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

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss 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 SD TCC

**Certificate No: ET3-1504_Aug07**

# CALIBRATION CERTIFICATE

Object: ET3DV6 - SN:1504

Calibration procedure(s): QA CAL-01.v6
Calibration procedure for dosimetric E-field probes

Calibration date: August 29, 2007

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)

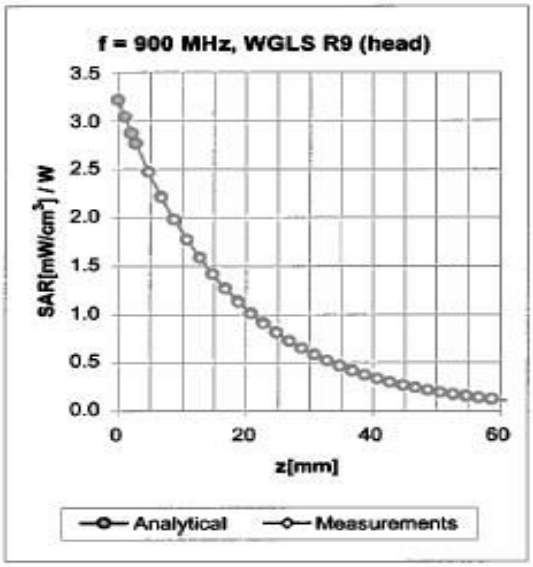
| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power meter E4419B | GB41293874 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41495277 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41498087 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 8-Aug-07 (METAS, No. 217-00719) | Aug-08 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-07 (METAS, No. 217-00671) | Mar-08 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 8-Aug-07 (METAS, No. 217-00720) | Aug-08 |
| Reference Probe ES3DV2 | SN: 3013 | 4-Jan-07 (SPEAG, No. ES3-3013_Jan07) | Jan-08 |
| DAE4 | SN: 654 | 20-Apr-07 (SPEAG, No. DAE4-654_Apr07) | Apr-08 |

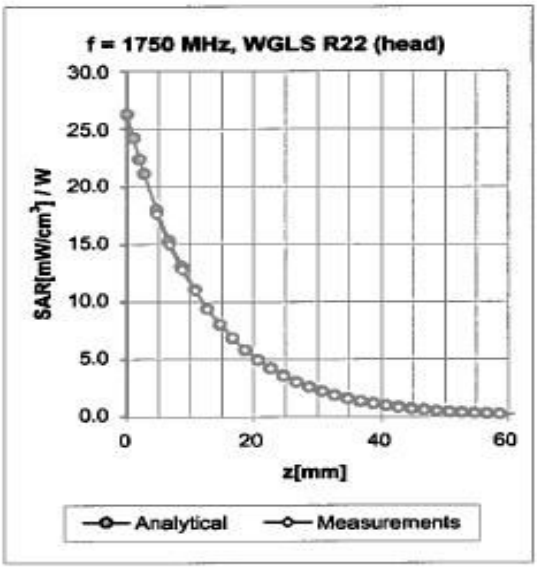
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Oct-06) | In house check: Oct-07 |

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

Issued: August 29, 2007

# Conversion Factor Assessment




| f [MHz] | Validity [MHz][C] | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF Uncertainty |
|---|---|---|---|---|---|---|---|
| 835 | ± 50 / ± 99 | Head | 41.5 ± 5% | 0.90 ± 5% | 0.38 | 2.40 | 6.52 ± 11.0% (k=2) |
| 900 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.97 ± 5% | 0.31 | 2.63 | 6.40 ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Head | 40.1 ± 5% | 1.37 ± 5% | 0.53 | 2.60 | 5.25 ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.59 | 2.50 | 5.09 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.80 | 1.73 | 4.63 ± 11.8% (k=2) |
| | | | | | | | |
| 835 | ± 50 / ± 100 | Body | 55.2 ± 5% | 0.97 ± 5% | 0.36 | 2.46 | 6.27 ± 11.0% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.32 | 2.84 | 6.00 ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Body | 53.4 ± 5% | 1.49 ± 5% | 0.61 | 2.63 | 4.78 ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.74 | 2.36 | 4.60 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.71 | 2.12 | 4.02 ± 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 SD TCC

Certificate No: ET3-1505_Aug07

# CALIBRATION CERTIFICATE

Object: ET3DV6 - SN:1505

Calibration procedure(s): QA CAL-01.v6
Calibration procedure for dosimetric E-field probes

Calibration date: August 29, 2007

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)

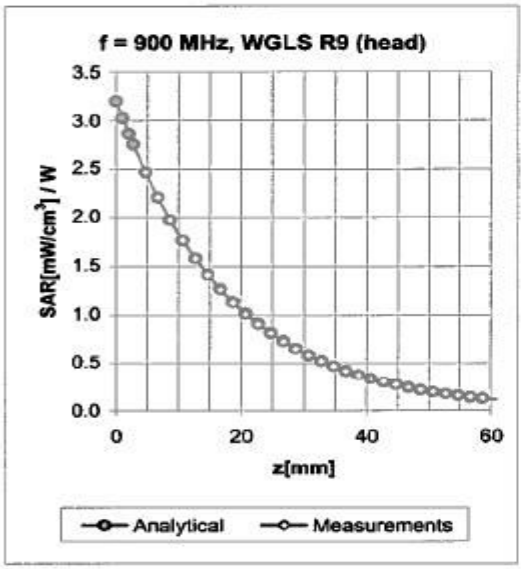
| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power meter E4419B | GB41293874 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41495277 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41498087 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 8-Aug-07 (METAS, No. 217-00719) | Aug-08 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-07 (METAS, No. 217-00671) | Mar-08 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 8-Aug-07 (METAS, No. 217-00720) | Aug-08 |
| Reference Probe ES3DV2 | SN: 3013 | 4-Jan-07 (SPEAG, No. ES3-3013_Jan07) | Jan-08 |
| DAE4 | SN: 654 | 20-Apr-07 (SPEAG, No. DAE4-654_Apr07) | Apr-08 |

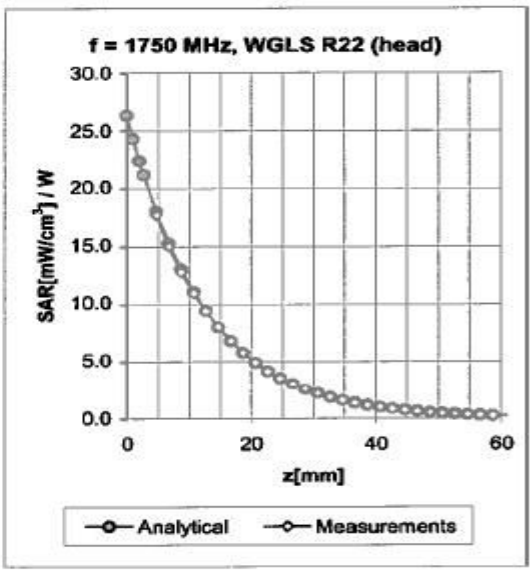
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Nov-05) | In house check: Nov-07 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Oct-06) | In house check: Oct-07 |

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

Issued: August 29, 2007

# Conversion Factor Assessment




| f [MHz] | Validity [MHz][C] | TSL | Permittivity | Conductivity | Alpha | Depth | ConvF Uncertainty |
|---|---|---|---|---|---|---|---|
| 835 | ± 50 / ± 99 | Head | 41.5 ± 5% | 0.90 ± 5% | 0.31 | 2.54 | 6.86 ± 11.0% (k=2) |
| 900 | ± 50 / ± 100 | Head | 41.5 ± 5% | 0.97 ± 5% | 0.34 | 2.42 | 6.75 ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Head | 40.1 ± 5% | 1.37 ± 5% | 0.46 | 2.74 | 5.35 ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.51 | 2.63 | 5.17 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.52 | 2.11 | 4.61 ± 11.8% (k=2) |
| | | | | | | | |
| 835 | ± 50 / ± 100 | Body | 55.2 ± 5% | 0.97 ± 5% | 0.29 | 2.72 | 6.49 ± 11.0% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.31 | 2.73 | 6.21 ± 11.0% (k=2) |
| 1750 | ± 50 / ± 100 | Body | 53.4 ± 5% | 1.49 ± 5% | 0.53 | 2.78 | 4.81 ± 11.0% (k=2) |
| 1900 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.65 | 2.41 | 4.65 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.51 | 2.50 | 3.95 ± 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 SD**

Certificate No: **ET3-1516_Nov07**

# CALIBRATION CERTIFICATE

Object: ET3DV6 - SN:1516

Calibration procedure(s): QA CAL-01.v6
Calibration procedure for dosimetric E-field probes

Calibration date: November 12, 2007

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)

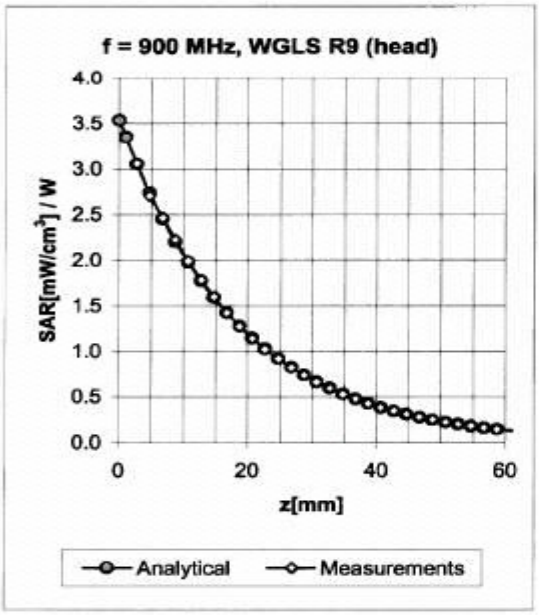
| Primary Standards | ID # | Cal Date (Calibrated by, Certificate No.) | Scheduled Calibration |
|---|---|---|---|
| Power meter E4419B | GB41293874 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41495277 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Power sensor E4412A | MY41498087 | 29-Mar-07 (METAS, No. 217-00670) | Mar-08 |
| Reference 3 dB Attenuator | SN: S5054 (3c) | 8-Aug-07 (METAS, No. 217-00719) | Aug-08 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-07 (METAS, No. 217-00671) | Mar-08 |
| Reference 30 dB Attenuator | SN: S5129 (30b) | 8-Aug-07 (METAS, No. 217-00720) | Aug-08 |
| Reference Probe ES3DV2 | SN: 3013 | 4-Jan-07 (SPEAG, No. ES3-3013_Jan07) | Jan-08 |
| DAE4 | SN: 654 | 20-Apr-07 (SPEAG, No. DAE4-654_Apr07) | Apr-08 |

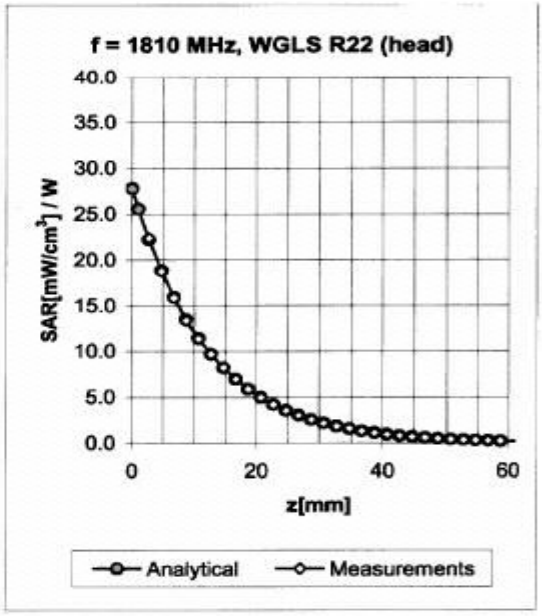
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| RF generator HP 8648C | US3642U01700 | 4-Aug-99 (SPEAG, in house check Oct-07) | In house check: Oct-09 |
| Network Analyzer HP 8753E | US37390585 | 18-Oct-01 (SPEAG, in house check Oct-07) | In house check: Oct-08 |

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

Issued: November 12, 2007

# 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% | 0.72 | 2.07 | 6.45 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.63 | 2.19 | 5.24 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Head | 40.0 ± 5% | 1.40 ± 5% | 0.96 | 1.75 | 4.96 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Head | 39.2 ± 5% | 1.80 ± 5% | 0.92 | 1.71 | 4.47 ± 11.8% (k=2) |
| 900 | ± 50 / ± 100 | Body | 55.0 ± 5% | 1.05 ± 5% | 0.79 | 1.94 | 6.01 ± 11.0% (k=2) |
| 1810 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.73 | 2.35 | 4.87 ± 11.0% (k=2) |
| 1950 | ± 50 / ± 100 | Body | 53.3 ± 5% | 1.52 ± 5% | 0.64 | 2.49 | 4.56 ± 11.0% (k=2) |
| 2450 | ± 50 / ± 100 | Body | 52.7 ± 5% | 1.95 ± 5% | 0.63 | 2.50 | 4.21 ± 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)

FINAS
Finnish Accreditation Service
T117 (EN ISO/IEC 17025)

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

S Schweizerischer Kalibrierdienst
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**Accreditation No.: SCS 108**

**Client** **Nokia SD TCC**

**Certificate No: D835V2-487_Nov06**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D835V2 - SN: 487 |
| Calibration procedure(s) | QA CAL-05.v6<br>Calibration procedure for dipole validation kits |
| Calibration date: | November 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 | 03-Oct-06 (METAS, No. 217-00608) | Oct-07 |
| Power sensor HP 8481A | US37292783 | 03-Oct-06 (METAS, No. 217-00608) | Oct-07 |
| 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 (HF) | SN 1507 | 19-Oct-06 (SPEAG, No. ET3-1507_Oct06) | Oct-07 |
| 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 Oct-06) | In house check: Oct-07 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Mike Meili | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: November 23, 2006

**DASY4 Validation Report for Head TSL**

Date/Time: 21.11.2006 12:57:12

Test Laboratory: SPEAG, Zurich, Switzerland

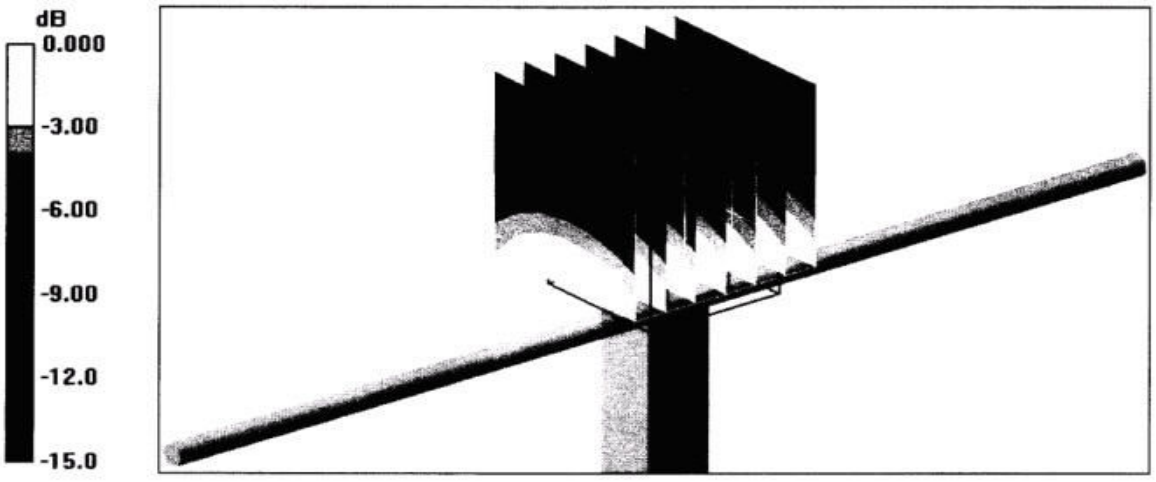
**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 487**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL 900 MHz;
Medium parameters used: f = 835 MHz; $\sigma$ = 0.901 mho/m; $\varepsilon_r$ = 42.3; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(6.09, 6.09, 6.09); Calibrated: 19.10.2006
- 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 = 54.8 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 3.32 W/kg
**SAR(1 g) = 2.29 mW/g; SAR(10 g) = 1.51 mW/g**
Maximum value of SAR (measured) = 2.48 mW/g




0 dB = 2.48mW/g

Certificate No: D835V2-487_Nov06 Page 6 of 9

## DASY4 Validation Report for Body TSL

Date/Time: 14.11.2006 13:02:09

Test Laboratory: SPEAG, Zurich, Switzerland

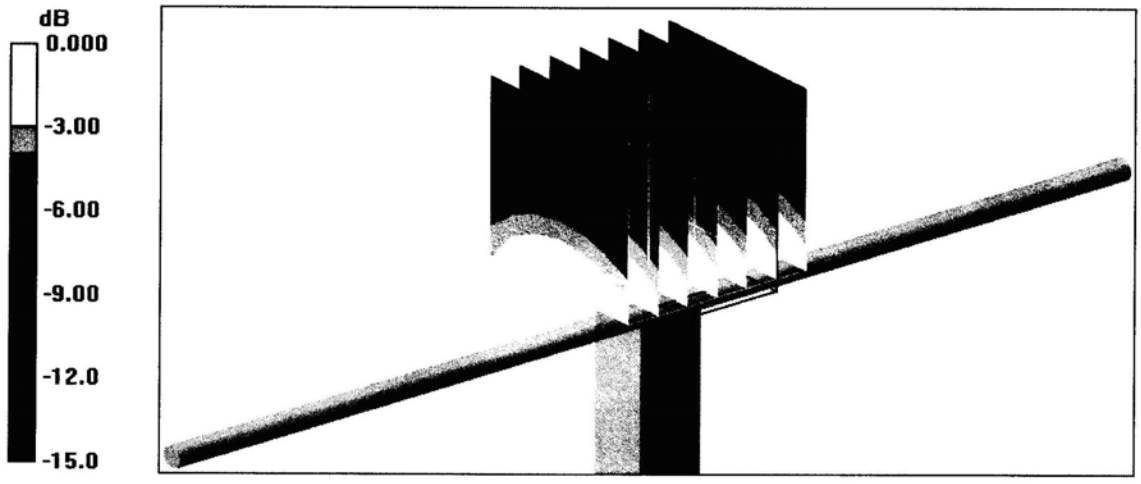
**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:487**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL900;
Medium parameters used: f = 835 MHz; $\sigma$ = 0.99 mho/m; $\varepsilon_r$ = 53.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(5.75, 5.75, 5.75); Calibrated: 19.10.2006
- 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 = 54.1 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 3.41 W/kg
**SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.62 mW/g**
Maximum value of SAR (measured) = 2.64 mW/g




0 dB = 2.64mW/g

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**Accreditation No.: SCS 108**

Client **Nokia SD TCC**

**Certificate No: D1800V2-2d064_Aug07**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D1800V2 - SN: 2d064 |
| Calibration procedure(s) | QA CAL-05.v7<br>Calibration procedure for dipole validation kits |
| Calibration date: | August 28, 2007 |
| 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 | 03-Oct-06 (METAS, No. 217-00608) | Oct-07 |
| Power sensor HP 8481A | US37292783 | 03-Oct-06 (METAS, No. 217-00608) | Oct-07 |
| Reference 20 dB Attenuator | SN: 5086 (20g) | 07-Aug-07 (METAS, No 217-00718) | Aug-08 |
| Reference 10 dB Attenuator | SN: 5047.2 (10r) | 07-Aug-07 (METAS, No 217-00718) | Aug-08 |
| Reference Probe ET3DV6 | SN: 1507 | 19-Oct-06 (SPEAG, No. ET3-1507_Oct06) | Oct-07 |
| DAE4 | SN 601 | 30-Jan-07 (SPEAG, No. DAE4-601_Jan07) | Jan-08 |

| 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 Oct-06) | In house check: Oct-07 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Marcel Fehr | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: August 28, 2007

**DASY4 Validation Report for Head TSL**

Date/Time: 28.08.2007 12:05:10

Test Laboratory: SPEAG, Zurich, Switzerland

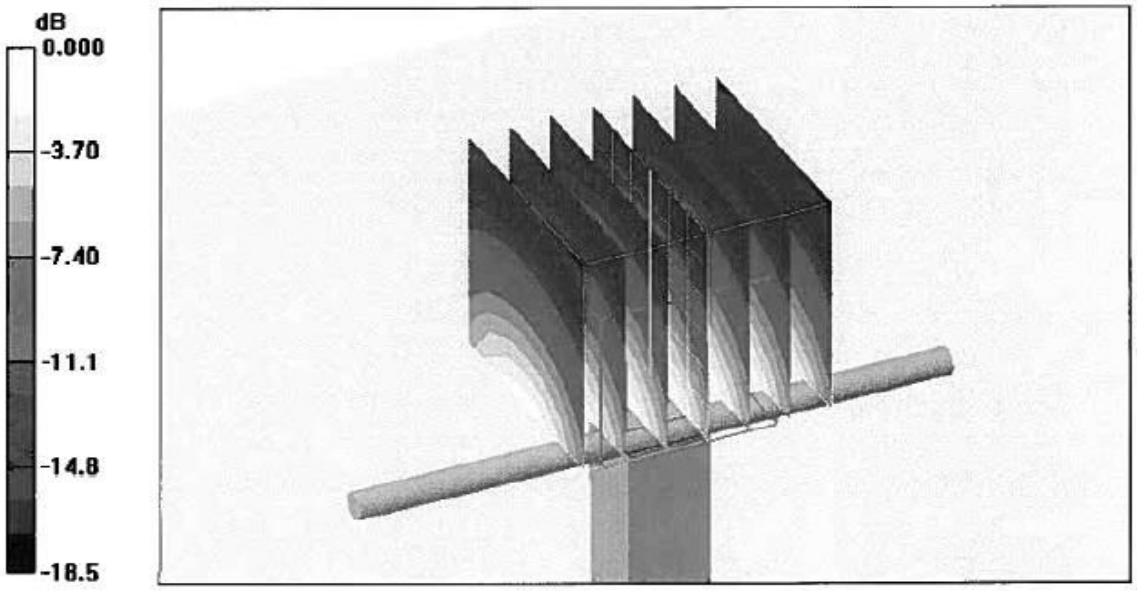
**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d064**

Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: HSL U10 BB;
Medium parameters used: f = 1800 MHz; $\sigma$ = 1.41 mho/m; $\varepsilon_r$ = 39.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(5.03, 5.03, 5.03); Calibrated: 19.10.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2007
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; ;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.1 V/m; Power Drift = 0.002 dB
Peak SAR (extrapolated) = 16.5 W/kg
**SAR(1 g) = 9.7 mW/g; SAR(10 g) = 5.14 mW/g**
Maximum value of SAR (measured) = 11.0 mW/g




0 dB = 11.0mW/g

**DASY4 Validation Report for Body TSL**

Date/Time: 28.08.2007 15:38:17

Test Laboratory: SPEAG, Zurich, Switzerland

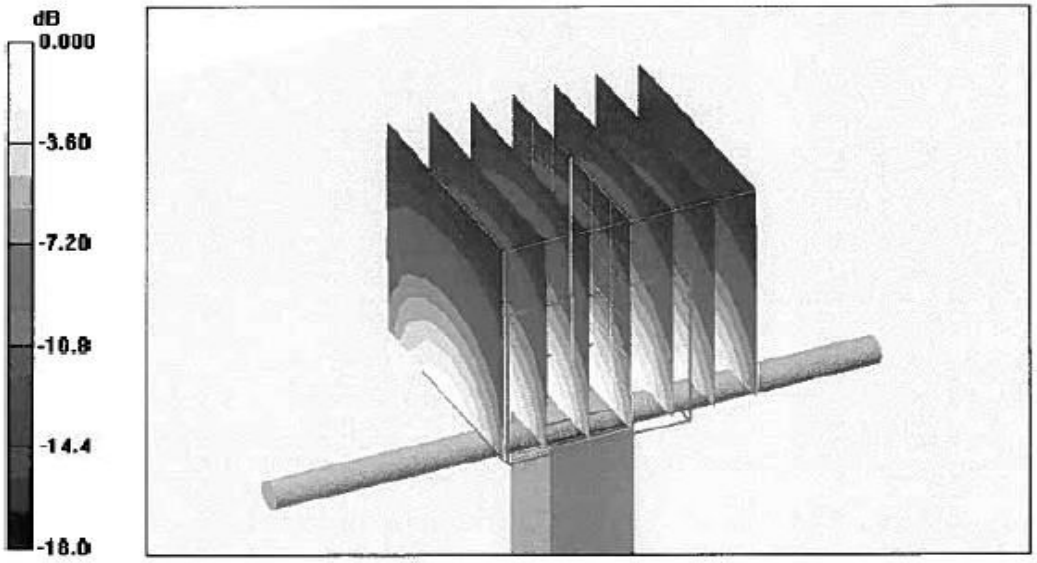
**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d064**

Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: MSL U10 BB;
Medium parameters used: f = 1800 MHz; $\sigma$ = 1.48 mho/m; $\varepsilon_r$ = 54.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(4.47, 4.47, 4.47); Calibrated: 19.10.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2007
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; ;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.7 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 15.2 W/kg
**SAR(1 g) = 9.39 mW/g; SAR(10 g) = 5.14 mW/g**
Maximum value of SAR (measured) = 10.6 mW/g




0 dB = 10.6mW/g

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**Calibration Laboratory of**
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**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: D1800V2-2d063_Sep06**

# CALIBRATION CERTIFICATE

Object: D1800V2 - SN: 2d063

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

Calibration date: September 20, 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 |
| Reference Probe ES3DV3 | SN: 3025 | 28-Oct-05 (SPEAG, No. ES3-3025_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: | Marcel Fehr | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: September 20, 2006

**DASY4 Validation Report for Head TSL**

Date/Time: 13.09.2006 12:17:34

Test Laboratory: SPEAG, Zurich, Switzerland

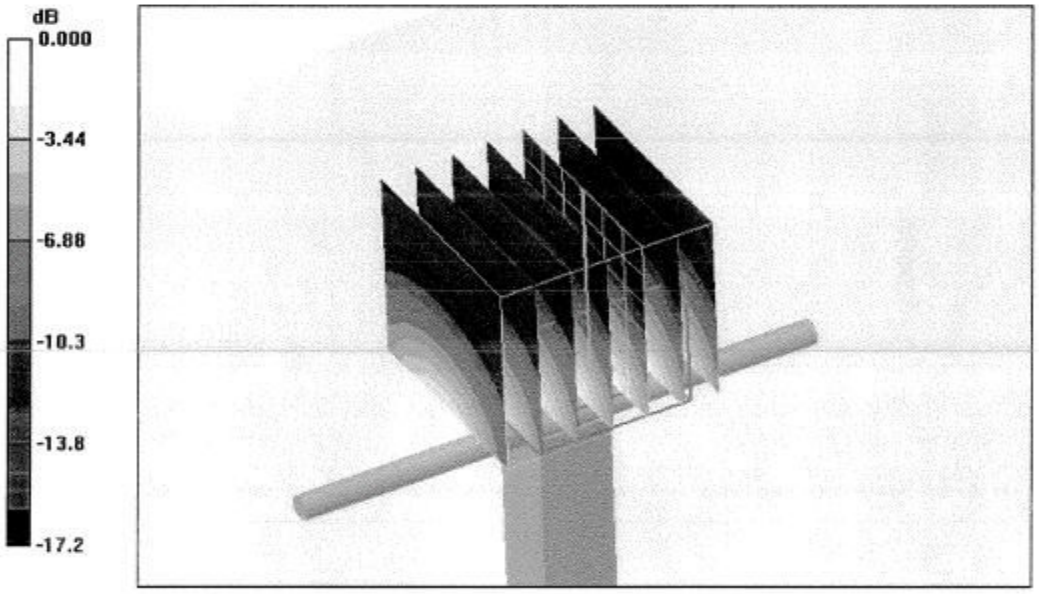
**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: SN:2d063**

Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: HSL U10 BB;
Medium parameters used: f = 1800 MHz; $\sigma$ = 1.35 mho/m; $\varepsilon_r$ = 38.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(4.85, 4.85, 4.85); 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, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.5 V/m; Power Drift = -0.083 dB
Peak SAR (extrapolated) = 16.3 W/kg
**SAR(1 g) = 9.57 mW/g; SAR(10 g) = 5.12 mW/g**
Maximum value of SAR (measured) = 10.6 mW/g




0 dB = 10.6mW/g

**DASY4 Validation Report for Body TSL**

Date/Time: 20.09.2006 15:39:47

Test Laboratory: SPEAG, Zurich, Switzerland

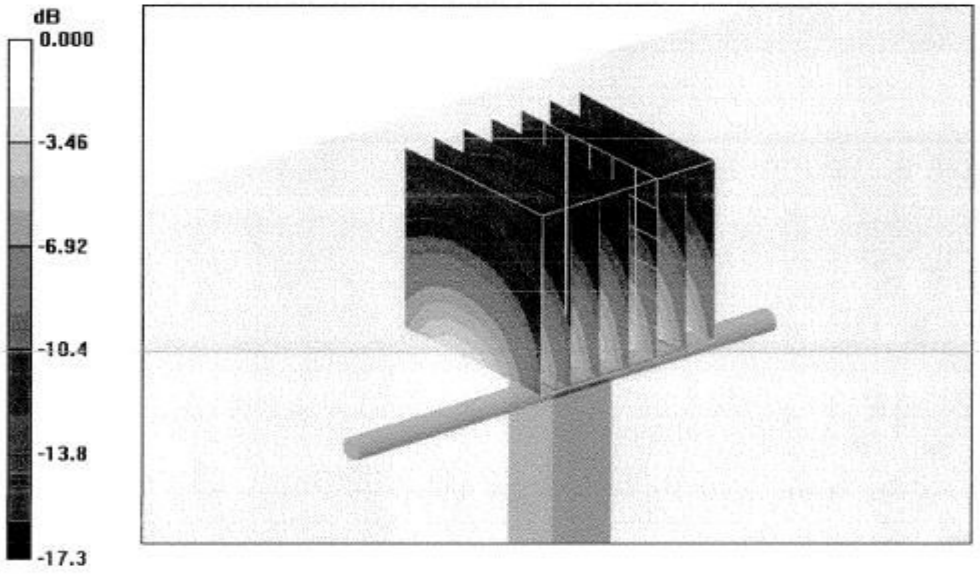
**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: SN: 2d063**

Communication System: CW; Frequency: 1800 MHz;Duty Cycle: 1:1
Medium: MSL U10;
Medium parameters used: f = 1800 MHz; $\sigma$ = 1.49 mho/m; $\varepsilon_r$ = 52.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3025 (HF); ConvF(4.45, 4.45, 4.45); 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, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.8 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 17.7 W/kg
**SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.47 mW/g**
Maximum value of SAR (measured) = 11.2 mW/g




0 dB = 11.2mW/g

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**Accreditation No.: SCS 108**

**Client** Nokia SD TCC

**Certificate No: D1900V2-534_Sep06**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D1900V2 - SN: 534 |
| Calibration procedure(s) | QA CAL-05.v6<br>Calibration procedure for dipole validation kits |
| Calibration date: | September 20, 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 |
| Reference Probe ES3DV3 | SN: 3025 | 28-Oct-05 (SPEAG, No. ES3-3025_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: | Marcel Fehr | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: September 20, 2006

**DASY4 Validation Report for Head TSL**

Date/Time: 13.09.2006 15:19:52

Test Laboratory: SPEAG, Zurich, Switzerland

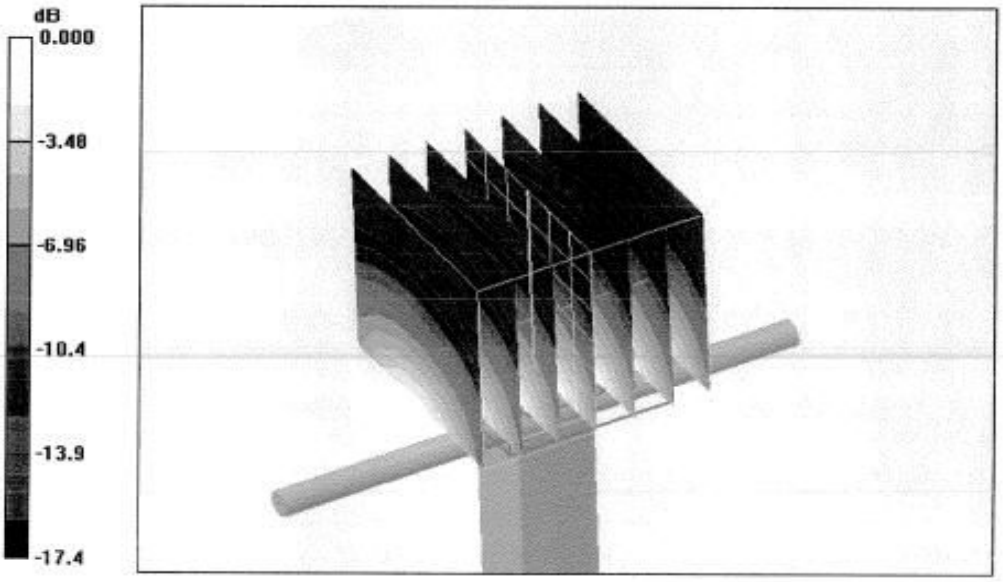
**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:534**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL U10 BB;
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.41 mho/m; $\varepsilon_r$ = 38.6; $\rho$ = 1000 kg/m$^3$
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, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.2 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 15.9 W/kg
**SAR(1 g) = 9.38 mW/g; SAR(10 g) = 4.97 mW/g**
Maximum value of SAR (measured) = 10.5 mW/g




0 dB = 10.5mW/g

**DASY4 Validation Report for Body TSL**

Date/Time: 20.09.2006 10:57:32

Test Laboratory: SPEAG, Zurich, Switzerland

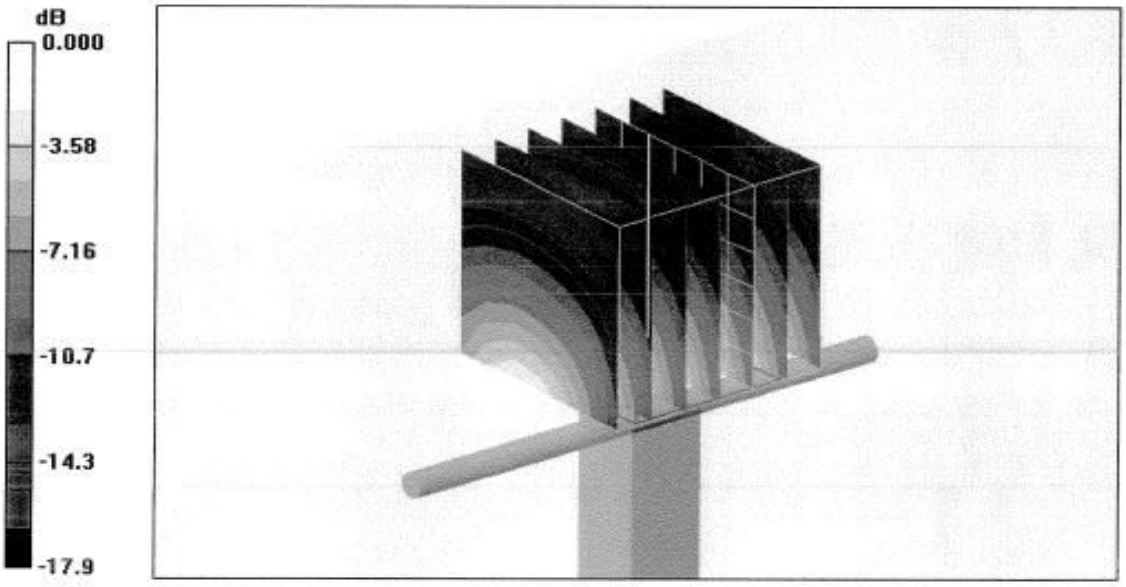
**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:534**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: MSL U10;
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.56 mho/m; $\varepsilon_r$ = 52.6; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV2 - SN3025 (HF); ConvF(4.38, 4.38, 4.38); 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, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:**
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.6 V/m; Power Drift = 0.060 dB
Peak SAR (extrapolated) = 16.5 W/kg
**SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.37 mW/g**
Maximum value of SAR (measured) = 11.2 mW/g




0 dB = 11.2mW/g

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

Test Laboratory: TCC Nokia
**Type: RM-375; Serial: A0000001269B43C**

**CDMA800 Flip Open**

| 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 | 24.50 | 24.35 | 23.51 |
| RC1 | SO3 | yes | 24.62 | 24.50 | 23.71 |
| RC1 | SO55 | yes | 24.50 | 24.43 | 23.60 |
| RC2 | SO9 | yes | 24.50 | 24.39 | 23.53 |
| RC2 | SO17 | yes | 24.56 | 24.57 | 23.79 |
| RC2 | SO55 | yes | 24.45 | 24.38 | 23.55 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 24.57 | 24.47 | 23.60 |
| RC3 | SO3 | yes | 24.64 | 24.52 | 23.70 |
| RC3 | SO32 (no SCH1) | no | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 23.75 | 23.81 | 22.99 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 23.82 | 23.82 | 22.93 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 24.02 | 24.08 | 23.24 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 24.01 | 24.05 | 23.22 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 24.23 | 24.25 | 23.41 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **24.55** | **24.54** | **23.66** |
| RC4 | SO1 | no | - | - | - |
| RC4 | SO2 | yes | 24.52 | 24.52 | 23.65 |
| RC4 | SO3 | yes | 24.63 | 24.51 | 23.72 |
| RC4 | SO32 (no SCH1) | yes | - | - | - |
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 23.80 | 23.85 | 22.99 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 23.82 | 23.82 | 22.97 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 23.89 | 23.95 | 23.10 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 24.16 | 24.10 | 23.19 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 24.36 | 24.15 | 23.39 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 24.57 | 24.56 | 23.69 |
| RC5 | SO9 | yes | 24.63 | 24.55 | 23.68 |
| RC5 | S17 | yes | 24.60 | 24.49 | 23.71 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 24.58 | 24.49 | 23.63 |

**CDMA1700/2100 Flip Open**

| Radio Configuration | Service Options and Channel Configurations | Supported | Ch 25 1711.25 MHz | Ch 425 1732.5 MHz | Ch 875 1753.75 MHz |
|---|---|---|---|---|---|
| | | | Pavg (dBm) | Pavg (dBm) | Pavg (dBm) |
| RC1 | SO1 | no | - | - | - |
| RC1 | SO2 | yes | 23.34 | 23.54 | 23.45 |
| RC1 | SO3 | yes | 23.49 | 23.60 | 23.61 |
| RC1 | SO55 | yes | 23.24 | 23.47 | 23.35 |
| RC2 | SO9 | yes | 23.35 | 23.55 | 23.41 |
| RC2 | SO17 | yes | 23.36 | 23.49 | 23.51 |
| RC2 | SO55 | yes | 23.25 | 23.47 | 23.37 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 23.35 | 23.57 | 23.44 |
| RC3 | SO3 | yes | 23.42 | 23.57 | 23.51 |
| RC3 | SO32 (no SCH1) | no | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 22.61 | 22.79 | 22.76 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 22.65 | 22.83 | 22.80 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 22.81 | 23.00 | 22.96 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 23.06 | 23.21 | 23.03 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 23.19 | 23.29 | 23.25 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **23.35** | **23.50** | **23.45** |
| RC4 | SO1 | no | - | - | - |
| RC4 | SO2 | yes | 23.36 | 23.56 | 23.45 |
| RC4 | SO3 | yes | 23.41 | 23.62 | 23.48 |
| RC4 | SO32 (no SCH1) | no | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 22.65 | 22.80 | 22.78 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 22.70 | 22.81 | 22.82 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 22.84 | 23.01 | 22.97 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 22.93 | 23.05 | 23.05 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 23.10 | 23.27 | 23.23 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 23.33 | 23.52 | 23.52 |
| RC5 | SO9 | yes | 23.34 | 23.53 | 23.48 |
| RC5 | S17 | yes | 23.45 | 23.61 | 23.47 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 23.33 | 23.48 | 23.43 |

**CDMA1900 Flip Open**

| Radio Configuration | Service Options and Channel Configurations | Supported | Ch25 1851.25MHz | Ch600 1880.00MHz | Ch1175 1908.75MHz |
|---|---|---|---|---|---|
| | | | Pavg (dBm) | Pavg (dBm) | Pavg (dBm) |
| RC1 | SO1 | no | - | - | - |
| RC1 | SO2 | yes | 23.54 | 23.36 | 23.43 |
| RC1 | SO3 | yes | 23.51 | 23.35 | 23.55 |
| RC1 | SO55 | yes | 23.54 | 23.32 | 23.47 |
| RC2 | SO9 | yes | 23.55 | 23.32 | 23.43 |
| RC2 | SO17 | yes | 23.58 | 23.45 | 23.54 |
| RC2 | SO55 | yes | 23.44 | 23.29 | 23.40 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 23.52 | 23.33 | 23.42 |
| RC3 | SO3 | yes | 23.53 | 23.35 | 23.41 |
| RC3 | SO32 (no SCH1) | yes | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 22.84 | 22.71 | 22.82 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 22.86 | 22.73 | 22.85 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 23.04 | 22.96 | 23.05 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 23.17 | 22.96 | 23.00 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 23.29 | 23.04 | 23.23 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **23.58** | **23.28** | **23.47** |
| RC4 | SO1 | no | - | - | - |
| RC4 | SO2 | yes | 23.58 | 23.28 | 23.45 |
| RC4 | SO3 | yes | 23.52 | 23.35 | 23.51 |
| RC4 | SO32 (no SCH1) | yes | - | - | - |
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 22.80 | 22.66 | 22.73 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 22.72 | 22.58 | 22.63 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 22.93 | 22.78 | 22.80 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 23.00 | 22.83 | 23.02 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 23.18 | 23.06 | 23.10 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 23.54 | 23.37 | 23.42 |
| RC5 | SO9 | yes | 23.55 | 23.38 | 23.42 |
| RC5 | S17 | yes | 23.62 | 23.33 | 23.43 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 23.52 | 23.35 | 23.44 |

**CDMA800 Flip Closed**

| 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 | 24.50 | 24.35 | 24.22 |
| RC1 | SO3 | yes | 24.62 | 24.50 | 24.36 |
| RC1 | SO55 | yes | 24.50 | 24.43 | 24.26 |
| RC2 | SO9 | yes | 24.50 | 24.39 | 24.26 |
| RC2 | SO17 | yes | 24.56 | 24.57 | 24.41 |
| RC2 | SO55 | yes | 24.45 | 24.38 | 24.23 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 24.57 | 24.47 | 24.28 |
| RC3 | SO3 | yes | 24.64 | 24.52 | 24.43 |
| RC3 | SO32 (no SCH1) | no | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 23.75 | 23.81 | 23.54 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 23.82 | 23.82 | 23.55 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 24.02 | 24.08 | 23.75 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 24.01 | 24.05 | 23.84 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 24.23 | 24.25 | 23.98 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **24.55** | **24.54** | **24.28** |
| RC4 | SO1 | no | - | - | |
| RC4 | SO2 | yes | 24.52 | 24.52 | 24.27 |
| RC4 | SO3 | yes | 24.63 | 24.51 | 24.32 |
| RC4 | SO32 (no SCH1) | yes | - | - | - |
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 23.80 | 23.85 | 23.58 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 23.82 | 23.82 | 23.59 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 23.89 | 23.95 | 23.78 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 24.16 | 24.10 | 23.80 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 24.36 | 24.15 | 23.97 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 24.57 | 24.56 | 24.27 |
| RC5 | SO9 | yes | 24.63 | 24.55 | 24.33 |
| RC5 | S17 | yes | 24.60 | 24.49 | 24.38 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 24.58 | 24.49 | 24.33 |

**CDMA1700/2100 Flip Closed**

| Radio Configuration | Service Options and Channel Configurations | Supported | Ch 25 1711.25 MHz | Ch 425 1732.5 MHz | Ch 875 1753.75 MHz |
|---|---|---|---|---|---|
| | | | Pavg (dBm) | Pavg (dBm) | Pavg (dBm) |
| RC1 | SO1 | no | - | - | - |
| RC1 | SO2 | yes | 23.34 | 23.54 | 23.45 |
| RC1 | SO3 | yes | 23.49 | 23.60 | 23.61 |
| RC1 | SO55 | yes | 23.24 | 23.47 | 23.35 |
| RC2 | SO9 | yes | 23.35 | 23.55 | 23.41 |
| RC2 | SO17 | yes | 23.36 | 23.49 | 23.51 |
| RC2 | SO55 | yes | 23.25 | 23.47 | 23.37 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 23.35 | 23.57 | 23.44 |
| RC3 | SO3 | yes | 23.42 | 23.57 | 23.51 |
| RC3 | SO32 (no SCH1) | no | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 22.61 | 22.79 | 22.76 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 22.65 | 22.83 | 22.80 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 22.81 | 23.00 | 22.96 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 23.06 | 23.21 | 23.03 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 23.19 | 23.29 | 23.25 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **23.35** | **23.50** | **23.45** |
| RC4 | SO1 | no | - | - | - |
| RC4 | SO2 | yes | 23.36 | 23.56 | 23.45 |
| RC4 | SO3 | yes | 23.41 | 23.62 | 23.48 |
| RC4 | SO32 (no SCH1) | no | - | - | - |
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 22.65 | 22.80 | 22.78 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 22.70 | 22.81 | 22.82 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 22.84 | 23.01 | 22.97 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 22.93 | 23.05 | 23.05 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 23.10 | 23.27 | 23.23 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 23.33 | 23.52 | 23.52 |
| RC5 | SO9 | yes | 23.34 | 23.53 | 23.48 |
| RC5 | S17 | yes | 23.45 | 23.61 | 23.47 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 23.33 | 23.48 | 23.43 |

**CDMA1900 Flip Closed**

| Radio Configuration | Service Options and Channel Configurations | Supported | Ch25 1851.25MHz | Ch600 1880.00MHz | Ch1175 1908.75MHz |
|---|---|---|---|---|---|
| | | | Pavg (dBm) | Pavg (dBm) | Pavg (dBm) |
| RC1 | SO1 | no | - | - | - |
| RC1 | SO2 | yes | 23.54 | 23.36 | 23.43 |
| RC1 | SO3 | yes | 23.51 | 23.35 | 23.55 |
| RC1 | SO55 | yes | 23.54 | 23.32 | 23.47 |
| RC2 | SO9 | yes | 23.55 | 23.32 | 23.43 |
| RC2 | SO17 | yes | 23.58 | 23.45 | 23.54 |
| RC2 | SO55 | yes | 23.44 | 23.29 | 23.40 |
| RC3 | SO1 | no | - | - | - |
| RC3 | SO2 | yes | 23.52 | 23.33 | 23.42 |
| RC3 | SO3 | yes | 23.53 | 23.35 | 23.41 |
| RC3 | SO32 (no SCH1) | yes | - | - | - |
| RC3 | SO32 (SCH1 9.6 kpbs) | yes | 22.84 | 22.71 | 22.82 |
| RC3 | SO32 (SCH1 19.2 kpbs) | yes | 22.86 | 22.73 | 22.85 |
| RC3 | SO32 (SCH1 38.4 kpbs) | yes | 23.04 | 22.96 | 23.05 |
| RC3 | SO32 (SCH1 76.8 kpbs) | yes | 23.17 | 22.96 | 23.00 |
| RC3 | SO32 (SCH1 153.6 kpbs) | yes | 23.29 | 23.04 | 23.23 |
| RC3 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC3 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| **RC3** | **SO55** | **yes** | **23.58** | **23.28** | **23.47** |
| RC4 | SO1 | no | - | - | - |
| RC4 | SO2 | yes | 23.58 | 23.28 | 23.45 |
| RC4 | SO3 | yes | 23.52 | 23.35 | 23.51 |

| | | | | | |
|---|---|---|---|---|---|
| RC4 | SO32 (no SCH1) | yes | - | - | - |
| RC4 | SO32 (SCH1 9.6 kpbs) | yes | 22.80 | 22.66 | 22.73 |
| RC4 | SO32 (SCH1 19.2 kpbs) | yes | 22.72 | 22.58 | 22.63 |
| RC4 | SO32 (SCH1 38.4 kpbs) | yes | 22.93 | 22.78 | 22.80 |
| RC4 | SO32 (SCH1 76.8 kpbs) | yes | 23.00 | 22.83 | 23.02 |
| RC4 | SO32 (SCH1 153.6 kpbs) | yes | 23.18 | 23.06 | 23.10 |
| RC4 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC4 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC4 | SO55 | yes | 23.54 | 23.37 | 23.42 |
| RC5 | SO9 | yes | 23.55 | 23.38 | 23.42 |
| RC5 | S17 | yes | 23.62 | 23.33 | 23.43 |
| RC5 | SO33 (SCH1 9.6 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 19.2 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 38.4 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 76.8 kpbs) | no | - | - | - |
| RC5 | SO33 (SCH1 153.6 kpbs) | no | - | - | - |
| RC5 | SO55 | yes | 23.52 | 23.35 | 23.44 |