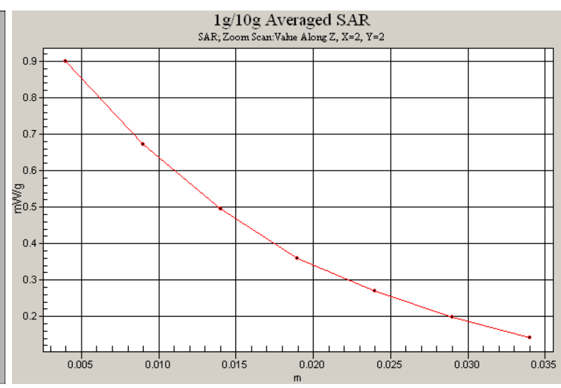
**Communication System: CDMA800**
Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: t= 21.6 C
Medium parameters used: f = 837 MHz; $\sigma$ = 0.869 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.19, 6.19, 6.19); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Cheek position - Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.882 mW/g

**Cheek position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.9 V/m
Peak SAR (extrapolated) = 1.11 W/kg
**SAR(1 g) = 0.838 mW/g**
**SAR(10 g) = 0.579 mW/g**
**Power Drift = -0.341 dB**
Maximum value of SAR (measured) = 0.899 mW/g



Date/Time: 2010-03-18 10:50:10 AM

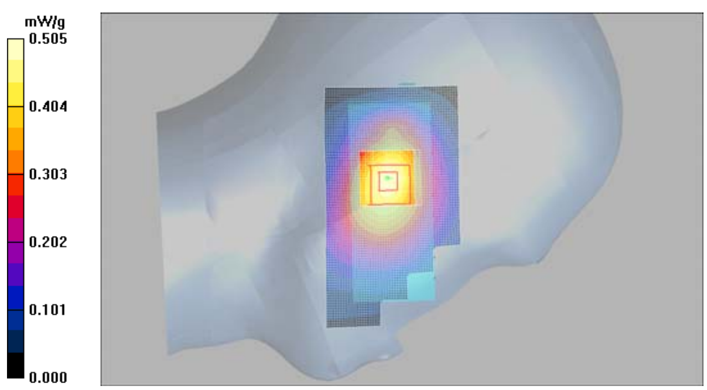
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

**Communication System: CDMA800**
Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: t= 21.6 C
Medium parameters used: f = 837 MHz; $\sigma$ = 0.869 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/$m^3$
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.19, 6.19, 6.19); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Tilt position - Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.505 mW/g

**Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.7 V/m
Peak SAR (extrapolated) = 0.609 W/kg
**SAR(1 g) = 0.473 mW/g**
**SAR(10 g) = 0.338 mW/g**
**Power Drift = -0.107 dB**
Maximum value of SAR (measured) = 0.503 mW/g



Date/Time: 2010-03-18 11:02:21 AM

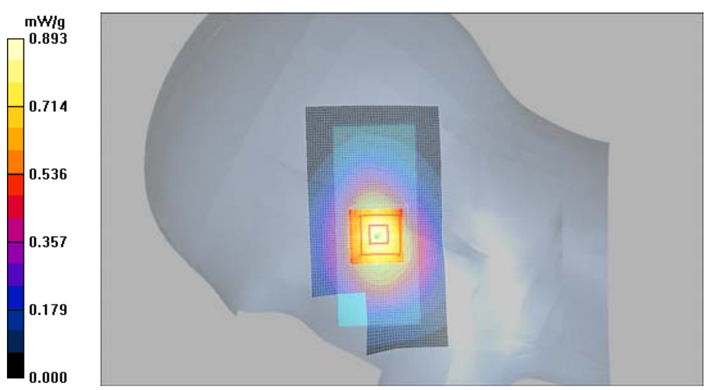
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

**Communication System: CDMA800**
Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: t= 21.6 C
Medium parameters used: f = 837 MHz; $\sigma$ = 0.869 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.19, 6.19, 6.19); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Cheek position - Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.893 mW/g

**Cheek position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.1 V/m
Peak SAR (extrapolated) = 1.13 W/kg
**SAR(1 g) = 0.830 mW/g**
**SAR(10 g) = 0.572 mW/g**
**Power Drift = 0.226 dB**
Maximum value of SAR (measured) = 0.904 mW/g



Date/Time: 2010-03-18 11:41:27 AM

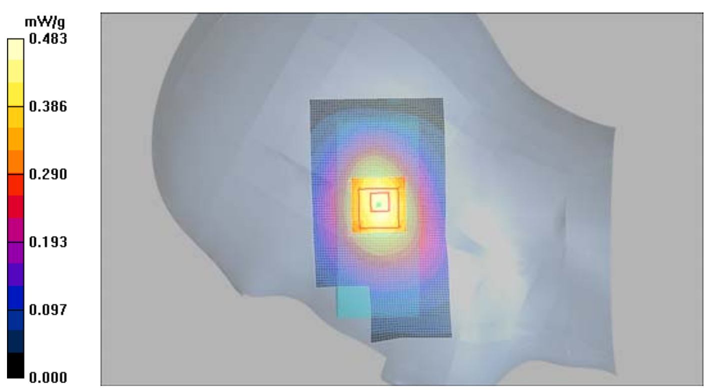
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

**Communication System: CDMA800**
Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: Head 835; Medium Notes: Medium Temperature: t= 21.6 C
Medium parameters used: f = 837 MHz; $\sigma$ = 0.869 mho/m; $\varepsilon_r$ = 40.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(6.19, 6.19, 6.19); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM3; Type: SAM; Serial: TP-1427
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Tilt position - Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.483 mW/g

**Tilt position - Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 14.5 V/m
Peak SAR (extrapolated) = 0.580 W/kg
**SAR(1 g) = 0.449 mW/g**
**SAR(10 g) = 0.323 mW/g**
**Power Drift = -0.040 dB**
Maximum value of SAR (measured) = 0.471 mW/g



Date/Time: 2010-03-18 1:54:34 PM

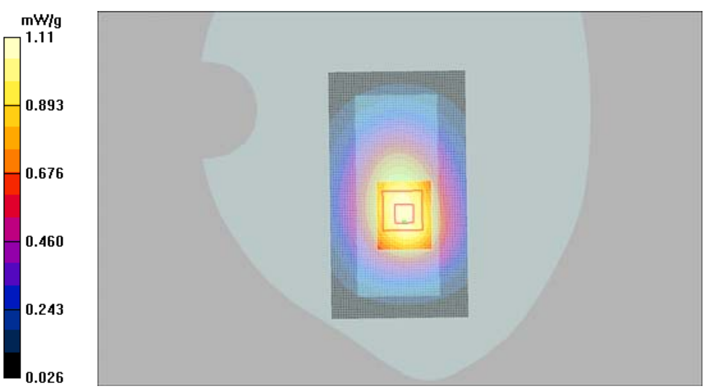
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

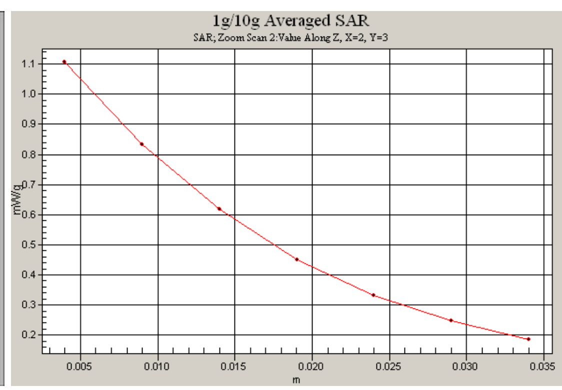
**Communication System: CDMA800**
Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: t= 21.0 C
Medium parameters used: f = 825 MHz; $\sigma$ = 0.953 mho/m; $\varepsilon_r$ = 53.2; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.91, 5.91, 5.91); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body - Low - No Accessory - Back facing phantom/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.11 mW/g

**Body - Low - No Accessory - Back facing phantom/Zoom Scan 2 (5x6x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.3 V/m
Peak SAR (extrapolated) = 1.34 W/kg
**SAR(1 g) = 1.04 mW/g**
**SAR(10 g) = 0.749 mW/g**
**Power Drift = 0.000 dB**
Maximum value of SAR (measured) = 1.10 mW/g



Date/Time: 2010-03-18 2:58:37 PM

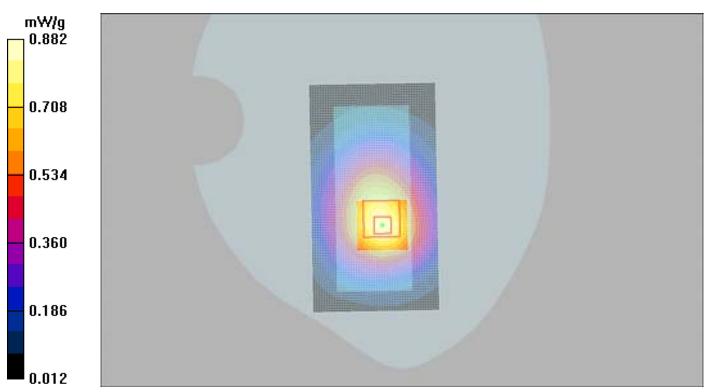
Test Laboratory: TCC Nokia
**Type: RM-685; Serial: A0000001C8FB23**

**Communication System: CDMA800**
Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: Body 835; Medium Notes: Medium Temperature: t= 21.0 C
Medium parameters used: f = 837 MHz; $\sigma = 0.963$ mho/m; $\varepsilon_r = 53$; $\rho = 1000$ kg/m$^3$
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1652; Probe Notes:
- ConvF(5.91, 5.91, 5.91); Calibrated: 2009-09-21
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn480; Calibrated: 2009-09-15
- Phantom: SAM1; Type: SAM; Serial: TP - 01097
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body - Middle - HS-105 - Back facing phantom/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.882 mW/g

**Body - Middle - HS-105 - Back facing phantom/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 11.3 V/m
Peak SAR (extrapolated) = 1.07 W/kg
**SAR(1 g) = 0.810 mW/g**
**SAR(10 g) = 0.569 mW/g**
**Power Drift = -0.007 dB**
Maximum value of SAR (measured) = 0.868 mW/g



## APPENDIX C: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED TRANSMISSION MODES

Type: RM-685; Serial number: A0000001C8FB23

CDMA800

| Radio Configuration | Service Options and Channel Configurations | Supported | Ch 1013 824.70 MHz | Ch 384 836.52 MHz | Ch 777 848.31 MHz |
|---|---|---|---|---|---|
| | | | Pavg dBm | Pavg dBm | Pavg dBm |
| RC1 | SO1 | No | - | - | - |
| RC1 | SO2 | Yes | 24.17 | 24.07 | 24.04 |
| RC1 | SO3 | Yes | 24.16 | 24.10 | 24.12 |
| RC1 | SO55 | Yes | 24.18 | 24.10 | 24.07 |
| RC2 | SO9 | Yes | 24.12 | 24.04 | 24.01 |
| RC2 | SO17 | Yes | 24.15 | 24.14 | 24.11 |
| RC2 | SO55 | Yes | 24.11 | 24.05 | 24.02 |
| RC3 | SO1 | No | - | - | - |
| RC3 | SO2 | Yes | 24.19 | 24.12 | 24.10 |
| RC3 | SO3 | Yes | 24.16 | 24.03 | 24.02 |
| RC3 | SO32 (no SCH1) | Yes | 24.20 | 24.13 | 24.12 |
| RC3 | SO32 (SCH1 9.6kbps) | Yes | 24.22 | 24.16 | 24.11 |
| RC3 | SO32 (SCH1 19.2kbps) | Yes | 24.21 | 24.12 | 24.13 |
| RC3 | SO32 (SCH1 38.4kbps) | Yes | 24.23 | 24.15 | 24.12 |
| RC3 | SO32 (SCH1 76.8kbps) | Yes | 24.22 | 24.16 | 24.12 |
| RC3 | SO32 (SCH1 153.6kbps) | Yes | 24.26 | 24.15 | 24.11 |
| RC3 | SO33 (SCH1 9.6kbps) | No | - | - | - |
| RC3 | SO33 (SCH1 19.2kbps) | No | - | - | - |
| RC3 | SO33 (SCH1 38.4kbps) | No | - | - | - |
| RC3 | SO33 (SCH1 76.8kbps) | No | - | - | - |
| RC3 | SO33 (SCH1 153.6kbps) | No | - | - | - |
| **RC3** | **SO55** | **Yes** | **24.19** | **24.12** | **24.11** |
| RC4 | SO1 | No | - | - | - |
| RC4 | SO2 | Yes | 24.19 | 24.13 | 24.09 |
| RC4 | SO3 | Yes | 24.15 | 24.05 | 24.00 |
| RC4 | SO32 (no SCH1) | Yes | 24.25 | 24.14 | 24.10 |
| RC4 | SO32 (SCH1 9.6kbps) | Yes | 24.24 | 24.14 | 24.10 |
| RC4 | SO32 (SCH1 19.2kbps) | Yes | 24.24 | 24.15 | 24.08 |
| RC4 | SO32 (SCH1 38.4kbps) | Yes | 24.23 | 24.12 | 24.10 |
| RC4 | SO32 (SCH1 76.8kbps) | Yes | 24.23 | 24.14 | 24.10 |
| RC4 | SO32 (SCH1 153.6kbps) | Yes | 24.24 | 24.17 | 24.11 |
| RC4 | SO33 (SCH1 9.6kbps) | No | - | - | - |
| RC4 | SO33 (SCH1 19.2kbps) | No | - | - | - |
| RC4 | SO33 (SCH1 38.4kbps) | No | - | - | - |
| RC4 | SO33 (SCH1 76.8kbps) | No | - | - | - |
| RC4 | SO33 (SCH1 153.6kbps) | No | - | - | - |
| RC4 | SO55 | Yes | 24.18 | 24.11 | 24.08 |

| | | | | | |
|---|---|---|---|---|---|
| RC5 | SO9 | Yes | 24.24 | 24.10 | 24.08 |
| RC5 | SO17 | Yes | 24.14 | 24.04 | 23.98 |
| RC5 | SO33 (SCH1 9.6kbps) | No | - | - | - |
| RC5 | SO33 (SCH1 19.2kbps) | No | - | - | - |
| RC5 | SO33 (SCH1 38.4kbps) | No | - | - | - |
| RC5 | SO33 (SCH1 76.8kbps) | No | - | - | - |
| RC5 | SO33 (SCH1 153.6kbps) | No | - | - | - |
| RC5 | SO55 | Yes | 24.22 | 24.12 | 24.11 |

## APPENDIX D: RELEVANT PAGES FROM PROBE CALIBRATION REPORT(S)

See the following pages.

**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
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 **Nokia Beijing TCC**

Certificate No: **ET3-1652_Sep09**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | ET3DV6 - SN:1652 |
| Calibration procedure(s) | QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2<br>Calibration procedure for dosimetric E-field probes |
| Calibration date: | September 21, 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 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: 660 | 9-Sep-08 (No. DAE4-660_Sep08) | Sep-09 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (in house check Oct-07) | In house check: Oct-09 |
| Network Analyzer HP 8753E | US37390585 | 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: September 21, 2009

# DASY - Parameters of Probe: ET3DV6 SN:1652

## Sensitivity in Free Space[A] / Diode Compression[B]

| | | | | |
|---|---|---|---|---|
| NormX | **2.00** ± 10.1% | $\mu V/(V/m)^2$ | DCP X | **94** mV |
| NormY | **2.07** ± 10.1% | $\mu V/(V/m)^2$ | DCP Y | **94** mV |
| NormZ | **1.97** ± 10.1% | $\mu V/(V/m)^2$ | DCP Z | **93** mV |

## Sensitivity in Tissue Simulating Liquid (Conversion Factors)

**Please see Page 8.**

## Boundary Effect

**TSL 835 MHz Typical SAR gradient: 5 % per mm**

| Sensor Center to Phantom Surface Distance | | **3.7 mm** | **4.7 mm** |
|---|---|---|---|
| $SAR_{be}$ [%] | Without Correction Algorithm | 10.1 | 5.9 |
| $SAR_{be}$ [%] | With Correction Algorithm | 0.8 | 0.5 |

**TSL 1750 MHz Typical SAR gradient: 10 % per mm**

| Sensor Center to Phantom Surface Distance | | **3.7 mm** | **4.7 mm** |
|---|---|---|---|
| $SAR_{be}$ [%] | Without Correction Algorithm | 10.0 | 5.5 |
| $SAR_{be}$ [%] | With Correction Algorithm | 0.9 | 0.6 |

## Sensor Offset

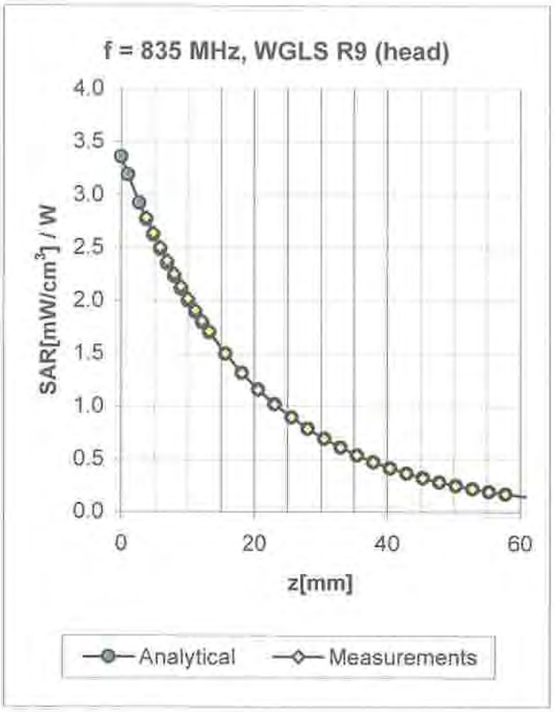
Probe Tip to Sensor Center **2.7** mm

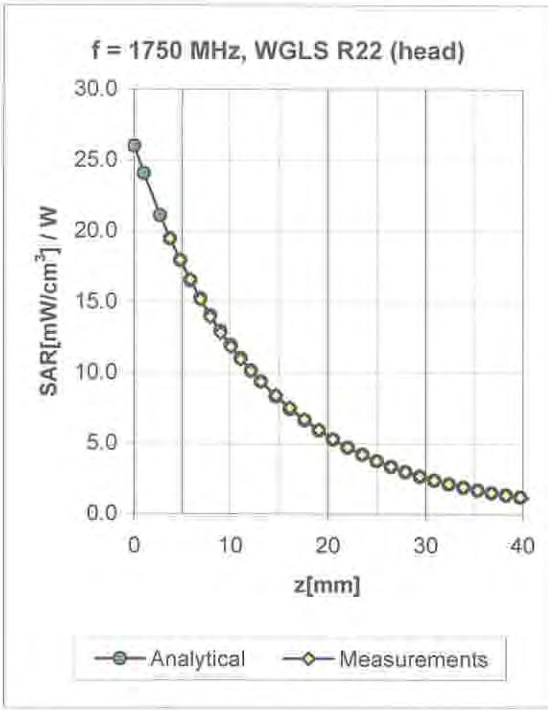
**The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.**

[A] The uncertainties of NormX,Y,Z do not affect the $E^2$-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

# Conversion Factor Assessment




| f [MHz] | Validity [MHz][C] | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF | Uncertainty |
|---|---|---|---|---|---|---|---|---|
| 835 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.90 ± 5% | 0.66 | 1.85 | 6.19 | ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Head | 40.1 ± 5% | 1.37 ± 5% | 0.54 | 2.64 | 5.15 | ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.68 | 2.31 | 4.91 | ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.71 | 2.27 | 4.76 | ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.99 | 1.70 | 4.33 | ± 11.0% (k=2) |
| | | | | | | | | |
| 835 | ± 50 / ± 100 | Body | 55.2 ± 5% | 0.97 ± 5% | 0.48 | 2.24 | 5.91 | ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Body | 53.4 ± 5% | 1.49 ± 5% | 0.65 | 3.14 | 4.65 | ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.83 | 2.58 | 4.44 | ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.99 | 2.27 | 4.54 | ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.99 | 1.71 | 4.08 | ± 11.0% (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 E: RELEVANT PAGES FROM DIPOLE VALIDATION KIT REPORT(S)

See the following pages.

**Calibration Laboratory of**
Schmid & Partner
Engineering AG
**Zeughausstrasse 43, 8004 Zurich, Switzerland**

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
C 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 **Nokia SD TCC**

Certificate No: **D835V2-479_Feb09**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D835V2 - SN: 479 |
| Calibration procedure(s) | QA CAL-05.v7<br>Calibration procedure for dipole validation kits |
| Calibration date: | February 09, 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) | 01-Jul-08 (No. 217-00864) | Jul-09 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 01-Jul-08 (No. 217-00867) | Jul-09 |
| Reference Probe ES3DV2 | SN: 3025 | 28-Apr-08 (No. ES3-3025_Apr08) | Apr-09 |
| DAE4 | SN: 601 | 14-Mar-08 (No. DAE4-601_Mar08) | Mar-09 |

| 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: February 10, 2009

## DASY5 Validation Report for Head TSL

Date/Time: 03.02.2009 10:04:18

Test Laboratory: SPEAG, Zurich, Switzerland

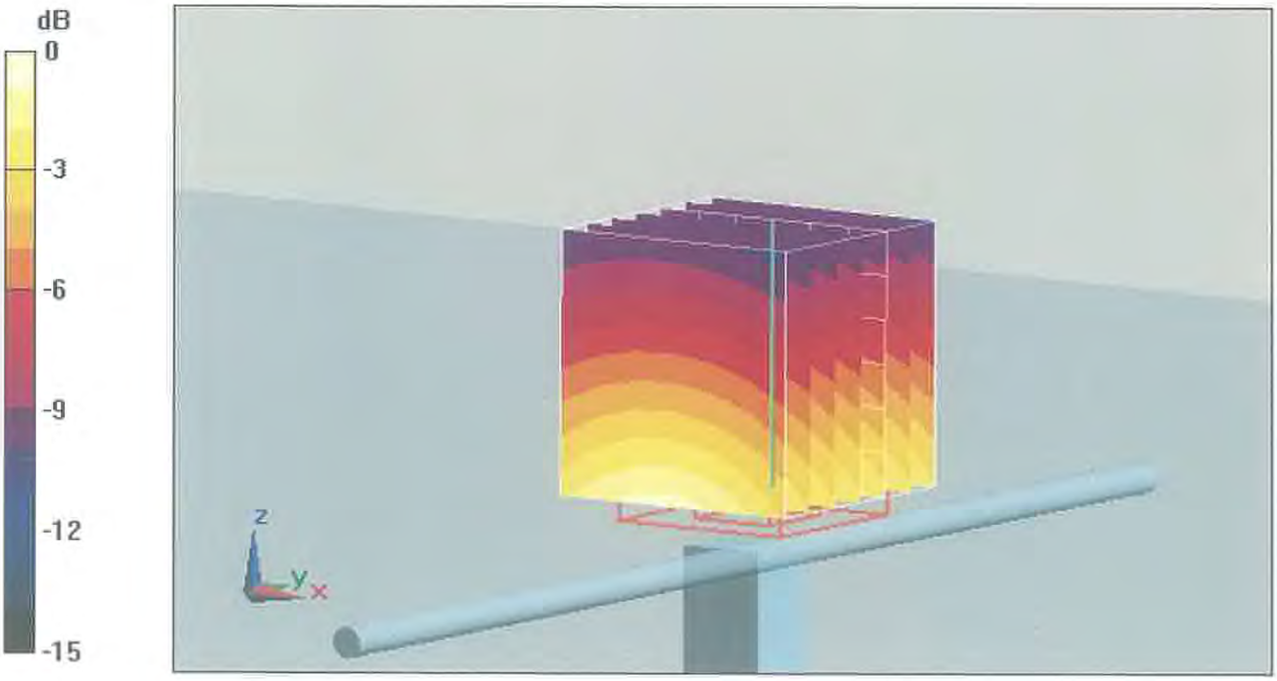
**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:479**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL 900 MHz
Medium parameters used: f = 835 MHz; $\sigma$ = 0.88 mho/m; $\varepsilon_r$ = 40.2; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(5.97, 5.97, 5.97); Calibrated: 28.04.2008
- Sensor-Surface: 3.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 14.03.2008
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

**Pin=250mW; dip=15mm; dist=3.4mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.4 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 3.51 W/kg
**SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.58 mW/g**
Maximum value of SAR (measured) = 2.7 mW/g




0 dB = 2.7mW/g