## APPENDIX F: RELEVANT PAGES FROM DIPOLE VALIDATION KIT 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
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 Salo TCC

**Certificate No: D750V3-1034_Jul11**

# CALIBRATION CERTIFICATE

Object: D750V3 - SN:1034

Calibration procedure(s): QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: July 07, 2011

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 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Power sensor HP 8481A | US37292783 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-11 (No. 217-01367) | Apr-12 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 29-Mar-11 (No. 217-01371) | Apr-12 |
| Reference Probe ES3DV3 | SN: 3205 | 29-Apr-11 (No. ES3-3205_Apr11) | Apr-12 |
| DAE4 | SN: 601 | 04-Jul-11 (No. DAE4-601_Jul11) | Jul-12 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-09) | In house check: Oct-11 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-09) | In house check: Oct-11 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-10) | In house check: Oct-11 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Claudio Leubler | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: July 11, 2011

## Glossary:

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A | not applicable or not measured |

## Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

## Additional Documentation:

d) DASY4/5 System Handbook

## Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| **DASY Version** | DASY5 | V52.6.2 |
| **Extrapolation** | Advanced Extrapolation | |
| **Phantom** | Modular Flat Phantom | |
| **Distance Dipole Center - TSL** | 15 mm | with Spacer |
| **Zoom Scan Resolution** | dx, dy, dz = 5 mm | |
| **Frequency** | 750 MHz ± 1 MHz | |

## Head TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 41.9 | 0.89 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 41.7 ± 6 % | 0.91 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 2.12 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **8.33 mW / g ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 1.39 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **5.48 mW / g ± 16.5 % (k=2)** |

## Body TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 55.5 | 0.96 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 55.2 ± 6 % | 0.96 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 2.20 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **8.79 mW / g ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 1.45 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **5.80 mW / g ± 16.5 % (k=2)** |

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 53.8 Ω - 1.6 jΩ |
| Return Loss | - 28.0 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 49.1 Ω - 3.5 jΩ |
| Return Loss | - 28.7 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.033 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | July 06, 2011 |

Date: 07.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

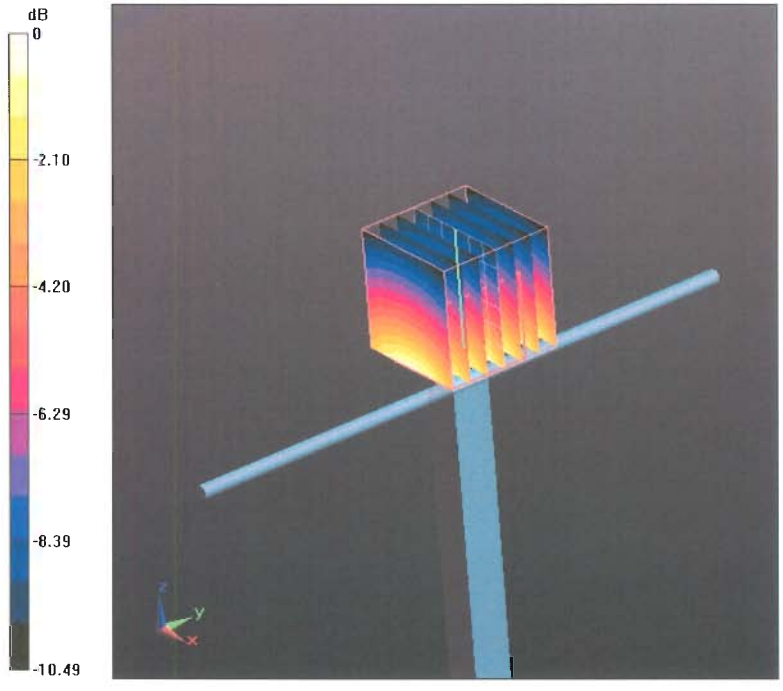
**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1034**

Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; $\sigma$ = 0.91 mho/m; $\varepsilon_r$ = 41.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

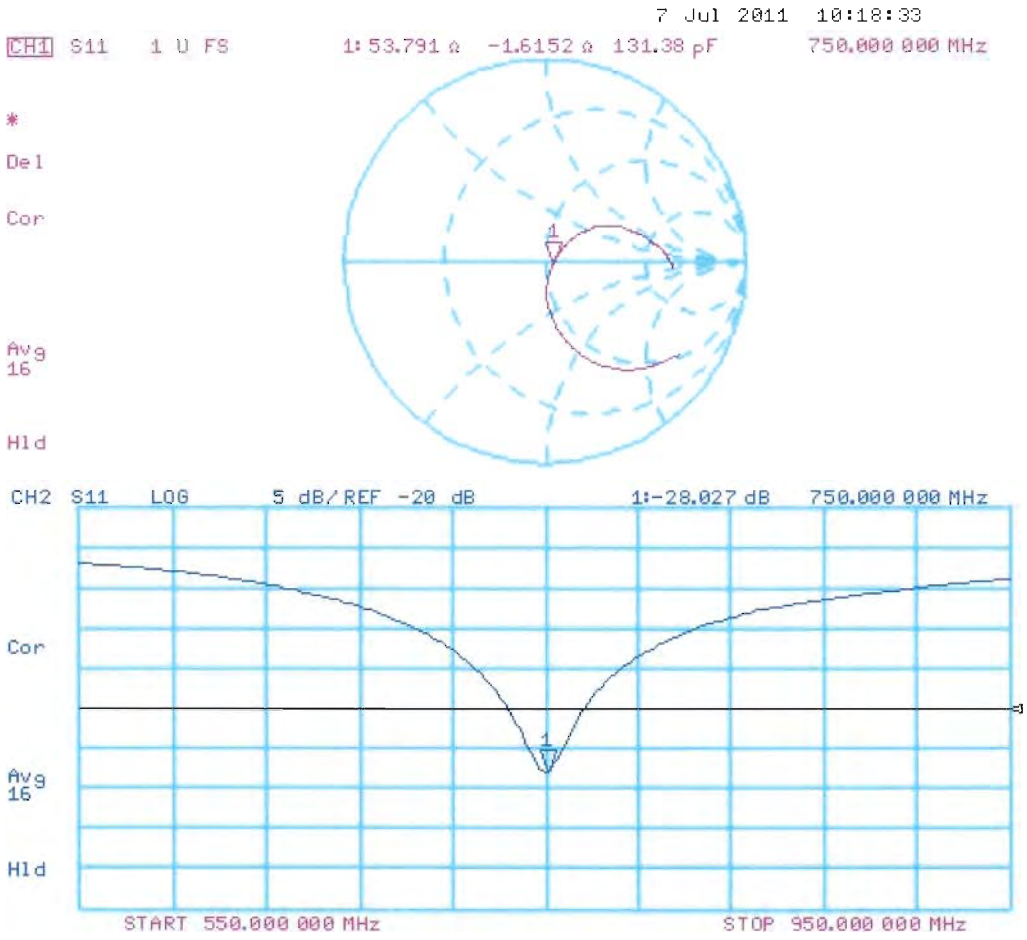
- Probe: ES3DV3 - SN3205; ConvF(6.33, 6.33, 6.33); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

**Dipole Calibration for Head Tissue/Pin=250mW; dip=15mm; dist=3.0mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.065 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.205 W/kg
**SAR(1 g) = 2.12 mW/g; SAR(10 g) = 1.39 mW/g**
Maximum value of SAR (measured) = 2.487 mW/g




0 dB = 2.490mW/g

## Impedance Measurement Plot for Head TSL



Date: 07.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

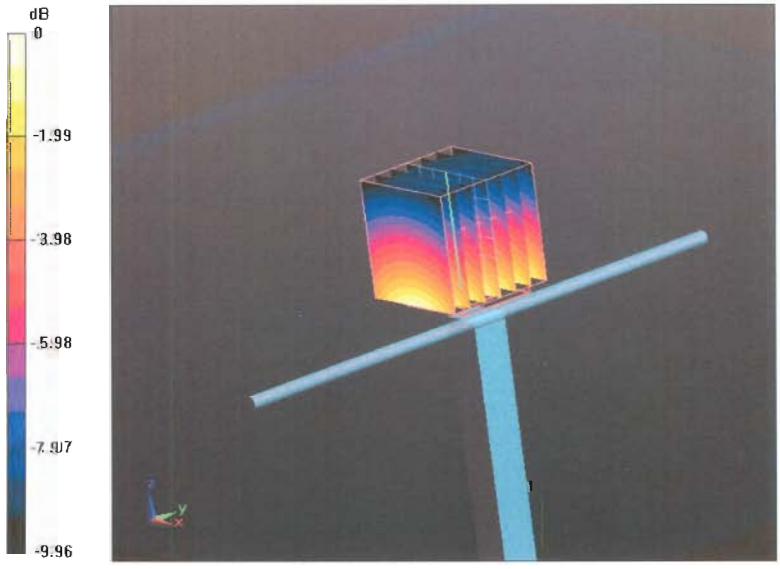
**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1034**

Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; $\sigma$ = 0.96 mho/m; $\varepsilon_r$ = 55.2; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

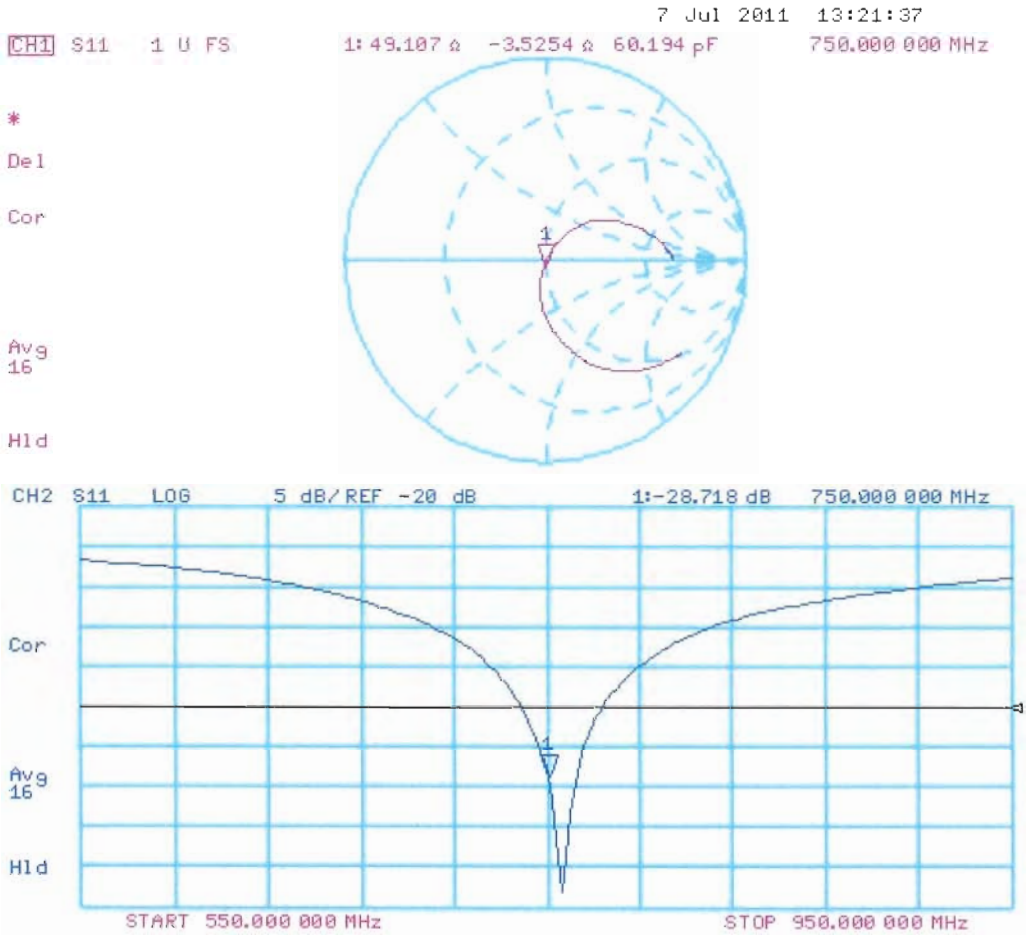
- Probe: ES3DV3 - SN3205; ConvF(6.12, 6.12, 6.12); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

**Dipole Calibration for Body Tissue/Pin=250mW; dip=15mm; dist=3.0mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.234 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.265 W/kg
**SAR(1 g) = 2.2 mW/g; SAR(10 g) = 1.45 mW/g**
Maximum value of SAR (measured) = 2.566 mW/g




0 dB = 2.570mW/g

## Impedance Measurement Plot for Body TSL



## Dipole D750V3 – SN: 1034 Antenna Parameters measured: 2012-05-07.

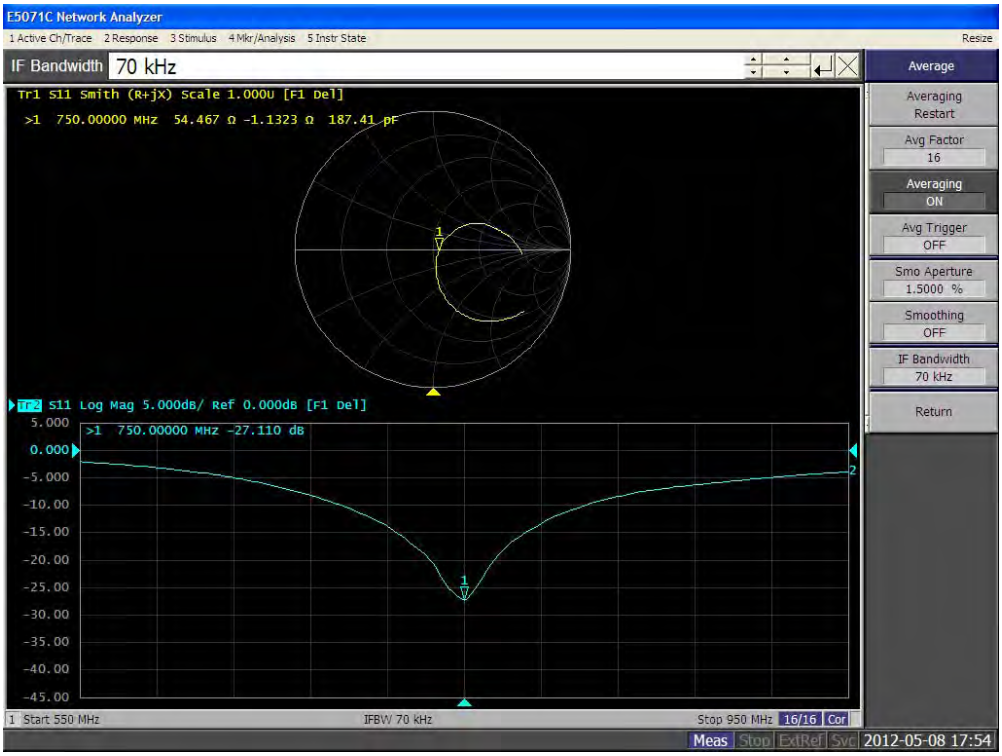
### Antenna Parameters with Head TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 53.8 Ω - 1.6 jΩ | 54.5 Ω - 1.1 jΩ |
| Return loss | -28.0 dB | -27.1 dB |

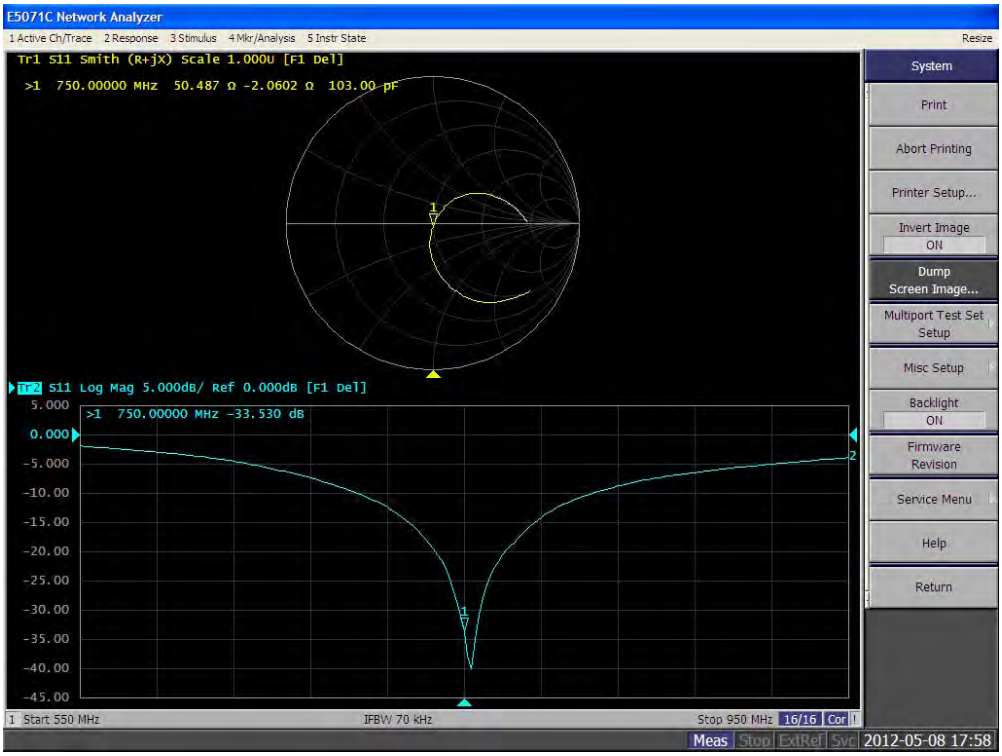
### Antenna Parameters with Body TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 49.1 Ω - 3.5 jΩ | 50.5 Ω - 2.1 jΩ |
| Return loss | -28.7 dB | -33.5 dB |

## Impedance Measurement Plot for Head TSL 750




## Impedance Measurement Plot for Body TSL 750



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**Accreditation No.: SCS 108**

**Client** Nokia Salo TCC

**Certificate No: D835V2-462_Sep11**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D835V2 - SN: 462 |
| Calibration procedure(s) | QA CAL-05.v8<br>Calibration procedure for dipole validation kits above 700 MHz |
| Calibration date: | September 13, 2011 |

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 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Power sensor HP 8481A | US37292783 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-11 (No. 217-01367) | Apr-12 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 29-Mar-11 (No. 217-01371) | Apr-12 |
| Reference Probe ES3DV3 | SN: 3205 | 29-Apr-11 (No. ES3-3205_Apr11) | Apr-12 |
| DAE4 | SN: 601 | 04-Jul-11 (No. DAE4-601_Jul11) | Jul-12 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-09) | In house check: Oct-11 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-09) | In house check: Oct-11 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-10) | In house check: Oct-11 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Dimce Iliev | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: September 13, 2011

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 51.6 Ω - 1.8 jΩ |
| Return Loss | - 32.4 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 47.8 Ω - 3.7 jΩ |
| Return Loss | - 27.2 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.391 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | March 27, 2002 |

Date: 13.09.2011

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462**

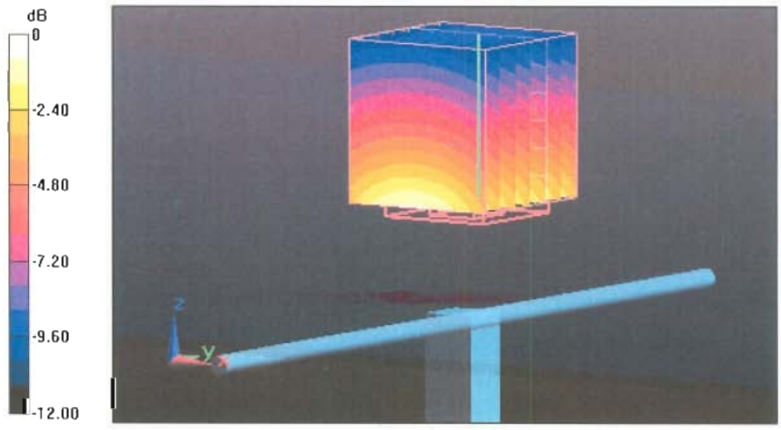
Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma$ = 0.89 mho/m; $\varepsilon_r$ = 41.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.07, 6.07, 6.07); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

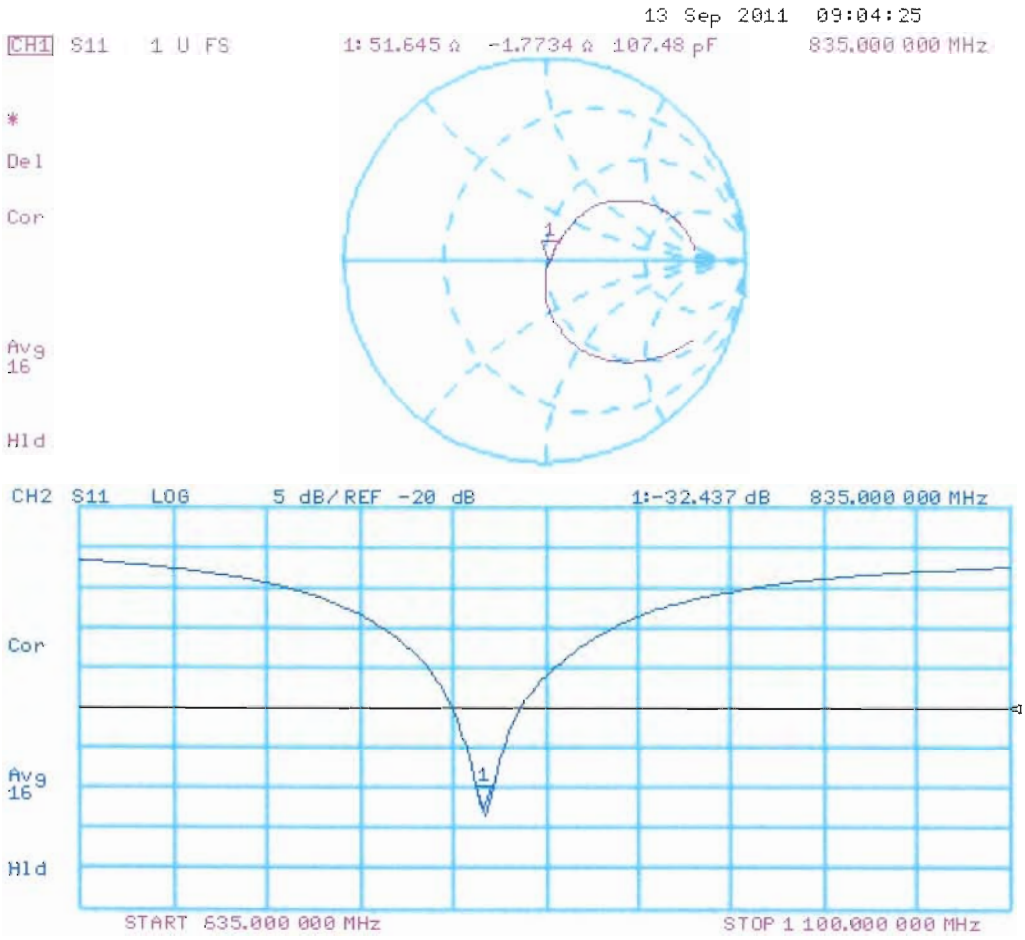
## Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.987 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.423 W/kg
**SAR(1 g) = 2.33 mW/g; SAR(10 g) = 1.52 mW/g**
Maximum value of SAR (measured) = 2.708 mW/g




0 dB = 2.710mW/g

## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 12.09.2011

Test Laboratory: SPEAG, Zurich, Switzerland

### DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 462

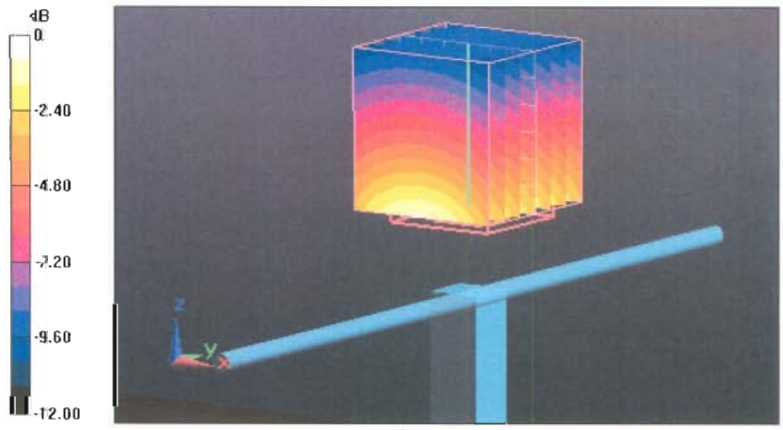
Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma$ = 1 mho/m; $\varepsilon_r$ = 53.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.02, 6.02, 6.02); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

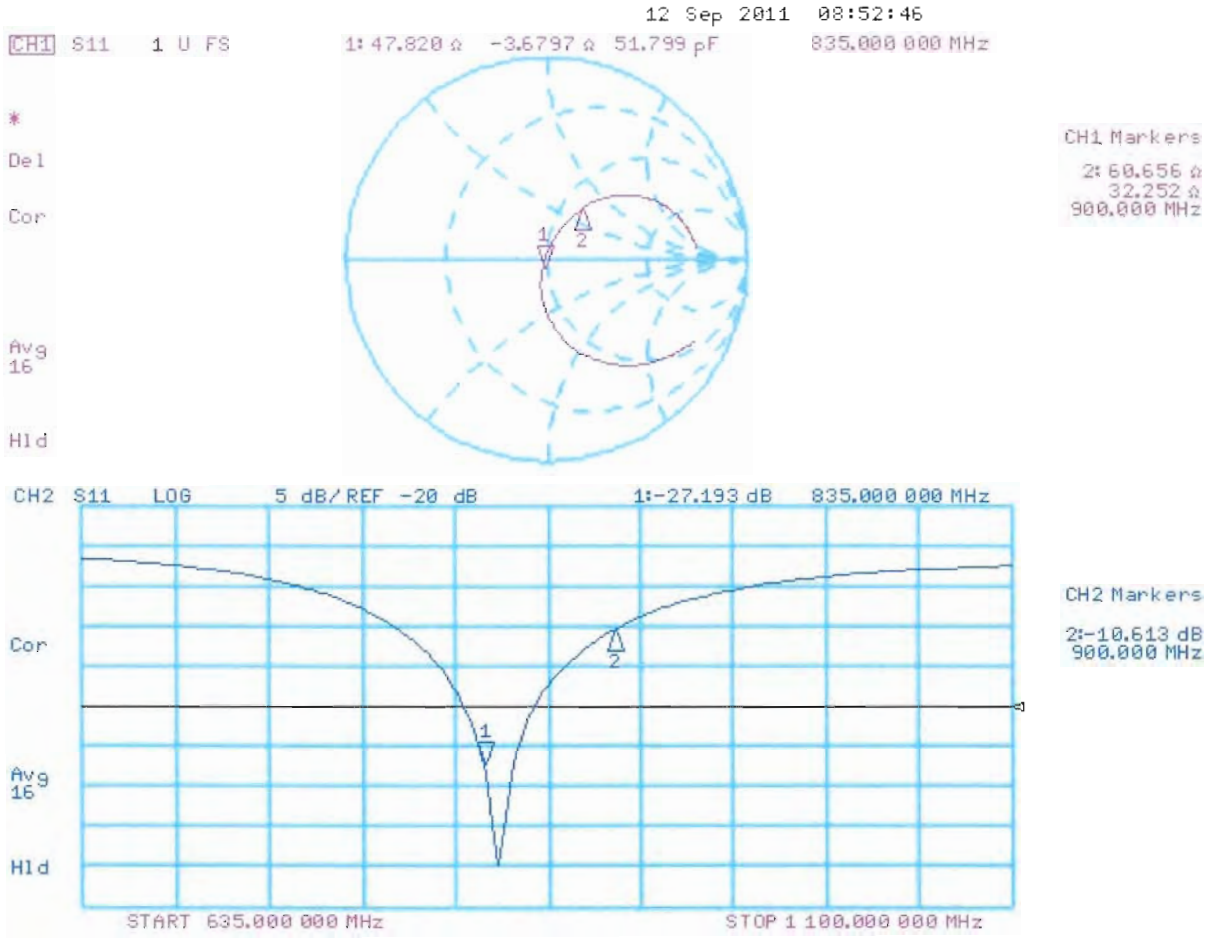
### Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.464 V/m; Power Drift = 0.0033 dB
Peak SAR (extrapolated) = 3.540 W/kg
**SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.61 mW/g**
Maximum value of SAR (measured) = 2.851 mW/g




0 dB = 2.850mW/g

## Impedance Measurement Plot for Body TSL



## Dipole D835V2 – SN: 462 Antenna Parameters measured: 2013-04-16.

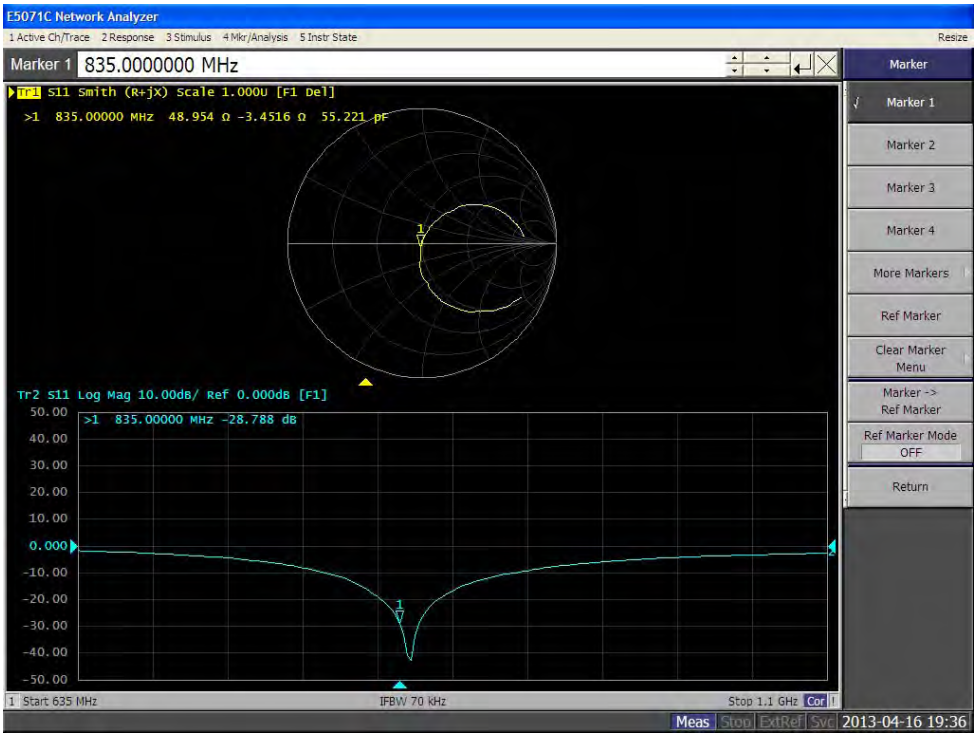
### Antenna Parameters with Head TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 50.7 Ω - 2.8 jΩ | 49.0 Ω -3.5 jΩ |
| Return loss | -30.7 dB | -28.8 dB |

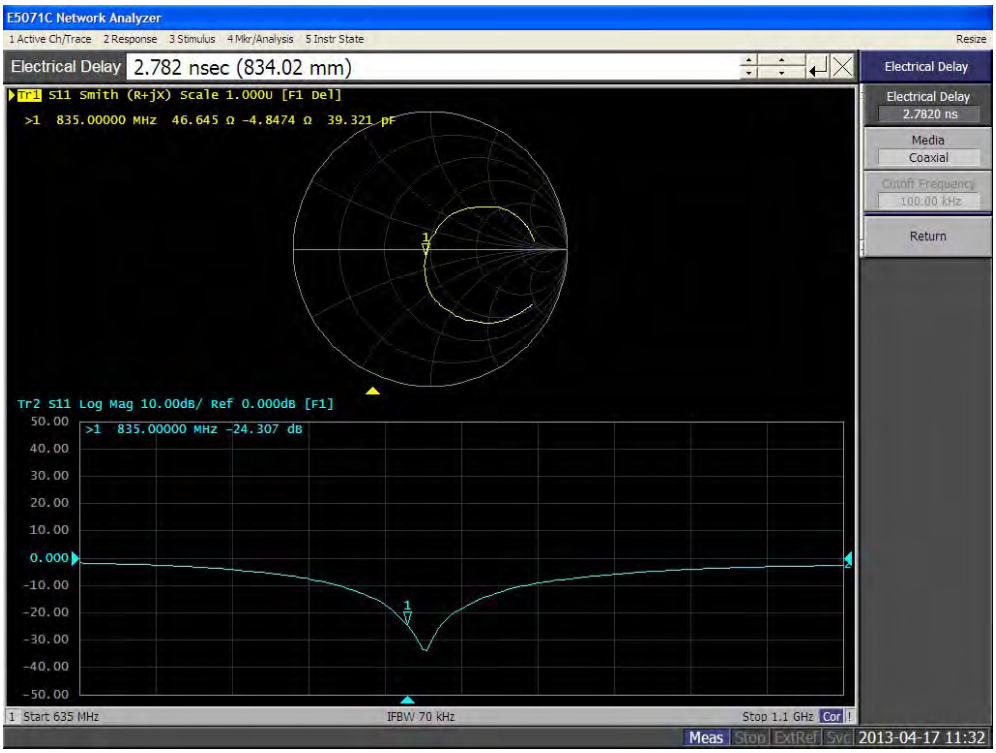
### Antenna Parameters with Body TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 47.4 Ω - 3.8 jΩ | 46.6 Ω -4.8 jΩ |
| Return loss | -26.5 dB | -24.3 dB |

## Impedance Measurement Plot for Head TSL 835




## Impedance Measurement Plot for Body TSL 835



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**Accreditation No.: SCS 108**

**Client** **Nokia Salo TCC**

**Certificate No: D835V2-480_Dec12**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D835V2 - SN: 480 |
| Calibration procedure(s) | QA CAL-05.v8<br>Calibration procedure for dipole validation kits above 700 MHz |
| Calibration date: | December 03, 2012 |

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 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Power sensor HP 8481A | US37292783 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 27-Mar-12 (No. 217-01530) | Apr-13 |
| Type-N mismatch combination | SN: 5047.3 / 06327 | 27-Mar-12 (No. 217-01533) | Apr-13 |
| Reference Probe ES3DV3 | SN: 3205 | 30-Dec-11 (No. ES3-3205_Dec11) | Dec-12 |
| DAE4 | SN: 601 | 27-Jun-12 (No. DAE4-601_Jun12) | Jun-13 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-11) | In house check: Oct-13 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-11) | In house check: Oct-13 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-12) | In house check: Oct-13 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Israe El-Naouq | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: December 3, 2012

**Calibration Laboratory of**
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**Accreditation No.: SCS 108**

**Glossary:**

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A | not applicable or not measured |

**Calibration is Performed According to the Following Standards:**

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

**Additional Documentation:**

d) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| **DASY Version** | DASY5 | V52.8.3 |
| **Extrapolation** | Advanced Extrapolation | |
| **Phantom** | Modular Flat Phantom | |
| **Distance Dipole Center - TSL** | 15 mm | with Spacer |
| **Zoom Scan Resolution** | dx, dy, dz = 5 mm | |
| **Frequency** | 835 MHz ± 1 MHz | |

## Head TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 41.5 | 0.90 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 41.4 ± 6 % | 0.92 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 2.39 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **9.40 W/kg ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 1.56 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **6.16 W/kg ± 16.5 % (k=2)** |

## Body TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 55.2 | 0.97 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 54.5 ± 6 % | 0.99 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 2.42 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **9.51 W/kg ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 1.59 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **6.27 W/kg ± 16.5 % (k=2)** |

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 50.8 Ω - 3.3 jΩ |
| Return Loss | - 29.4 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 46.7 Ω - 4.9 jΩ |
| Return Loss | - 24.3 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.391 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | January 28, 2003 |

## DASY5 Validation Report for Head TSL

Date: 03.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 480**

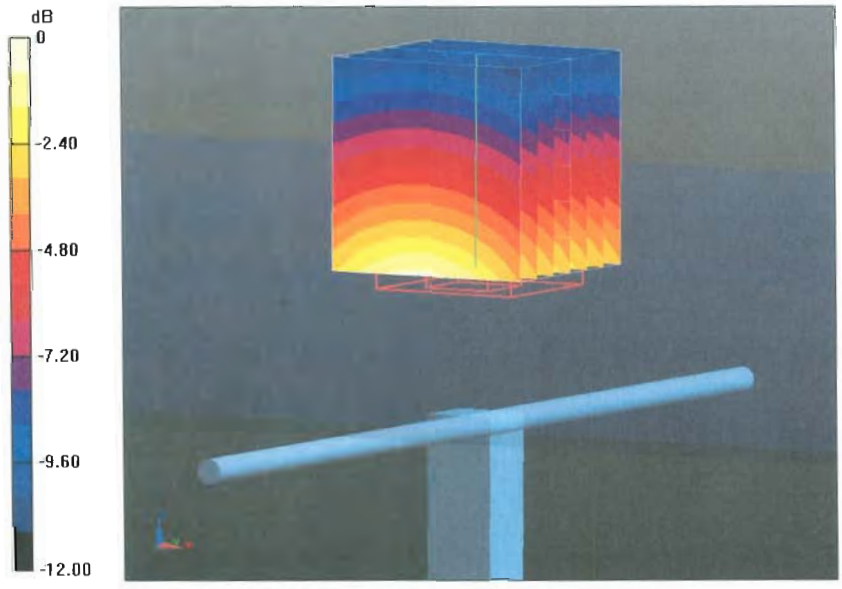
Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma$ = 0.92 mho/m; $\varepsilon_r$ = 41.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.07, 6.07, 6.07); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

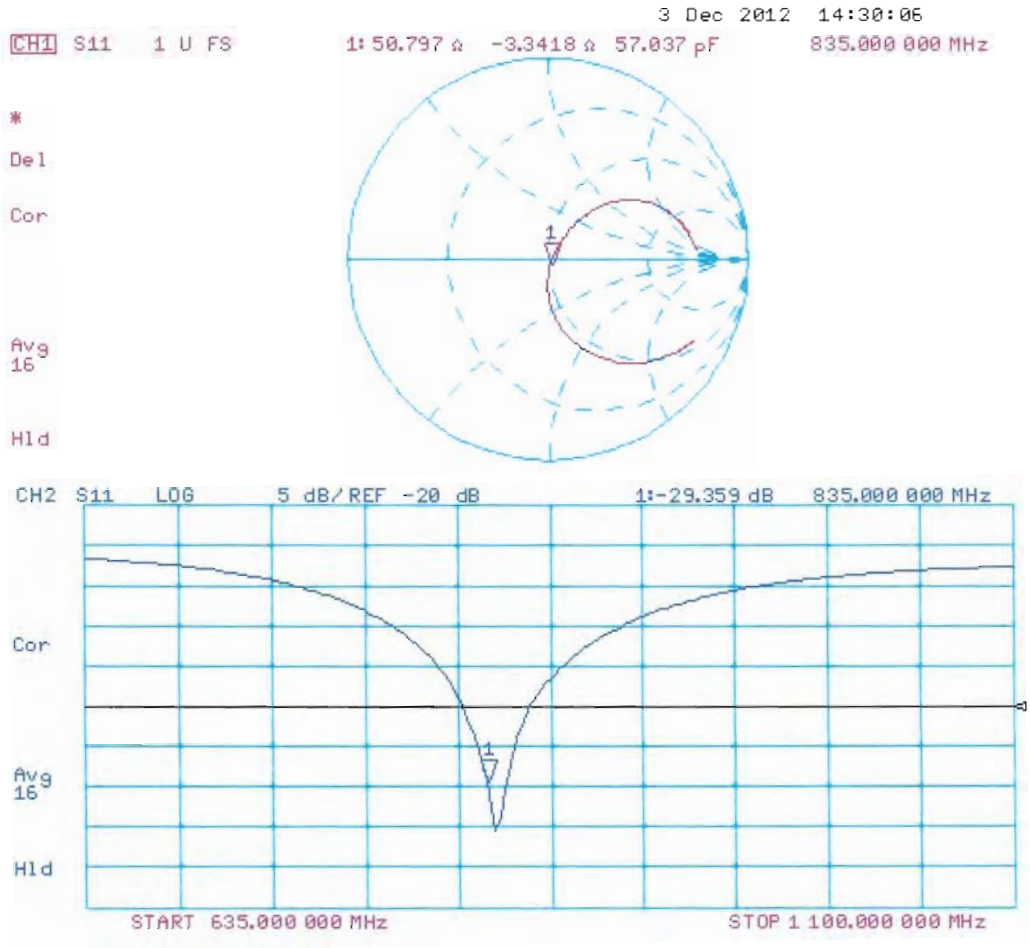
### Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.814 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.60 W/kg
**SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.56 W/kg**
Maximum value of SAR (measured) = 2.80 W/kg




0 dB = 2.80 W/kg = 4.47 dBW/kg

## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 03.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 480**

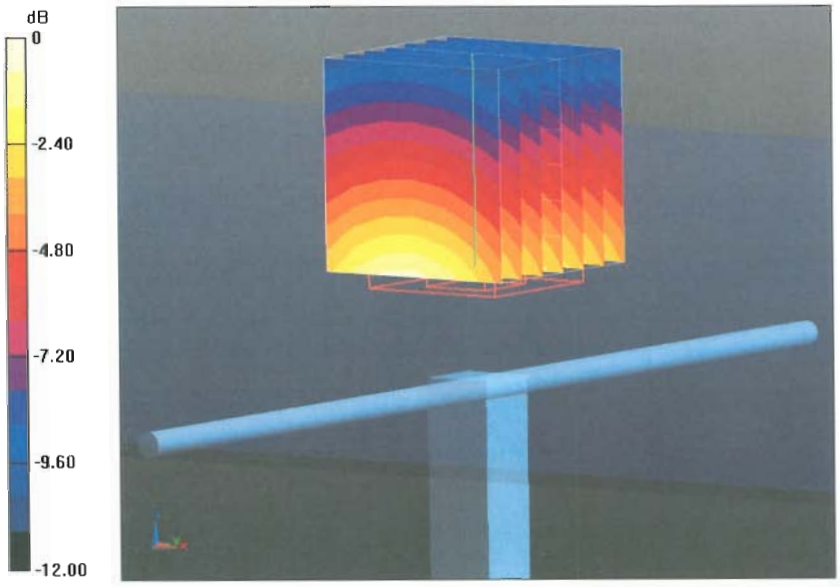
Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; $\sigma$ = 0.99 mho/m; $\varepsilon_r$ = 54.5; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.02, 6.02, 6.02); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

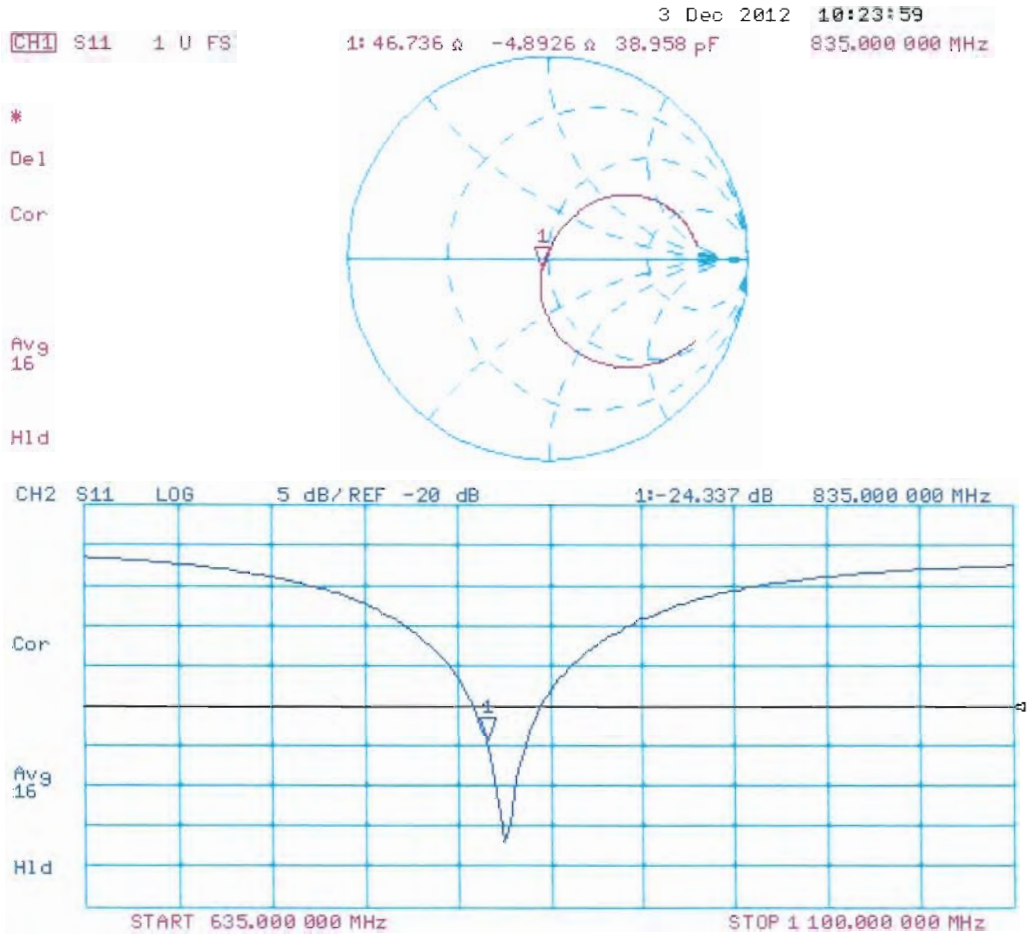
### Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.301 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.53 W/kg
**SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.59 W/kg**
Maximum value of SAR (measured) = 2.80 W/kg




0 dB = 2.80 W/kg = 4.47 dBW/kg

## Impedance Measurement Plot for Body TSL



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**Accreditation No.: SCS 108**

**Client** **Nokia Salo TCC**

**Certificate No: D1750V2-1082_Dec12**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D1750V2 - SN: 1082 |
| Calibration procedure(s) | QA CAL-05.v8<br>Calibration procedure for dipole validation kits above 700 MHz |
| Calibration date: | December 05, 2012 |

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 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Power sensor HP 8481A | US37292783 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 27-Mar-12 (No. 217-01530) | Apr-13 |
| Type-N mismatch combination | SN: 5047.3 / 06327 | 27-Mar-12 (No. 217-01533) | Apr-13 |
| Reference Probe ES3DV3 | SN: 3205 | 30-Dec-11 (No. ES3-3205_Dec11) | Dec-12 |
| DAE4 | SN: 601 | 27-Jun-12 (No. DAE4-601_Jun12) | Jun-13 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-11) | In house check: Oct-13 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-11) | In house check: Oct-13 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-12) | In house check: Oct-13 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Israe El-Naouq | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: December 5, 2012

**Calibration Laboratory of**
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**Accreditation No.: SCS 108**

## Glossary:

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A | not applicable or not measured |

## Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

## Additional Documentation:

d) DASY4/5 System Handbook

## Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| DASY Version | DASY5 | V52.8.3 |
|---|---|---|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 1750 MHz ± 1 MHz | |

## Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| Nominal Head TSL parameters | 22.0 °C | 40.1 | 1.37 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 39.3 ± 6 % | 1.34 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL

| SAR averaged over 1 $cm^3$ (1 g) of Head TSL | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 8.99 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **36.3 W/kg ± 17.0 % (k=2)** |

| SAR averaged over 10 $cm^3$ (10 g) of Head TSL | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 4.80 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **19.3 W/kg ± 16.5 % (k=2)** |

## Body TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| Nominal Body TSL parameters | 22.0 °C | 53.4 | 1.49 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 51.8 ± 6 % | 1.47 mho/m ± 6 % |
| Body TSL temperature change during test | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL

| SAR averaged over 1 $cm^3$ (1 g) of Body TSL | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 9.21 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **36.9 W/kg ± 17.0 % (k=2)** |

| SAR averaged over 10 $cm^3$ (10 g) of Body TSL | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 4.95 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **19.8 W/kg ± 16.5 % (k=2)** |

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 49.8 Ω + 0.7 jΩ |
| Return Loss | - 43.1 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 46.2 Ω + 0.8 jΩ |
| Return Loss | - 27.8 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.219 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | January 19, 2011 |

Date: 05.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1082**

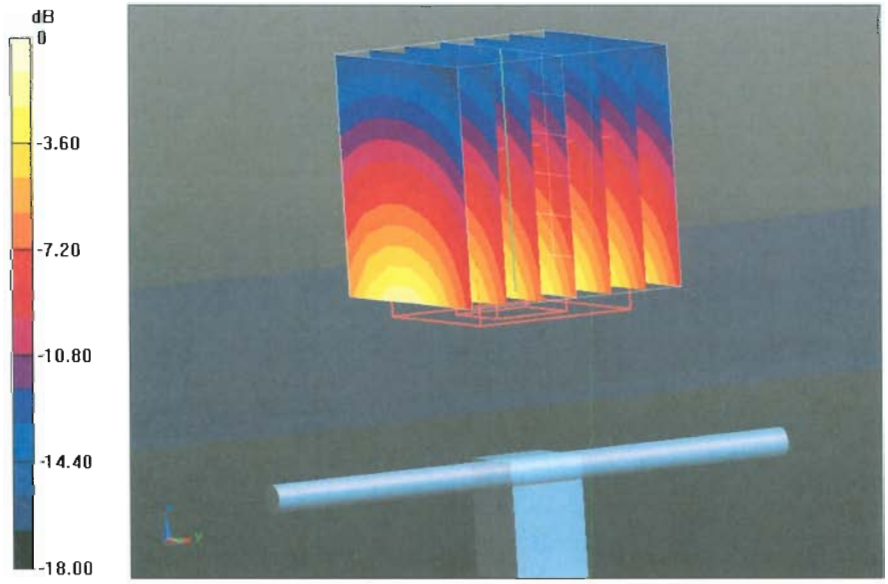
Communication System: CW; Frequency: 1750 MHz
Medium parameters used: f = 1750 MHz; $\sigma$ = 1.34 mho/m; $\varepsilon_r$ = 39.3; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.22, 5.22, 5.22); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

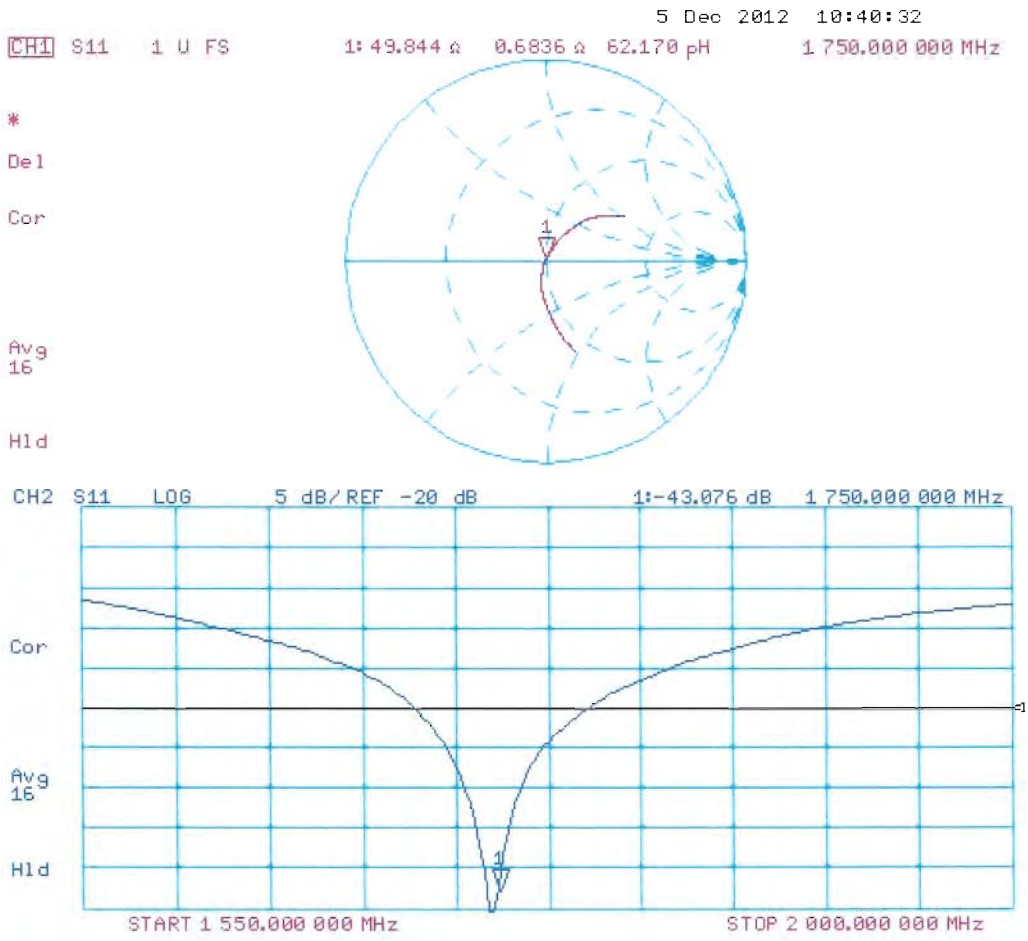
## Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.445 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 15.9 W/kg
**SAR(1 g) = 8.99 W/kg; SAR(10 g) = 4.8 W/kg**
Maximum value of SAR (measured) = 10.9 W/kg




0 dB = 10.9 W/kg = 10.37 dBW/kg

## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 05.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1082**

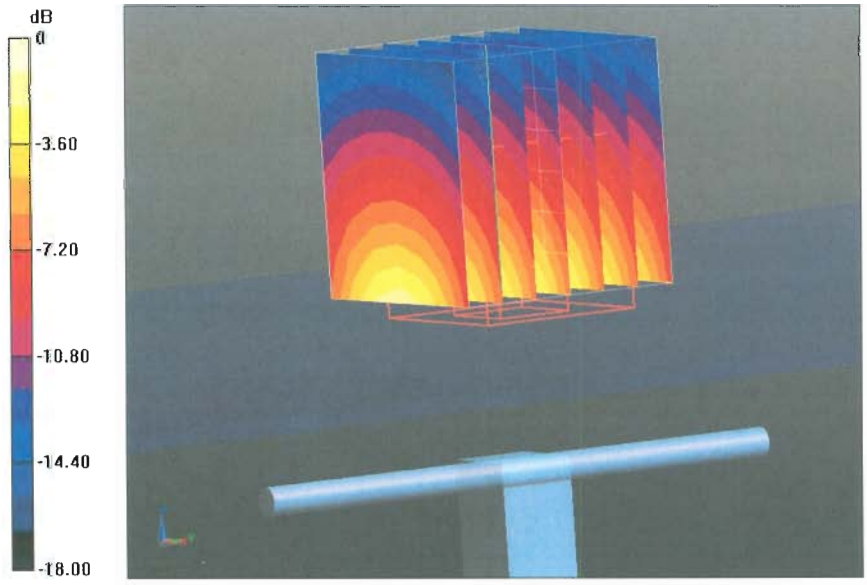
Communication System: CW; Frequency: 1750 MHz
Medium parameters used: f = 1750 MHz; $\sigma$ = 1.47 mho/m; $\varepsilon_r$ = 51.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.85, 4.85, 4.85); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

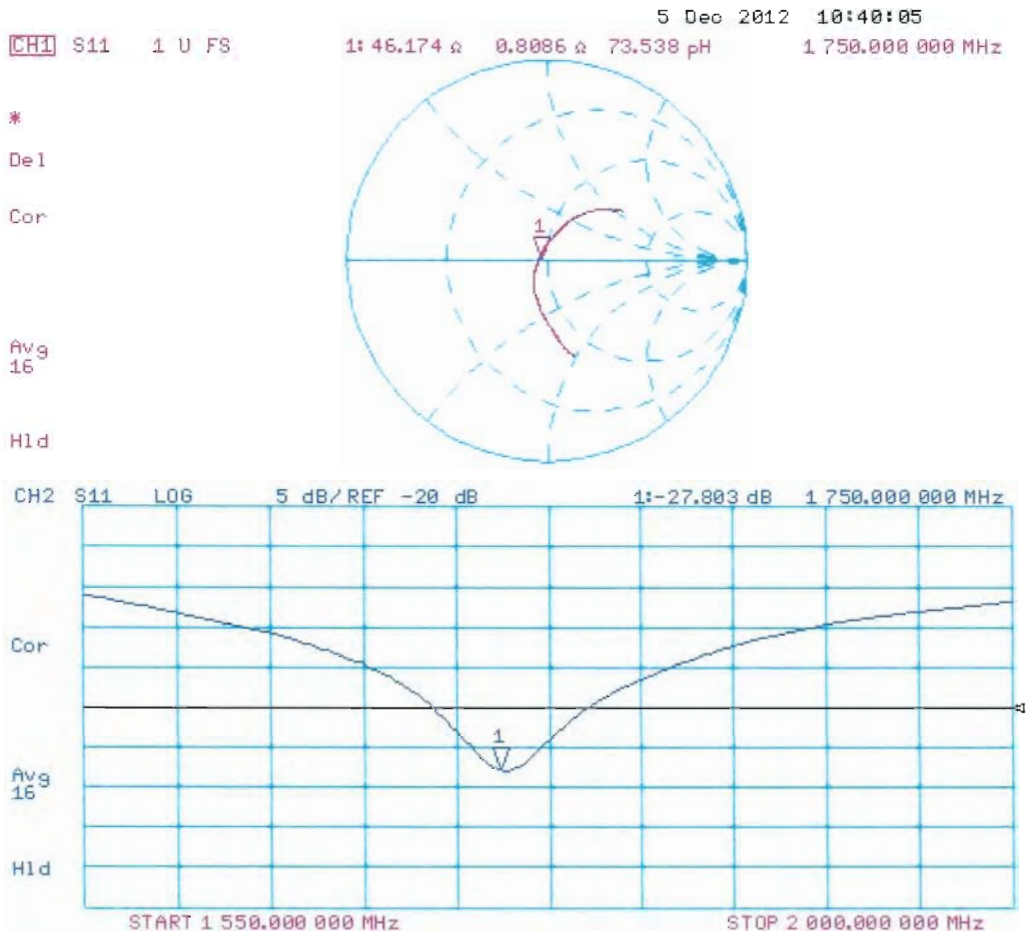
### Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.445 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 15.9 W/kg
**SAR(1 g) = 9.21 W/kg; SAR(10 g) = 4.95 W/kg**
Maximum value of SAR (measured) = 11.5 W/kg




0 dB = 11.5 W/kg = 10.61 dBW/kg

## Impedance Measurement Plot for Body TSL



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**Accreditation No.: SCS 108**

**Client** Nokia Salo TCC

**Certificate No: D1900V2-5d030_Feb12**

# CALIBRATION CERTIFICATE

Object: D1900V2 - SN: 5d030

Calibration procedure(s): QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: February 22, 2012

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 | 05-Oct-11 (No. 217-01451) | Oct-12 |
| Power sensor HP 8481A | US37292783 | 05-Oct-11 (No. 217-01451) | Oct-12 |
| Reference 20 dB Attenuator | SN: 5086 (20g) | 29-Mar-11 (No. 217-01368) | Apr-12 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 29-Mar-11 (No. 217-01371) | Apr-12 |
| Reference Probe ES3DV3 | SN: 3205 | 30-Dec-11 (No. ES3-3205_Dec11) | Dec-12 |
| DAE4 | SN: 601 | 04-Jul-11 (No. DAE4-601_Jul11) | Jul-12 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-11) | In house check: Oct-13 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-11) | In house check: Oct-13 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-11) | In house check: Oct-12 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Israe El-Naouq | Laboratory Technician | Israe El-Naouq |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: February 22, 2012

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 52.0 Ω + 5.3 jΩ |
| Return Loss | - 25.2 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 47.6 Ω + 5.4 jΩ |
| Return Loss | - 24.4 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.192 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | December 17, 2002 |

## DASY5 Validation Report for Head TSL

Date: 22.02.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d030**

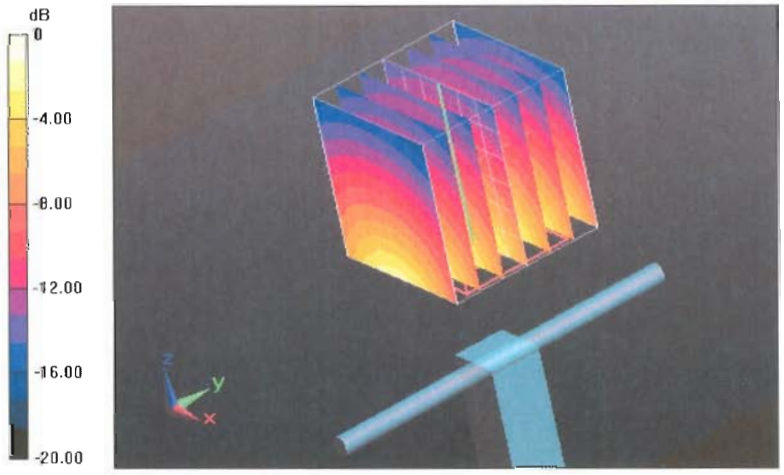
Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.4 mho/m; $\varepsilon_r$ = 40.4; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.01, 5.01, 5.01); Calibrated: 30.12.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

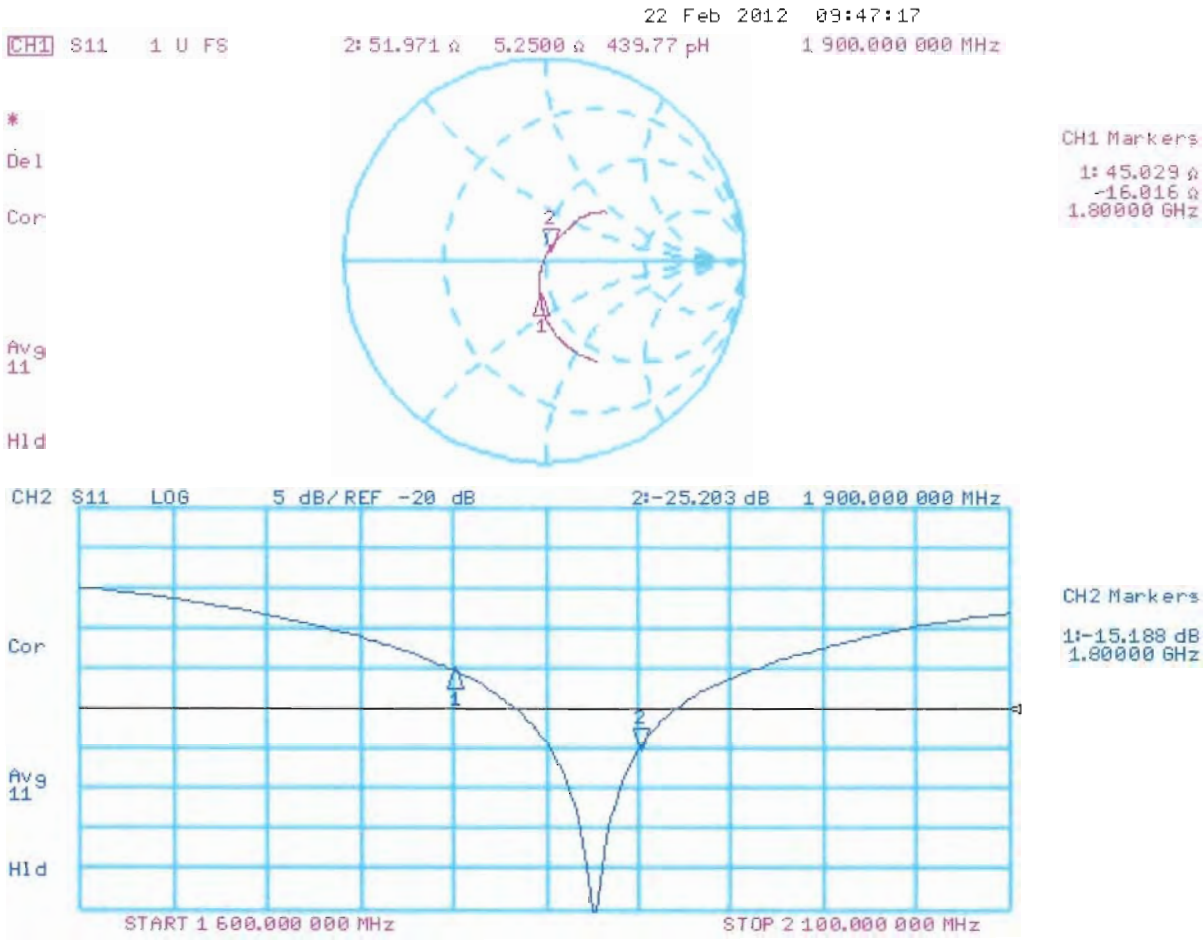
### Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.565 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 17.4270
**SAR(1 g) = 9.79 mW/g; SAR(10 g) = 5.18 mW/g**
Maximum value of SAR (measured) = 12.117 mW/g




0 dB = 12.120mW/g = 21.67 dB mW/g

## Impedance Measurement Plot for Head TSL



Date: 22.02.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d030**

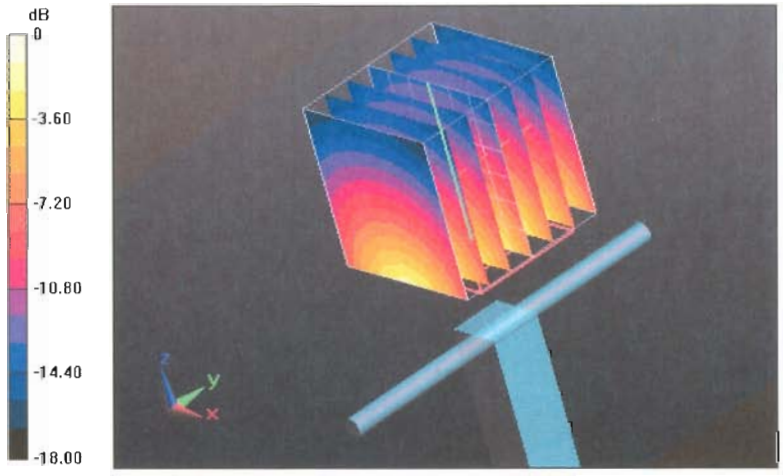
Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.56 mho/m; $\varepsilon_r$ = 53; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.62, 4.62, 4.62); Calibrated: 30.12.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.0(692); SEMCAD X 14.6.4(4989)

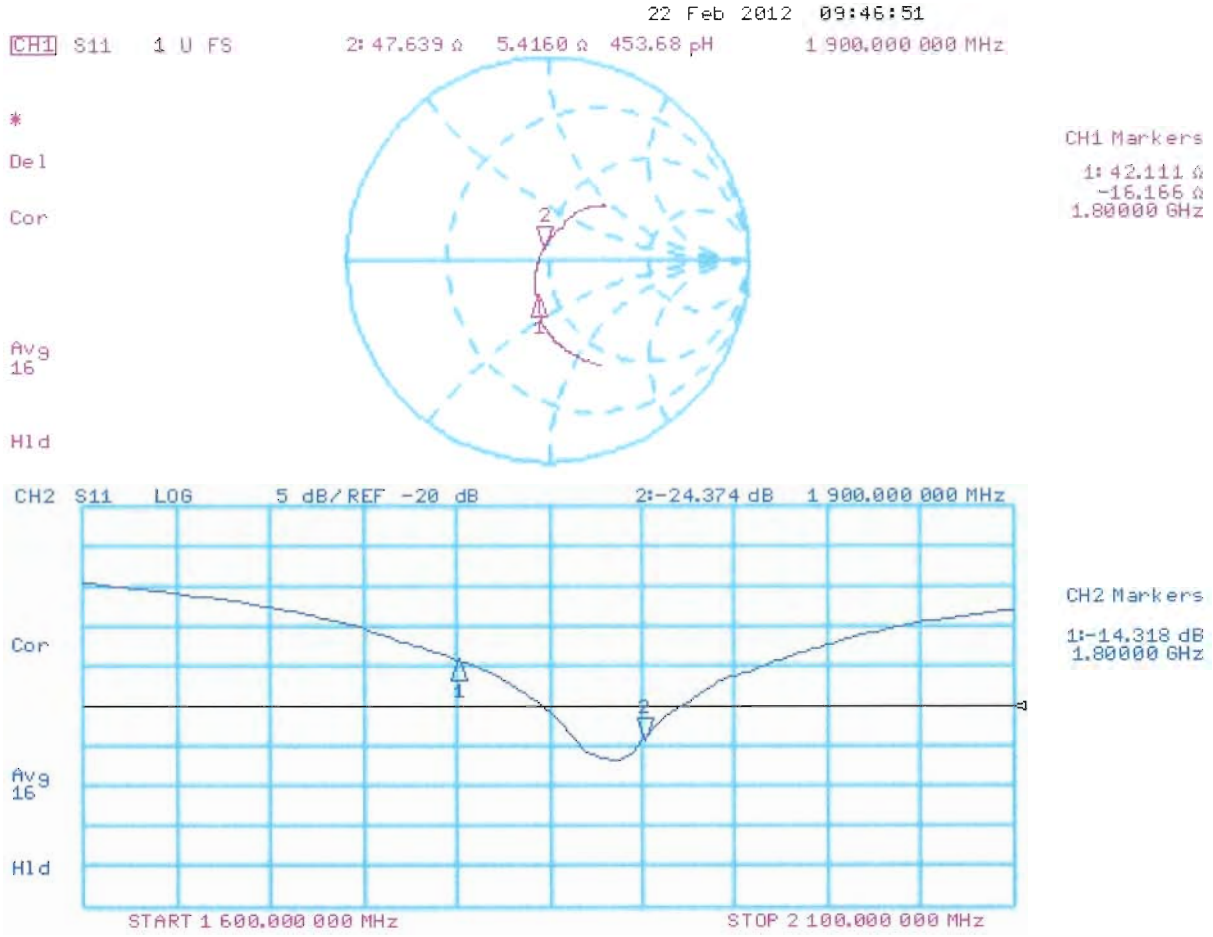
## Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 93.541 V/m; Power Drift = -0.0095 dB
Peak SAR (extrapolated) = 17.4260
**SAR(1 g) = 9.87 mW/g; SAR(10 g) = 5.17 mW/g**
Maximum value of SAR (measured) = 12.485 mW/g




0 dB = 12.480mW/g = 21.92 dB mW/g

## Impedance Measurement Plot for Body TSL



## Dipole D1900V2 - SN5d030 Antenna Parameters measured: 2013-04-12.

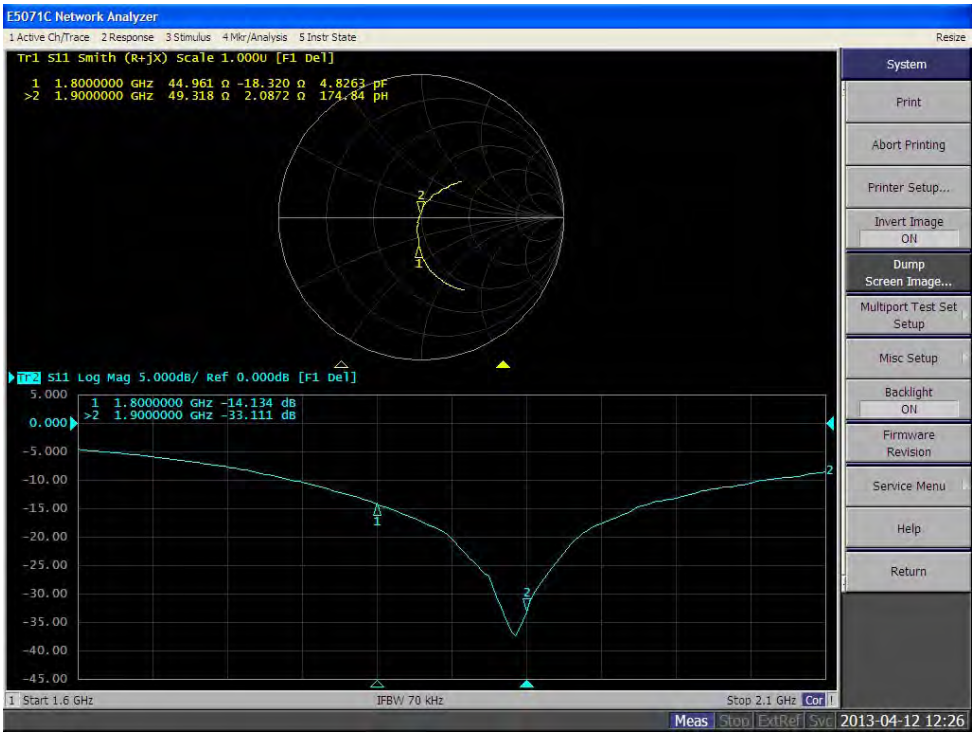
### Antenna Parameters with Head TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 52.0 Ω 5.3 jΩ | 49.3 Ω 2.1 jΩ |
| Return loss | -25.2 dB | -33.1 dB |

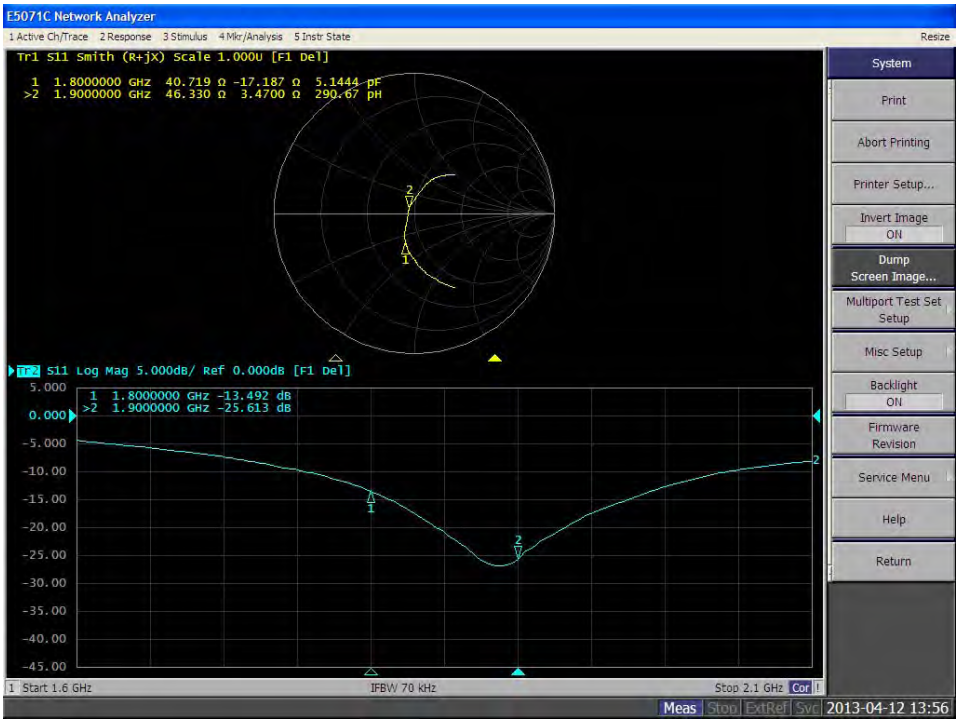
### Antenna Parameters with Body TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 47.6 Ω 5.4 jΩ | 46.3 Ω 3.5 jΩ |
| Return loss | -24.4 dB | -25.6 dB |

## Impedance Measurement Plot for Head TSL 1900




## Impedance Measurement Plot for Body TSL 1900



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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 Salo TCC

**Certificate No: D2450V2-729_Sep11**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D2450V2 - SN: 729 |
| Calibration procedure(s) | QA CAL-05.v8<br>Calibration procedure for dipole validation kits above 700 MHz |
| Calibration date: | September 13, 2011 |

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 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Power sensor HP 8481A | US37292783 | 06-Oct-10 (No. 217-01266) | Oct-11 |
| Reference 20 dB Attenuator | SN: S5086 (20b) | 29-Mar-11 (No. 217-01367) | Apr-12 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 29-Mar-11 (No. 217-01371) | Apr-12 |
| Reference Probe ES3DV3 | SN: 3205 | 29-Apr-11 (No. ES3-3205_Apr11) | Apr-12 |
| DAE4 | SN: 601 | 04-Jul-11 (No. DAE4-601_Jul11) | Jul-12 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-09) | In house check: Oct-11 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-09) | In house check: Oct-11 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-10) | In house check: Oct-11 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Dimce Iliev | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: September 13, 2011

**Glossary:**

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A | not applicable or not measured |

**Calibration is Performed According to the Following Standards:**

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

**Additional Documentation:**

d) DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| **DASY Version** | DASY5 | V52.6.2 |
| **Extrapolation** | Advanced Extrapolation | |
| **Phantom** | Modular Flat Phantom | |
| **Distance Dipole Center - TSL** | 10 mm | with Spacer |
| **Zoom Scan Resolution** | dx, dy, dz = 5 mm | |
| **Frequency** | 2450 MHz ± 1 MHz | |

## Head TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 39.2 | 1.80 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 38.3 ± 6 % | 1.85 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 13.9 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **54.6 mW /g ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 6.45 mW / g |
| SAR for nominal Head TSL parameters | normalized to 1W | **25.6 mW /g ± 16.5 % (k=2)** |

## Body TSL parameters

The following parameters and calculations were applied.

| | **Temperature** | **Permittivity** | **Conductivity** |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 52.7 | 1.95 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 51.7 ± 6 % | 2.04 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 250 mW input power | 13.3 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **51.8 mW / g ± 17.0 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 250 mW input power | 6.18 mW / g |
| SAR for nominal Body TSL parameters | normalized to 1W | **24.4 mW / g ± 16.5 % (k=2)** |

## Appendix

### Antenna Parameters with Head TSL

| | |
|---|---|
| Impedance, transformed to feed point | 51.8 Ω - 0.6 jΩ |
| Return Loss | - 34.7 dB |

### Antenna Parameters with Body TSL

| | |
|---|---|
| Impedance, transformed to feed point | 48.7 Ω + 1.1 jΩ |
| Return Loss | - 35.5 dB |

### General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.148 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | January 09, 2003 |

Date: 13.09.2011

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 729**

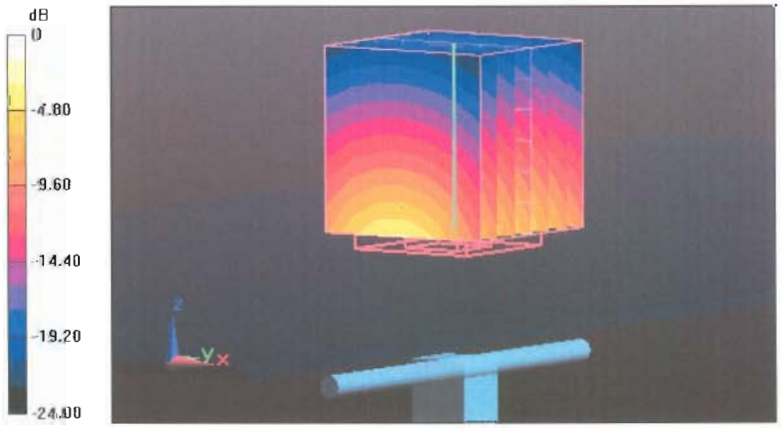
Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; $\sigma$ = 1.85 mho/m; $\varepsilon_r$ = 38.3; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.45, 4.45, 4.45); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

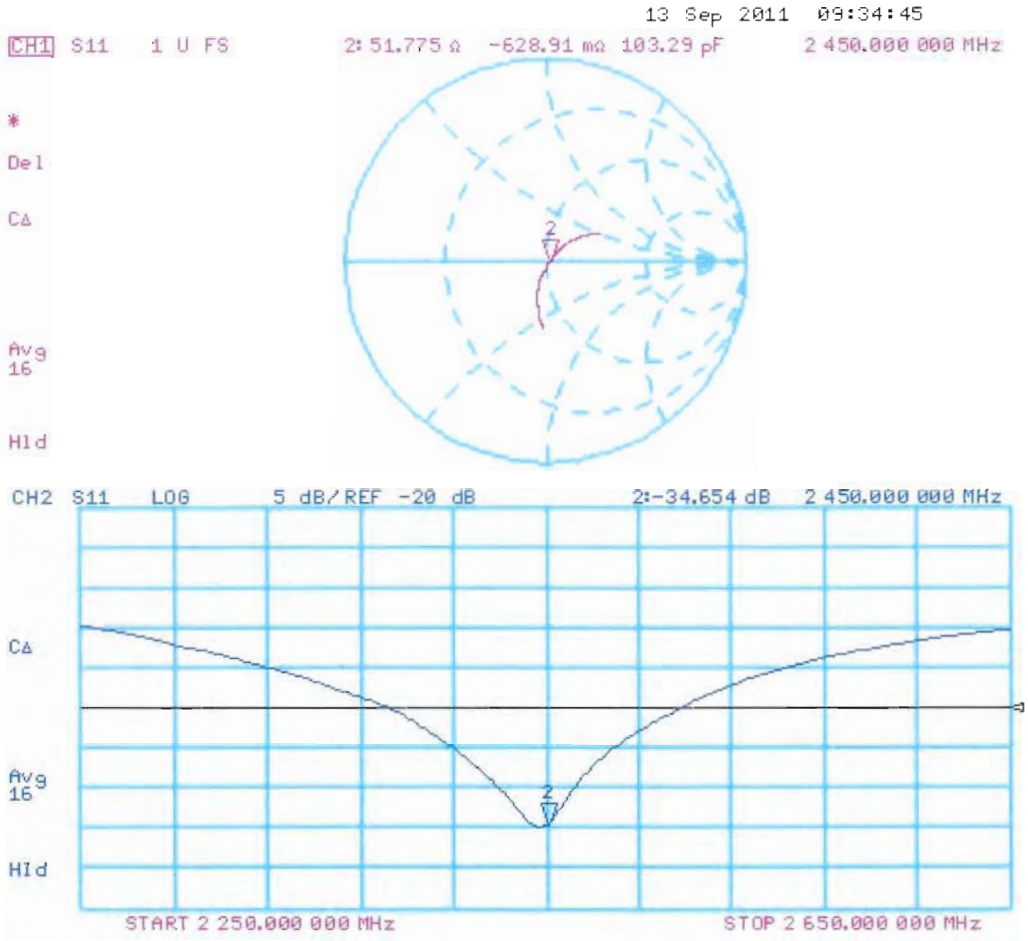
## Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 102.5 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 28.852 W/kg
**SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.45 mW/g**
Maximum value of SAR (measured) = 18.134 mW/g




0 dB = 18.130mW/g

## Impedance Measurement Plot for Head TSL



Date: 12.09.2011

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 729**

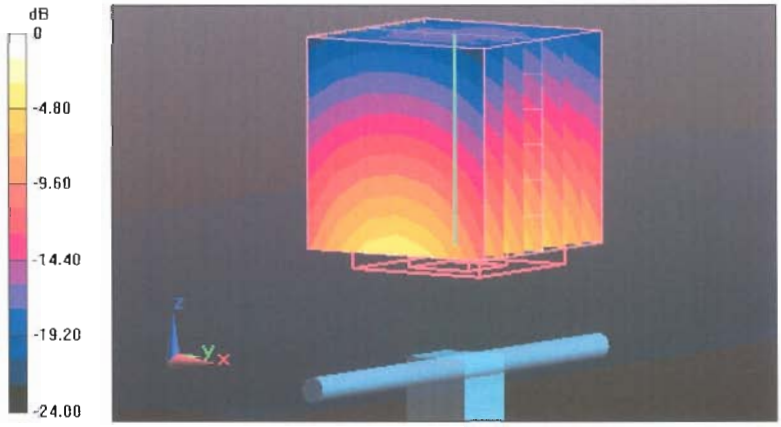
Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; $\sigma$ = 2.04 mho/m; $\varepsilon_r$ = 51.7; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.26, 4.26, 4.26); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

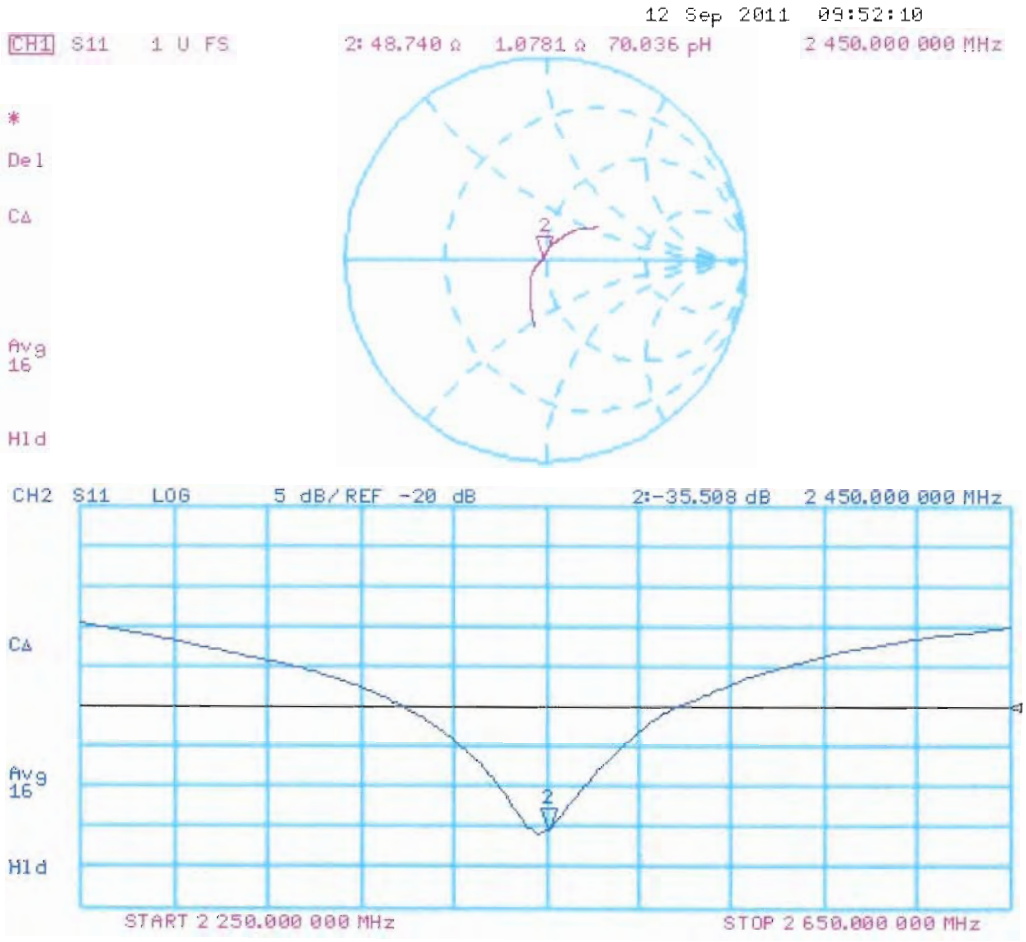
## Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.035 V/m; Power Drift = -0.0016 dB
Peak SAR (extrapolated) = 27.393 W/kg
**SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.18 mW/g**
Maximum value of SAR (measured) = 17.569 mW/g




0 dB = 17.570mW/g

## Impedance Measurement Plot for Body TSL



## Dipole D2450V2 – SN:729 Antenna Parameters measured: 2013-04-16.

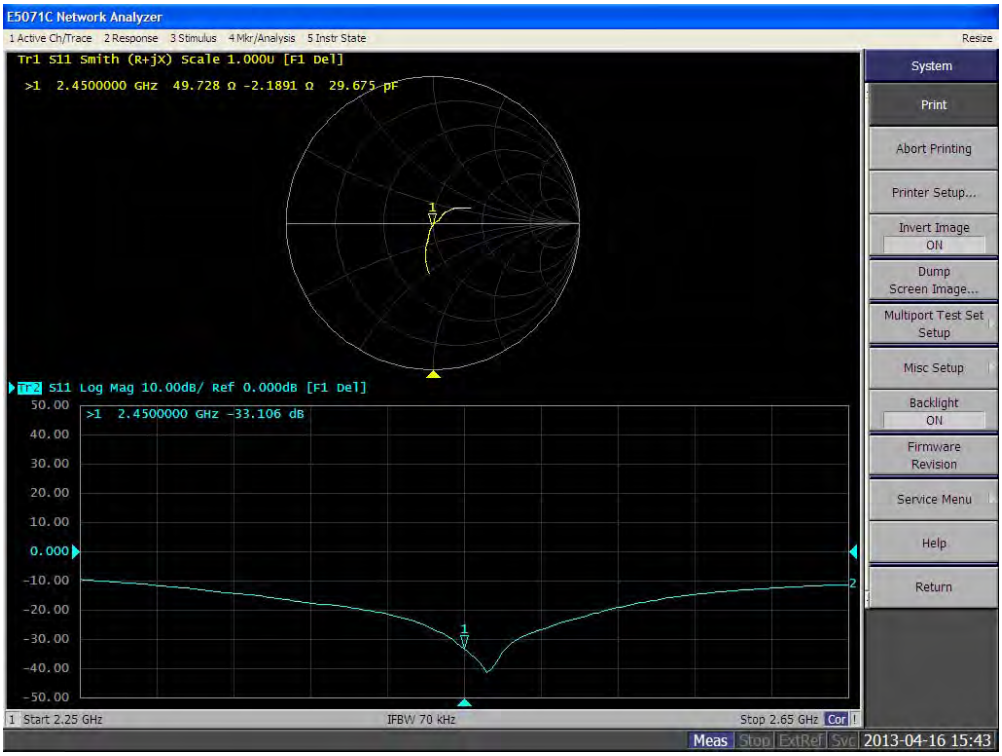
### Antenna Parameters with Head TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 51.8 Ω - 0.6 jΩ | 49.7 Ω - 2.2 jΩ |
| Return loss | -34.7 dB | -33.1 dB |

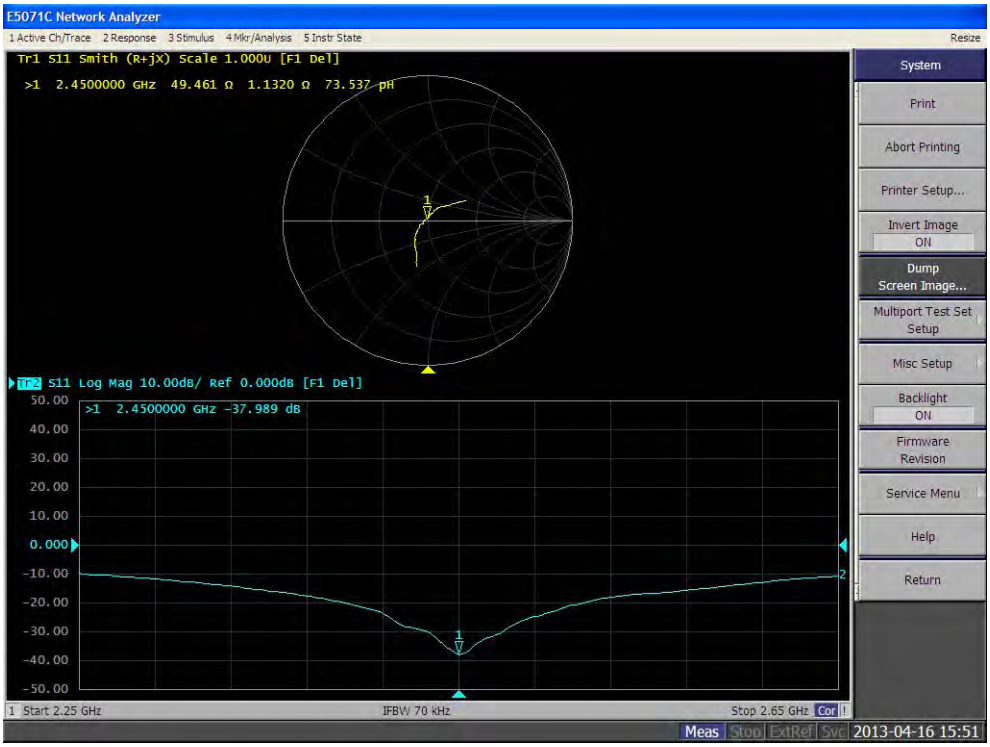
### Antenna Parameters with Body TSL

| | Calibration certificate | Annual measurement |
|---|---|---|
| Impedance, transformed to feed point | 48.7 Ω - 1.1 jΩ | 49.5 Ω  1.1 jΩ |
| Return loss | -35.5 dB | -38.0 dB |

## Impedance Measurement Plot for Head TSL 2450




## Impedance Measurement Plot for Body TSL 2450



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**Accreditation No.: SCS 108**

**Client** Nokia Salo TCC

**Certificate No: D5GHzV2-1048_Dec12**

# CALIBRATION CERTIFICATE

| | |
|---|---|
| Object | D5GHzV2 - SN: 1048 |
| Calibration procedure(s) | QA CAL-22.v1<br>Calibration procedure for dipole validation kits between 3-6 GHz |
| Calibration date: | December 11, 2012 |

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 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Power sensor HP 8481A | US37292783 | 01-Nov-12 (No. 217-01640) | Oct-13 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 27-Mar-12 (No. 217-01530) | Apr-13 |
| Type-N mismatch combination | SN: 5047.3 / 06327 | 27-Mar-12 (No. 217-01533) | Apr-13 |
| Reference Probe EX3DV4 | SN: 3503 | 30-Dec-11 (No. EX3-3503_Dec11) | Dec-12 |
| DAE4 | SN: 601 | 27-Jun-12 (No. DAE4-601_Jun12) | Jun-13 |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---|---|---|---|
| Power sensor HP 8481A | MY41092317 | 18-Oct-02 (in house check Oct-11) | In house check: Oct-13 |
| RF generator R&S SMT-06 | 100005 | 04-Aug-99 (in house check Oct-11) | In house check: Oct-13 |
| Network Analyzer HP 8753E | US37390585 S4206 | 18-Oct-01 (in house check Oct-12) | In house check: Oct-13 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Israe El-Naouq | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: December 11, 2012

**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**

## Glossary:

| | |
|---|---|
| TSL | tissue simulating liquid |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A | not applicable or not measured |

## Calibration is Performed According to the Following Standards:

a) IEC 62209-2, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30 MHz to 6 GHz: Human models, Instrumentation, and Procedures"; Part 2: "Procedure to determine the Specific Absorption Rate (SAR) for including accessories and multiple transmitters", March 2010

b) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

## Additional Documentation:

c) DASY4/5 System Handbook

## Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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%.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

| | | |
|---|---|---|
| **DASY Version** | DASY5 | V52.8.3 |
| **Extrapolation** | Advanced Extrapolation | |
| **Phantom** | Modular Flat Phantom V5.0 | |
| **Distance Dipole Center - TSL** | 10 mm | with Spacer |
| **Zoom Scan Resolution** | dx, dy = 4.0 mm, dz = 1.4 mm | Graded Ratio = 1.4 (Z direction) |
| **Frequency** | 5200 MHz ± 1 MHz<br>5300 MHz ± 1 MHz<br>5500 MHz ± 1 MHz<br>5600 MHz ± 1 MHz<br>5800 MHz ± 1 MHz | |

## Head TSL parameters at 5200 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 36.0 | 4.66 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 34.6 ± 6 % | 4.46 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL at 5200 MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 8.04 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **79.7 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 $cm^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.31 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **22.8 W/kg ± 19.5 % (k=2)** |

## Head TSL parameters at 5300 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.9 | 4.76 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 34.4 ± 6 % | 4.55 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL at 5300 MHz

| **SAR averaged over 1 cm$^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 8.34 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **82.6 W / kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.40 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **23.7 W/kg ± 19.5 % (k=2)** |

## Head TSL parameters at 5500 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.6 | 4.96 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 34.2 ± 6 % | 4.72 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL at 5500 MHz

| **SAR averaged over 1 cm$^3$ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 8.31 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **82.2 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.37 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **23.4 W/kg ± 19.5 % (k=2)** |

## Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.5 | 5.07 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 34.0 ± 6 % | 4.81 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL at 5600 MHz

| **SAR averaged over 1 cm³ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 8.41 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **83.1 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm³ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.40 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **23.7 W/kg ± 19.5 % (k=2)** |

## Head TSL parameters at 5800 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Head TSL parameters** | 22.0 °C | 35.3 | 5.27 mho/m |
| **Measured Head TSL parameters** | (22.0 ± 0.2) °C | 33.8 ± 6 % | 5.04 mho/m ± 6 % |
| **Head TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Head TSL at 5800 MHz

| **SAR averaged over 1 cm³ (1 g) of Head TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.93 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **78.4 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm³ (10 g) of Head TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.26 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | **22.3 W/kg ± 19.5 % (k=2)** |

## Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 49.0 | 5.30 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 47.1 ± 6 % | 5.40 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL at 5200 MHz

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.20 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **71.4 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.02 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **20.0 W/kg ± 19.5 % (k=2)** |

## Body TSL parameters at 5300 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.9 | 5.42 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 46.9 ± 6 % | 5.51 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL at 5300 MHz

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.45 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **73.9 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.09 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **20.7 W/kg ± 19.5 % (k=2)** |

## Body TSL parameters at 5500 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.6 | 5.65 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 46.6 ± 6 % | 5.76 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL at 5500 MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.62 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **75.6 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 $cm^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.12 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **21.0 W/kg ± 19.5 % (k=2)** |

## Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.5 | 5.77 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 46.4 ± 6 % | 5.88 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL at 5600 MHz

| **SAR averaged over 1 $cm^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.73 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **76.7 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 $cm^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.14 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **21.2 W/kg ± 19.5 % (k=2)** |

## Body TSL parameters at 5800 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|---|---|---|
| **Nominal Body TSL parameters** | 22.0 °C | 48.2 | 6.00 mho/m |
| **Measured Body TSL parameters** | (22.0 ± 0.2) °C | 46.1 ± 6 % | 6.17 mho/m ± 6 % |
| **Body TSL temperature change during test** | < 0.5 °C | ---- | ---- |

## SAR result with Body TSL at 5800 MHz

| **SAR averaged over 1 cm$^3$ (1 g) of Body TSL** | Condition | |
|---|---|---|
| SAR measured | 100 mW input power | 7.25 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **71.9 W/kg ± 19.9 % (k=2)** |

| **SAR averaged over 10 cm$^3$ (10 g) of Body TSL** | condition | |
|---|---|---|
| SAR measured | 100 mW input power | 2.00 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | **19.8 W/kg ± 19.5 % (k=2)** |

## Appendix

### Antenna Parameters with Head TSL at 5200 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 54.0 Ω - 7.1 jΩ |
| Return Loss | - 22.1 dB |

### Antenna Parameters with Head TSL at 5300 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 49.0 Ω - 4.5 jΩ |
| Return Loss | - 26.7 dB |

### Antenna Parameters with Head TSL at 5500 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 59.1 Ω - 8.8 jΩ |
| Return Loss | - 18.8 dB |

### Antenna Parameters with Head TSL at 5600 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 59.7 Ω - 1.7 jΩ |
| Return Loss | - 21.0 dB |

### Antenna Parameters with Head TSL at 5800 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 55.8 Ω - 8.9 jΩ |
| Return Loss | - 20.0 dB |

### Antenna Parameters with Body TSL at 5200 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 53.7 Ω - 6.3 jΩ |
| Return Loss | - 23.0 dB |

### Antenna Parameters with Body TSL at 5300 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 50.3 Ω - 4.2 jΩ |
| Return Loss | - 27.5 dB |

### Antenna Parameters with Body TSL at 5500 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 58.7 Ω - 6.9 jΩ |
| Return Loss | - 19.8 dB |

### Antenna Parameters with Body TSL at 5600 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 60.7 Ω - 0.7 jΩ |
| Return Loss | - 20.3 dB |

## Antenna Parameters with Body TSL at 5800 MHz

| | |
|---|---|
| Impedance, transformed to feed point | 56.7 Ω - 7.2 jΩ |
| Return Loss | - 20.7 dB |

## General Antenna Parameters and Design

| | |
|---|---|
| Electrical Delay (one direction) | 1.192 ns |

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

## Additional EUT Data

| | |
|---|---|
| Manufactured by | SPEAG |
| Manufactured on | June 09, 2006 |

## DASY5 Validation Report for Head TSL

Date: 11.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048**

Communication System: CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz
Medium parameters used: f = 5200 MHz; $\sigma$ = 4.46 mho/m; $\varepsilon_r$ = 34.6; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5300 MHz; $\sigma$ = 4.55 mho/m; $\varepsilon_r$ = 34.4; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5500 MHz; $\sigma$ = 4.72 mho/m; $\varepsilon_r$ = 34.2; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5600 MHz; $\sigma$ = 4.81 mho/m; $\varepsilon_r$ = 34; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5800 MHz; $\sigma$ = 5.04 mho/m; $\varepsilon_r$ = 33.8; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.41, 5.41, 5.41); Calibrated: 30.12.2011, ConvF(5.1, 5.1, 5.1); Calibrated: 30.12.2011, ConvF(4.91, 4.91, 4.91); Calibrated: 30.12.2011, ConvF(4.76, 4.76, 4.76); Calibrated: 30.12.2011, ConvF(4.81, 4.81, 4.81); Calibrated: 30.12.2011;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

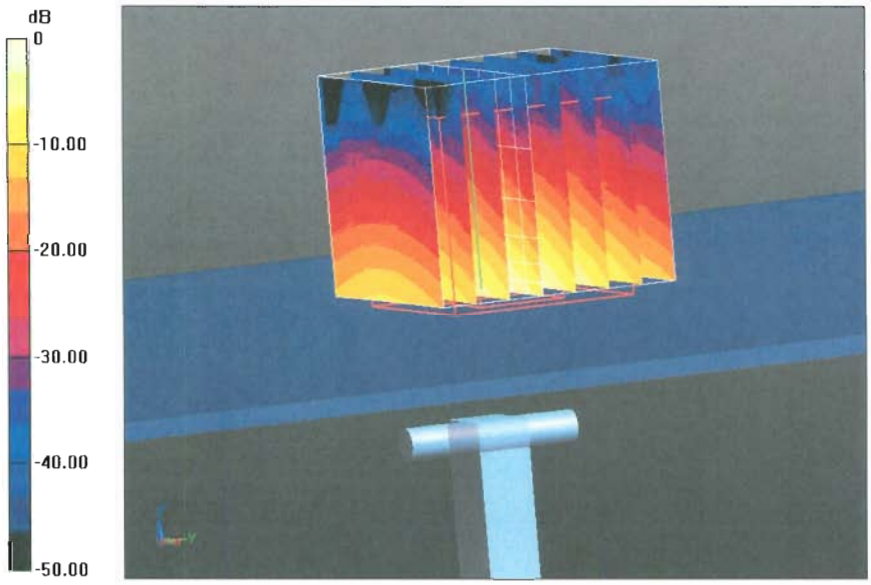
**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.551 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 29.4 W/kg
**SAR(1 g) = 8.04 W/kg; SAR(10 g) = 2.31 W/kg**
Maximum value of SAR (measured) = 18.7 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.266 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 31.3 W/kg
**SAR(1 g) = 8.34 W/kg; SAR(10 g) = 2.4 W/kg**
Maximum value of SAR (measured) = 19.6 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.310 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 32.5 W/kg
**SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.37 W/kg**
Maximum value of SAR (measured) = 19.8 W/kg

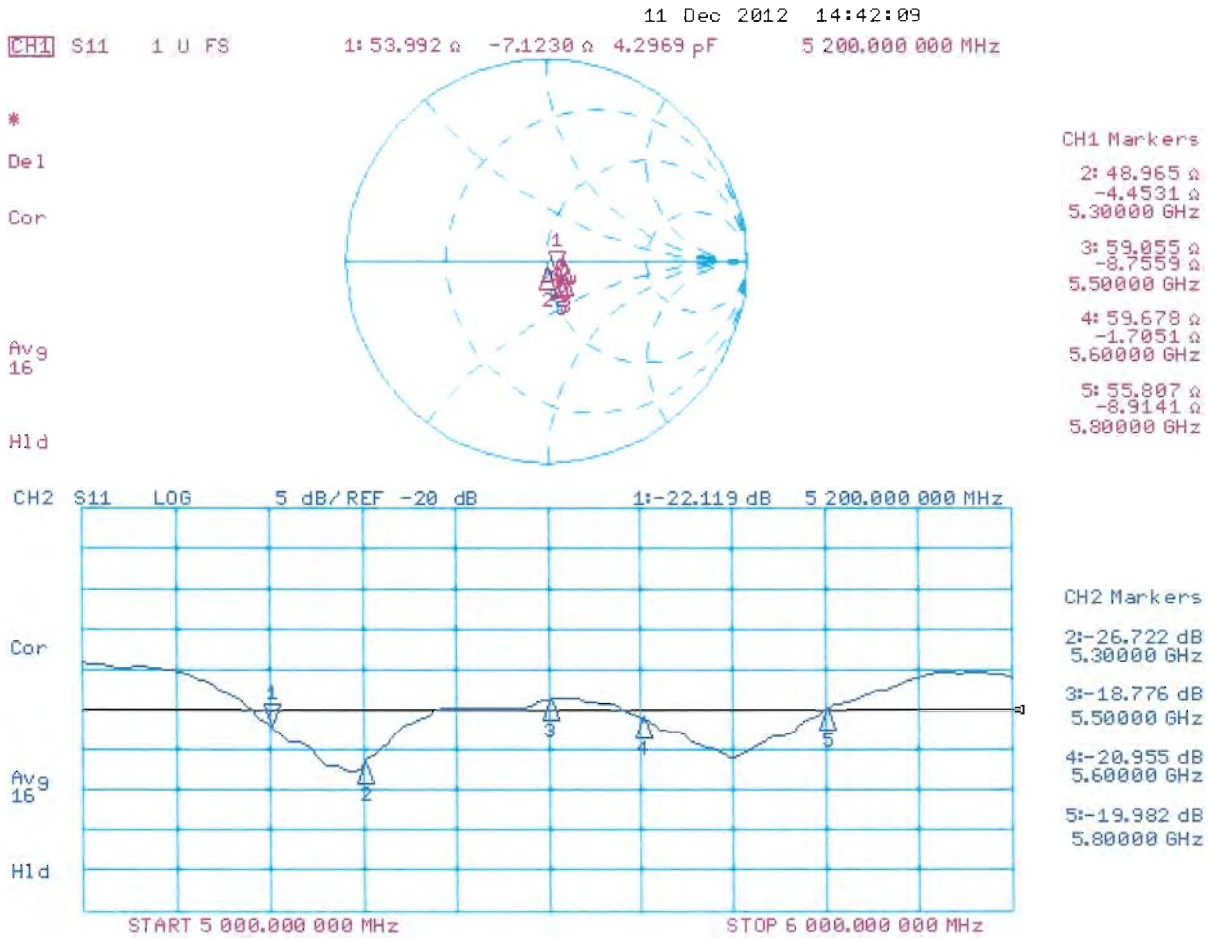
**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.574 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 33.1 W/kg
**SAR(1 g) = 8.41 W/kg; SAR(10 g) = 2.4 W/kg**
Maximum value of SAR (measured) = 20.1 W/kg

**Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 60.570 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 32.7 W/kg
**SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.26 W/kg**
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

## Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 10.12.2012

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1048**

Communication System: CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz
Medium parameters used: f = 5200 MHz; $\sigma$ = 5.4 mho/m; $\varepsilon_r$ = 47.1; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5300 MHz; $\sigma$ = 5.51 mho/m; $\varepsilon_r$ = 46.9; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5500 MHz; $\sigma$ = 5.76 mho/m; $\varepsilon_r$ = 46.6; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5600 MHz; $\sigma$ = 5.88 mho/m; $\varepsilon_r$ = 46.4; $\rho$ = 1000 kg/m$^3$ , Medium parameters used: f = 5800 MHz; $\sigma$ = 6.17 mho/m; $\varepsilon_r$ = 46.1; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(4.91, 4.91, 4.91); Calibrated: 30.12.2011, ConvF(4.67, 4.67, 4.67); Calibrated: 30.12.2011, ConvF(4.43, 4.43, 4.43); Calibrated: 30.12.2011, ConvF(4.22, 4.22, 4.22); Calibrated: 30.12.2011, ConvF(4.38, 4.38, 4.38); Calibrated: 30.12.2011;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

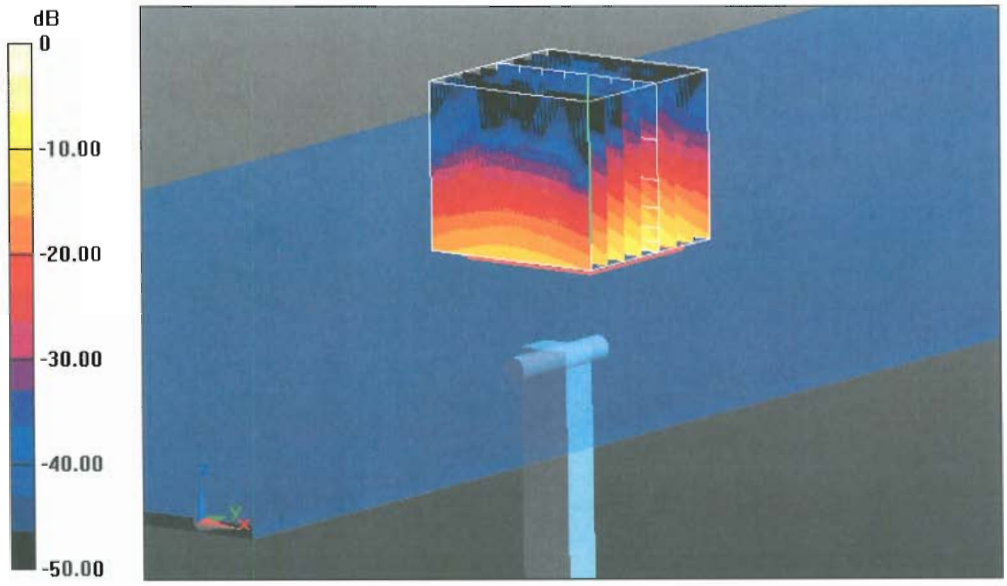
**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.320 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 28.3 W/kg
**SAR(1 g) = 7.2 W/kg; SAR(10 g) = 2.02 W/kg**
Maximum value of SAR (measured) = 17.2 W/kg

**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.849 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 30.1 W/kg
**SAR(1 g) = 7.45 W/kg; SAR(10 g) = 2.09 W/kg**
Maximum value of SAR (measured) = 17.9 W/kg

**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.354 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 32.8 W/kg
**SAR(1 g) = 7.62 W/kg; SAR(10 g) = 2.12 W/kg**
Maximum value of SAR (measured) = 18.7 W/kg

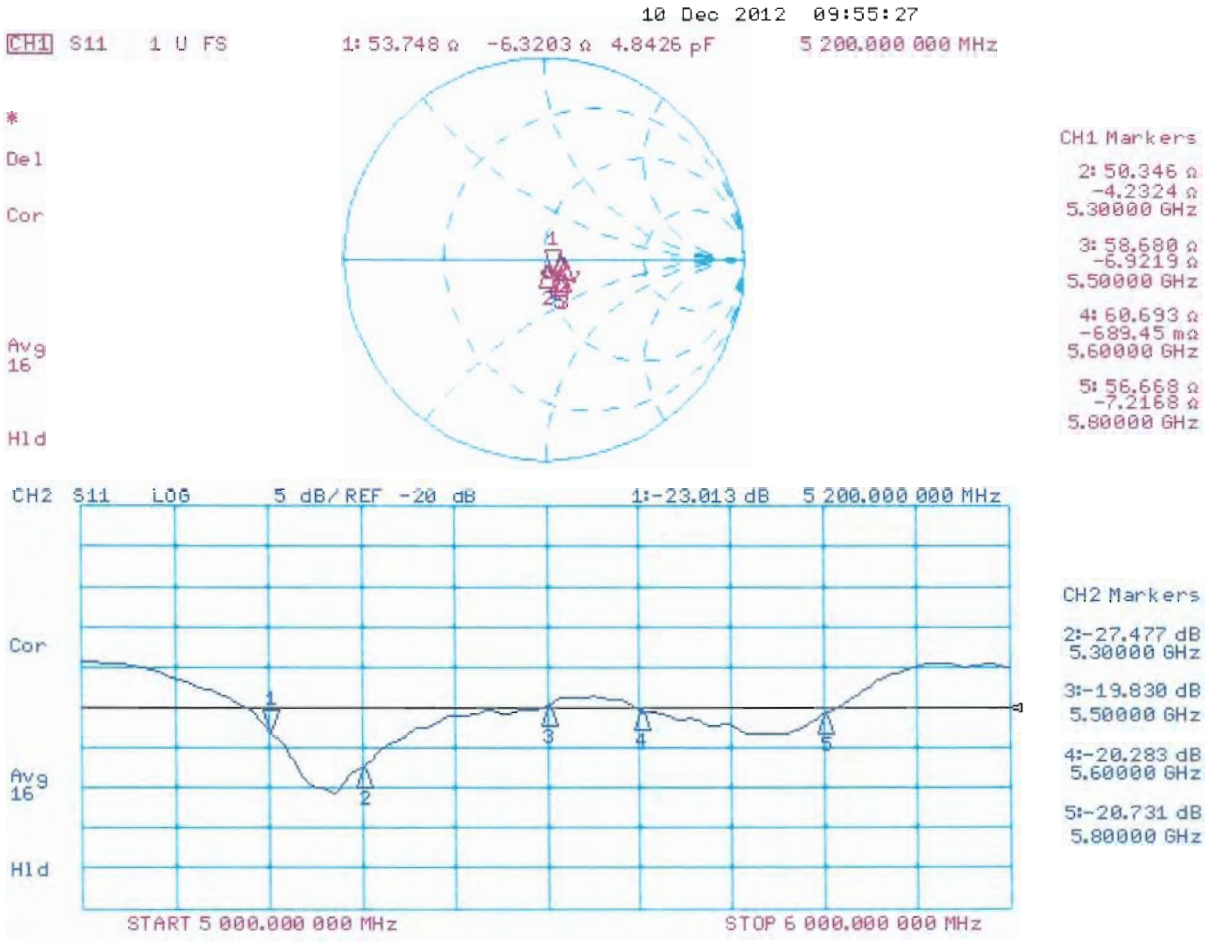
**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.041 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 34.3 W/kg
**SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.14 W/kg**
Maximum value of SAR (measured) = 19.2 W/kg

**Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 52.474 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 33.8 W/kg
**SAR(1 g) = 7.25 W/kg; SAR(10 g) = 2 W/kg**
Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kg = 12.60 dBW/kg

## Impedance Measurement Plot for Body TSL



# APPENDIX G: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED LTE TRANSMISSION MODES

## G.1 Power Tuning Targets

| Band | Target Tuning Power in Head and Body-worn measurements | | | | | |
|---|---|---|---|---|---|---|
| | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |
| LTE700 (Band 17) | N/A | N/A | 23.5 | 23.5 | N/A | N/A |
| LTE850 (Band 5) | 23.0 | 23.0 | 23.0 | 23.0 | N/A | N/A |
| LTE1700/2100 (Band 4) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |
| LTE1900 (Band 2) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 |

| Band | Target Tuning Power in WR mode | | | | | |
|---|---|---|---|---|---|---|
| | 1.4 MHz | 3 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |
| LTE1700/2100 (Band 4) | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 |
| LTE1900 (Band 2) | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 |

## G.2 Conducted Power from the Samples used in the Testing

Type: RM-877; Serial number: 004402/47/126346/1 used for LTE700 (Band17) for Head, Body-worn and Wireless Router SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE700 (Band 17) in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 706.5 | 23755 | 5 | 1 | 0 | QPSK | 23.53 | - |
| 706.5 | 23755 | 5 | 1 | 12 | QPSK | 23.62 | - |
| 706.5 | 23755 | 5 | 1 | 24 | QPSK | 23.64 | - |
| 706.5 | 23755 | 5 | 12 | 0 | QPSK | 22.74 | - |
| 706.5 | 23755 | 5 | 12 | 6 | QPSK | 22.62 | - |
| 706.5 | 23755 | 5 | 12 | 13 | QPSK | 22.89 | - |
| 706.5 | 23755 | 5 | 25 | 0 | QPSK | 22.52 | - |
| 706.5 | 23755 | 5 | 1 | 0 | 16QAM | 22.43 | - |
| 706.5 | 23755 | 5 | 1 | 12 | 16QAM | 22.47 | - |
| 706.5 | 23755 | 5 | 1 | 24 | 16QAM | 22.56 | - |
| 706.5 | 23755 | 5 | 12 | 0 | 16QAM | 21.63 | - |
| 706.5 | 23755 | 5 | 12 | 6 | 16QAM | 21.45 | - |
| 706.5 | 23755 | 5 | 12 | 13 | 16QAM | 21.92 | - |
| 706.5 | 23755 | 5 | 25 | 0 | 16QAM | 21.40 | - |
| | | | | | | | |
| 710.0 | 23790 | 5 | 1 | 0 | QPSK | 23.63 | - |
| 710.0 | 23790 | 5 | 1 | 12 | QPSK | 23.57 | - |
| 710.0 | 23790 | 5 | 1 | 24 | QPSK | 23.67 | - |
| 710.0 | 23790 | 5 | 12 | 0 | QPSK | 22.65 | - |
| 710.0 | 23790 | 5 | 12 | 6 | QPSK | 22.58 | - |
| 710.0 | 23790 | 5 | 12 | 13 | QPSK | 22.63 | - |
| 710.0 | 23790 | 5 | 25 | 0 | QPSK | 22.44 | - |
| 710.0 | 23790 | 5 | 1 | 0 | 16QAM | 22.58 | - |
| 710.0 | 23790 | 5 | 1 | 12 | 16QAM | 22.49 | - |
| 710.0 | 23790 | 5 | 1 | 24 | 16QAM | 22.52 | - |
| 710.0 | 23790 | 5 | 12 | 0 | 16QAM | 21.68 | - |
| 710.0 | 23790 | 5 | 12 | 6 | 16QAM | 21.55 | - |
| 710.0 | 23790 | 5 | 12 | 13 | 16QAM | 21.57 | - |
| 710.0 | 23790 | 5 | 25 | 0 | 16QAM | 21.41 | - |
| | | | | | | | |

(Table LTE700, 004402/47/126346/1 continues)

(Table LTE700, 004402/47/126346/1 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 713.5 | 23825 | 5 | 1 | 0 | QPSK | 23.54 | - |
| 713.5 | 23825 | 5 | 1 | 12 | QPSK | 23.63 | - |
| 713.5 | 23825 | 5 | 1 | 24 | QPSK | 23.56 | - |
| 713.5 | 23825 | 5 | 12 | 0 | QPSK | 22.54 | - |
| 713.5 | 23825 | 5 | 12 | 6 | QPSK | 22.62 | - |
| 713.5 | 23825 | 5 | 12 | 13 | QPSK | 22.70 | - |
| 713.5 | 23825 | 5 | 25 | 0 | QPSK | 22.38 | - |
| 713.5 | 23825 | 5 | 1 | 0 | 16QAM | 22.65 | - |
| 713.5 | 23825 | 5 | 1 | 12 | 16QAM | 22.72 | - |
| 713.5 | 23825 | 5 | 1 | 24 | 16QAM | 22.67 | - |
| 713.5 | 23825 | 5 | 12 | 0 | 16QAM | 21.65 | - |
| 713.5 | 23825 | 5 | 12 | 6 | 16QAM | 21.63 | - |
| 713.5 | 23825 | 5 | 12 | 13 | 16QAM | 21.63 | - |
| 713.5 | 23825 | 5 | 25 | 0 | 16QAM | 21.41 | - |
| | | | | | | | |
| 709.0 | 23780 | 10 | 1 | 0 | QPSK | 23.50 | - |
| 709.0 | 23780 | 10 | 1 | 24 | QPSK | 23.57 | - |
| 709.0 | 23780 | 10 | 1 | 49 | QPSK | 23.47 | - |
| 709.0 | 23780 | 10 | 25 | 0 | QPSK | 22.65 | - |
| 709.0 | 23780 | 10 | 25 | 12 | QPSK | 22.47 | - |
| 709.0 | 23780 | 10 | 25 | 25 | QPSK | 22.72 | - |
| 709.0 | 23780 | 10 | 50 | 0 | QPSK | 22.38 | - |
| 709.0 | 23780 | 10 | 1 | 0 | 16QAM | 22.42 | - |
| 709.0 | 23780 | 10 | 1 | 24 | 16QAM | 22.57 | - |
| 709.0 | 23780 | 10 | 1 | 49 | 16QAM | 22.34 | - |
| 709.0 | 23780 | 10 | 25 | 0 | 16QAM | 21.52 | - |
| 709.0 | 23780 | 10 | 25 | 12 | 16QAM | 21.37 | - |
| 709.0 | 23780 | 10 | 25 | 25 | 16QAM | 21.54 | - |
| 709.0 | 23780 | 10 | 50 | 0 | 16QAM | 21.29 | - |

(Table LTE700, 004402/47/126346/1 continues)

(Table LTE700, 004402/47/126346/1 continues)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 710.0 | 23790 | 10 | 1 | 0 | QPSK | 23.59 | - |
| 710.0 | 23790 | 10 | 1 | 24 | QPSK | 23.60 | - |
| 710.0 | 23790 | 10 | 1 | 49 | QPSK | 23.65 | - |
| 710.0 | 23790 | 10 | 25 | 0 | QPSK | 22.52 | - |
| 710.0 | 23790 | 10 | 25 | 12 | QPSK | 22.47 | - |
| 710.0 | 23790 | 10 | 25 | 25 | QPSK | 22.60 | - |
| 710.0 | 23790 | 10 | 50 | 0 | QPSK | 22.32 | - |
| 710.0 | 23790 | 10 | 1 | 0 | 16QAM | 22.64 | - |
| 710.0 | 23790 | 10 | 1 | 24 | 16QAM | 22.54 | - |
| 710.0 | 23790 | 10 | 1 | 49 | 16QAM | 22.63 | - |
| 710.0 | 23790 | 10 | 25 | 0 | 16QAM | 21.54 | - |
| 710.0 | 23790 | 10 | 25 | 12 | 16QAM | 21.45 | - |
| 710.0 | 23790 | 10 | 25 | 25 | 16QAM | 21.56 | - |
| 710.0 | 23790 | 10 | 50 | 0 | 16QAM | 21.29 | - |
| | | | | | | | |
| 711.0 | 23800 | 10 | 1 | 0 | QPSK | 23.64 | - |
| 711.0 | 23800 | 10 | 1 | 24 | QPSK | 23.56 | - |
| 711.0 | 23800 | 10 | 1 | 49 | QPSK | 23.54 | - |
| 711.0 | 23800 | 10 | 25 | 0 | QPSK | 22.51 | - |
| 711.0 | 23800 | 10 | 25 | 12 | QPSK | 22.43 | - |
| 711.0 | 23800 | 10 | 25 | 25 | QPSK | 22.51 | - |
| 711.0 | 23800 | 10 | 50 | 0 | QPSK | 22.26 | - |
| 711.0 | 23800 | 10 | 1 | 0 | 16QAM | 22.56 | - |
| 711.0 | 23800 | 10 | 1 | 24 | 16QAM | 22.63 | - |
| 711.0 | 23800 | 10 | 1 | 49 | 16QAM | 22.44 | - |
| 711.0 | 23800 | 10 | 25 | 0 | 16QAM | 21.51 | - |
| 711.0 | 23800 | 10 | 25 | 12 | 16QAM | 21.40 | - |
| 711.0 | 23800 | 10 | 25 | 25 | 16QAM | 21.59 | - |
| 711.0 | 23800 | 10 | 50 | 0 | 16QAM | 21.30 | - |

Type: RM-877; Serial number: 004402/47/126326/3 used for LTE850 (Band 5) for Head, Body-worn and Wireless Router SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE850 (Band 5) in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 824.7 | 20407 | 1.4 | 1 | 0 | QPSK | 23.17 | - |
| 824.7 | 20407 | 1.4 | 1 | 2 | QPSK | 23.06 | - |
| 824.7 | 20407 | 1.4 | 1 | 5 | QPSK | 23.26 | - |
| 824.7 | 20407 | 1.4 | 3 | 0 | QPSK | 23.11 | - |
| 824.7 | 20407 | 1.4 | 3 | 2 | QPSK | 23.09 | - |
| 824.7 | 20407 | 1.4 | 3 | 3 | QPSK | 22.95 | - |
| 824.7 | 20407 | 1.4 | 6 | 0 | QPSK | 22.03 | - |
| 824.7 | 20407 | 1.4 | 1 | 0 | 16QAM | 21.95 | - |
| 824.7 | 20407 | 1.4 | 1 | 2 | 16QAM | 22.04 | - |
| 824.7 | 20407 | 1.4 | 1 | 5 | 16QAM | 22.21 | - |
| 824.7 | 20407 | 1.4 | 3 | 0 | 16QAM | 22.27 | - |
| 824.7 | 20407 | 1.4 | 3 | 2 | 16QAM | 22.09 | - |
| 824.7 | 20407 | 1.4 | 3 | 3 | 16QAM | 22.15 | - |
| 824.7 | 20407 | 1.4 | 6 | 0 | 16QAM | 21.00 | - |
| | | | | | | | |
| 836.5 | 20525 | 1.4 | 1 | 0 | QPSK | 23.14 | - |
| 836.5 | 20525 | 1.4 | 1 | 2 | QPSK | 23.06 | - |
| 836.5 | 20525 | 1.4 | 1 | 5 | QPSK | 23.14 | - |
| 836.5 | 20525 | 1.4 | 3 | 0 | QPSK | 23.05 | - |
| 836.5 | 20525 | 1.4 | 3 | 2 | QPSK | 23.06 | - |
| 836.5 | 20525 | 1.4 | 3 | 3 | QPSK | 23.01 | - |
| 836.5 | 20525 | 1.4 | 6 | 0 | QPSK | 22.13 | - |
| 836.5 | 20525 | 1.4 | 1 | 0 | 16QAM | 22.04 | - |
| 836.5 | 20525 | 1.4 | 1 | 2 | 16QAM | 22.06 | - |
| 836.5 | 20525 | 1.4 | 1 | 5 | 16QAM | 22.07 | - |
| 836.5 | 20525 | 1.4 | 3 | 0 | 16QAM | 22.12 | - |
| 836.5 | 20525 | 1.4 | 3 | 2 | 16QAM | 22.16 | - |
| 836.5 | 20525 | 1.4 | 3 | 3 | 16QAM | 22.16 | - |
| 836.5 | 20525 | 1.4 | 6 | 0 | 16QAM | 21.06 | - |
| | | | | | | | |

(Table LTE850, 004402/47/126317/2 continues)

(Table LTE850, 004402/47/126317/2 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 848.3 | 20643 | 1.4 | 1 | 0 | QPSK | 23.21 | - |
| 848.3 | 20643 | 1.4 | 1 | 2 | QPSK | 23.15 | - |
| 848.3 | 20643 | 1.4 | 1 | 5 | QPSK | 23.25 | - |
| 848.3 | 20643 | 1.4 | 3 | 0 | QPSK | 23.22 | - |
| 848.3 | 20643 | 1.4 | 3 | 2 | QPSK | 23.21 | - |
| 848.3 | 20643 | 1.4 | 3 | 3 | QPSK | 23.17 | - |
| 848.3 | 20643 | 1.4 | 6 | 0 | QPSK | 22.23 | - |
| 848.3 | 20643 | 1.4 | 1 | 0 | 16QAM | 22.25 | - |
| 848.3 | 20643 | 1.4 | 1 | 2 | 16QAM | 22.14 | - |
| 848.3 | 20643 | 1.4 | 1 | 5 | 16QAM | 22.18 | - |
| 848.3 | 20643 | 1.4 | 3 | 0 | 16QAM | 22.12 | - |
| 848.3 | 20643 | 1.4 | 3 | 2 | 16QAM | 22.25 | - |
| 848.3 | 20643 | 1.4 | 3 | 3 | 16QAM | 22.05 | - |
| 848.3 | 20643 | 1.4 | 6 | 0 | 16QAM | 21.26 | - |
| | | | | | | | |
| 825.5 | 20415 | 3 | 1 | 0 | QPSK | 23.17 | - |
| 825.5 | 20415 | 3 | 1 | 7 | QPSK | 23.33 | - |
| 825.5 | 20415 | 3 | 1 | 14 | QPSK | 23.15 | - |
| 825.5 | 20415 | 3 | 8 | 0 | QPSK | 22.03 | - |
| 825.5 | 20415 | 3 | 8 | 3 | QPSK | 22.14 | - |
| 825.5 | 20415 | 3 | 8 | 7 | QPSK | 22.12 | - |
| 825.5 | 20415 | 3 | 15 | 0 | QPSK | 22.06 | - |
| 825.5 | 20415 | 3 | 1 | 0 | 16QAM | 22.38 | - |
| 825.5 | 20415 | 3 | 1 | 7 | 16QAM | 22.40 | - |
| 825.5 | 20415 | 3 | 1 | 14 | 16QAM | 22.36 | - |
| 825.5 | 20415 | 3 | 8 | 0 | 16QAM | 20.98 | - |
| 825.5 | 20415 | 3 | 8 | 3 | 16QAM | 21.12 | - |
| 825.5 | 20415 | 3 | 8 | 7 | 16QAM | 21.14 | - |
| 825.5 | 20415 | 3 | 15 | 0 | 16QAM | 21.04 | - |

(Table LTE850, 004402/47/126317/2 continues)

(Table LTE850, 004402/47/126317/2 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 836.5 | 20525 | 3 | 1 | 0 | QPSK | 23.14 | - |
| 836.5 | 20525 | 3 | 1 | 7 | QPSK | 23.12 | - |
| 836.5 | 20525 | 3 | 1 | 14 | QPSK | 23.05 | - |
| 836.5 | 20525 | 3 | 8 | 0 | QPSK | 22.06 | - |
| 836.5 | 20525 | 3 | 8 | 3 | QPSK | 22.07 | - |
| 836.5 | 20525 | 3 | 8 | 7 | QPSK | 22.07 | - |
| 836.5 | 20525 | 3 | 15 | 0 | QPSK | 22.09 | - |
| 836.5 | 20525 | 3 | 1 | 0 | 16QAM | 22.02 | - |
| 836.5 | 20525 | 3 | 1 | 7 | 16QAM | 22.00 | - |
| 836.5 | 20525 | 3 | 1 | 14 | 16QAM | 21.91 | - |
| 836.5 | 20525 | 3 | 8 | 0 | 16QAM | 20.99 | - |
| 836.5 | 20525 | 3 | 8 | 3 | 16QAM | 21.11 | - |
| 836.5 | 20525 | 3 | 8 | 7 | 16QAM | 20.96 | - |
| 836.5 | 20525 | 3 | 15 | 0 | 16QAM | 21.14 | - |
| | | | | | | | |
| 847.5 | 20635 | 3 | 1 | 0 | QPSK | 23.16 | - |
| 847.5 | 20635 | 3 | 1 | 7 | QPSK | 23.15 | - |
| 847.5 | 20635 | 3 | 1 | 14 | QPSK | 23.18 | - |
| 847.5 | 20635 | 3 | 8 | 0 | QPSK | 22.13 | - |
| 847.5 | 20635 | 3 | 8 | 3 | QPSK | 22.26 | - |
| 847.5 | 20635 | 3 | 8 | 7 | QPSK | 22.17 | - |
| 847.5 | 20635 | 3 | 15 | 0 | QPSK | 22.19 | - |
| 847.5 | 20635 | 3 | 1 | 0 | 16QAM | 21.86 | - |
| 847.5 | 20635 | 3 | 1 | 7 | 16QAM | 21.97 | - |
| 847.5 | 20635 | 3 | 1 | 14 | 16QAM | 21.88 | - |
| 847.5 | 20635 | 3 | 8 | 0 | 16QAM | 21.09 | - |
| 847.5 | 20635 | 3 | 8 | 3 | 16QAM | 21.23 | - |
| 847.5 | 20635 | 3 | 8 | 7 | 16QAM | 21.09 | - |
| 847.5 | 20635 | 3 | 15 | 0 | 16QAM | 21.32 | - |

(Table LTE850, 004402/47/126317/2 continues)

(Table LTE850, 004402/47/126317/2 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 826.5 | 20425 | 5 | 1 | 0 | QPSK | 23.14 | - |
| 826.5 | 20425 | 5 | 1 | 12 | QPSK | 23.22 | - |
| 826.5 | 20425 | 5 | 1 | 24 | QPSK | 23.26 | - |
| 826.5 | 20425 | 5 | 12 | 0 | QPSK | 21.96 | - |
| 826.5 | 20425 | 5 | 12 | 6 | QPSK | 22.05 | - |
| 826.5 | 20425 | 5 | 12 | 13 | QPSK | 22.06 | - |
| 826.5 | 20425 | 5 | 25 | 0 | QPSK | 22.05 | - |
| 826.5 | 20425 | 5 | 1 | 0 | 16QAM | 21.91 | - |
| 826.5 | 20425 | 5 | 1 | 12 | 16QAM | 21.95 | - |
| 826.5 | 20425 | 5 | 1 | 24 | 16QAM | 22.01 | - |
| 826.5 | 20425 | 5 | 12 | 0 | 16QAM | 21.01 | - |
| 826.5 | 20425 | 5 | 12 | 6 | 16QAM | 21.20 | - |
| 826.5 | 20425 | 5 | 12 | 13 | 16QAM | 21.15 | - |
| 826.5 | 20425 | 5 | 25 | 0 | 16QAM | 21.12 | - |
| | | | | | | | |
| 836.5 | 20525 | 5 | 1 | 0 | QPSK | 23.19 | - |
| 836.5 | 20525 | 5 | 1 | 12 | QPSK | 23.03 | - |
| 836.5 | 20525 | 5 | 1 | 24 | QPSK | 23.08 | - |
| 836.5 | 20525 | 5 | 12 | 0 | QPSK | 22.05 | - |
| 836.5 | 20525 | 5 | 12 | 6 | QPSK | 22.05 | - |
| 836.5 | 20525 | 5 | 12 | 13 | QPSK | 22.07 | - |
| 836.5 | 20525 | 5 | 25 | 0 | QPSK | 22.01 | - |
| 836.5 | 20525 | 5 | 1 | 0 | 16QAM | 22.12 | - |
| 836.5 | 20525 | 5 | 1 | 12 | 16QAM | 22.06 | - |
| 836.5 | 20525 | 5 | 1 | 24 | 16QAM | 21.98 | - |
| 836.5 | 20525 | 5 | 12 | 0 | 16QAM | 21.08 | - |
| 836.5 | 20525 | 5 | 12 | 6 | 16QAM | 21.17 | - |
| 836.5 | 20525 | 5 | 12 | 13 | 16QAM | 21.04 | - |
| 836.5 | 20525 | 5 | 25 | 0 | 16QAM | 21.01 | - |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE850, 004402/47/126317/2 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 846.5 | 20625 | 5 | 1 | 0 | QPSK | 23.16 | - |
| 846.5 | 20625 | 5 | 1 | 12 | QPSK | 23.19 | - |
| 846.5 | 20625 | 5 | 1 | 24 | QPSK | 23.23 | - |
| 846.5 | 20625 | 5 | 12 | 0 | QPSK | 22.10 | - |
| 846.5 | 20625 | 5 | 12 | 6 | QPSK | 22.16 | - |
| 846.5 | 20625 | 5 | 12 | 13 | QPSK | 22.17 | - |
| 846.5 | 20625 | 5 | 25 | 0 | QPSK | 22.06 | - |
| 846.5 | 20625 | 5 | 1 | 0 | 16QAM | 22.36 | - |
| 846.5 | 20625 | 5 | 1 | 12 | 16QAM | 22.36 | - |
| 846.5 | 20625 | 5 | 1 | 24 | 16QAM | 22.44 | - |
| 846.5 | 20625 | 5 | 12 | 0 | 16QAM | 21.09 | - |
| 846.5 | 20625 | 5 | 12 | 6 | 16QAM | 21.12 | - |
| 846.5 | 20625 | 5 | 12 | 13 | 16QAM | 21.20 | - |
| 846.5 | 20625 | 5 | 25 | 0 | 16QAM | 21.07 | - |
| | | | | | | | |
| 829.0 | 20450 | 10 | 1 | 0 | QPSK | 23.17 | - |
| 829.0 | 20450 | 10 | 1 | 24 | QPSK | 23.27 | - |
| 829.0 | 20450 | 10 | 1 | 49 | QPSK | 23.26 | - |
| 829.0 | 20450 | 10 | 25 | 0 | QPSK | 22.08 | - |
| 829.0 | 20450 | 10 | 25 | 12 | QPSK | 22.13 | - |
| 829.0 | 20450 | 10 | 25 | 25 | QPSK | 22.15 | - |
| 829.0 | 20450 | 10 | 50 | 0 | QPSK | 22.08 | - |
| 829.0 | 20450 | 10 | 1 | 0 | 16QAM | 22.15 | - |
| 829.0 | 20450 | 10 | 1 | 24 | 16QAM | 22.16 | - |
| 829.0 | 20450 | 10 | 1 | 49 | 16QAM | 22.26 | - |
| 829.0 | 20450 | 10 | 25 | 0 | 16QAM | 21.03 | - |
| 829.0 | 20450 | 10 | 25 | 12 | 16QAM | 21.16 | - |
| 829.0 | 20450 | 10 | 25 | 25 | 16QAM | 21.11 | - |
| 829.0 | 20450 | 10 | 50 | 0 | 16QAM | 21.12 | - |

(Table LTE850, 004402/47/126317/2 continues)

(Table LTE850, 004402/47/126317/2 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 836.5 | 20525 | 10 | 1 | 0 | QPSK | 23.00 | - |
| 836.5 | 20525 | 10 | 1 | 24 | QPSK | 23.04 | - |
| 836.5 | 20525 | 10 | 1 | 49 | QPSK | 22.95 | - |
| 836.5 | 20525 | 10 | 25 | 0 | QPSK | 22.08 | - |
| 836.5 | 20525 | 10 | 25 | 12 | QPSK | 22.00 | - |
| 836.5 | 20525 | 10 | 25 | 25 | QPSK | 21.96 | - |
| 836.5 | 20525 | 10 | 50 | 0 | QPSK | 21.87 | - |
| 836.5 | 20525 | 10 | 1 | 0 | 16QAM | 21.98 | - |
| 836.5 | 20525 | 10 | 1 | 24 | 16QAM | 22.03 | - |
| 836.5 | 20525 | 10 | 1 | 49 | 16QAM | 22.06 | - |
| 836.5 | 20525 | 10 | 25 | 0 | 16QAM | 21.03 | - |
| 836.5 | 20525 | 10 | 25 | 12 | 16QAM | 20.97 | - |
| 836.5 | 20525 | 10 | 25 | 25 | 16QAM | 20.93 | - |
| 836.5 | 20525 | 10 | 50 | 0 | 16QAM | 20.90 | - |
| | | | | | | | |
| 844.0 | 20600 | 10 | 1 | 0 | QPSK | 23.00 | - |
| 844.0 | 20600 | 10 | 1 | 24 | QPSK | 22.96 | - |
| 844.0 | 20600 | 10 | 1 | 49 | QPSK | 23.03 | - |
| 844.0 | 20600 | 10 | 25 | 0 | QPSK | 22.05 | - |
| 844.0 | 20600 | 10 | 25 | 12 | QPSK | 21.97 | - |
| 844.0 | 20600 | 10 | 25 | 25 | QPSK | 22.02 | - |
| 844.0 | 20600 | 10 | 50 | 0 | QPSK | 21.91 | - |
| 844.0 | 20600 | 10 | 1 | 0 | 16QAM | 22.09 | - |
| 844.0 | 20600 | 10 | 1 | 24 | 16QAM | 22.09 | - |
| 844.0 | 20600 | 10 | 1 | 49 | 16QAM | 22.08 | - |
| 844.0 | 20600 | 10 | 25 | 0 | 16QAM | 21.02 | - |
| 844.0 | 20600 | 10 | 25 | 12 | 16QAM | 20.94 | - |
| 844.0 | 20600 | 10 | 25 | 25 | 16QAM | 20.97 | - |
| 844.0 | 20600 | 10 | 50 | 0 | 16QAM | 20.89 | - |
| | | | | | | | |

Type: RM-877; Serial number: 004402/47/126326/3 used for LTE1700/2100 (Band4) for Head and Body-worn SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE1700/2100 (Band 4) in 1.4MHz Channel BW in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1710.7 | 19957 | 1.4 | 1 | 0 | QPSK | 23.01 | - |
| 1710.7 | 19957 | 1.4 | 1 | 2 | QPSK | 23.04 | - |
| 1710.7 | 19957 | 1.4 | 1 | 5 | QPSK | 23.02 | - |
| 1710.7 | 19957 | 1.4 | 3 | 0 | QPSK | 22.99 | - |
| 1710.7 | 19957 | 1.4 | 3 | 2 | QPSK | 23.03 | - |
| 1710.7 | 19957 | 1.4 | 3 | 3 | QPSK | 22.99 | - |
| 1710.7 | 19957 | 1.4 | 6 | 0 | QPSK | 22.05 | - |
| 1710.7 | 19957 | 1.4 | 1 | 0 | 16QAM | 21.68 | - |
| 1710.7 | 19957 | 1.4 | 1 | 2 | 16QAM | 21.85 | - |
| 1710.7 | 19957 | 1.4 | 1 | 5 | 16QAM | 21.76 | - |
| 1710.7 | 19957 | 1.4 | 3 | 0 | 16QAM | 22.03 | - |
| 1710.7 | 19957 | 1.4 | 3 | 2 | 16QAM | 22.09 | - |
| 1710.7 | 19957 | 1.4 | 3 | 3 | 16QAM | 22.10 | - |
| 1710.7 | 19957 | 1.4 | 6 | 0 | 16QAM | 21.13 | - |
| | | | | | | | |
| 1732.5 | 20175 | 1.4 | 1 | 0 | QPSK | 22.90 | - |
| 1732.5 | 20175 | 1.4 | 1 | 2 | QPSK | 22.90 | - |
| 1732.5 | 20175 | 1.4 | 1 | 5 | QPSK | 23.01 | - |
| 1732.5 | 20175 | 1.4 | 3 | 0 | QPSK | 22.85 | - |
| 1732.5 | 20175 | 1.4 | 3 | 2 | QPSK | 22.90 | - |
| 1732.5 | 20175 | 1.4 | 3 | 3 | QPSK | 22.81 | - |
| 1732.5 | 20175 | 1.4 | 6 | 0 | QPSK | 22.01 | - |
| 1732.5 | 20175 | 1.4 | 1 | 0 | 16QAM | 21.63 | - |
| 1732.5 | 20175 | 1.4 | 1 | 2 | 16QAM | 21.59 | - |
| 1732.5 | 20175 | 1.4 | 1 | 5 | 16QAM | 21.73 | - |
| 1732.5 | 20175 | 1.4 | 3 | 0 | 16QAM | 21.93 | - |
| 1732.5 | 20175 | 1.4 | 3 | 2 | 16QAM | 22.05 | - |
| 1732.5 | 20175 | 1.4 | 3 | 3 | 16QAM | 21.91 | - |
| 1732.5 | 20175 | 1.4 | 6 | 0 | 16QAM | 20.95 | - |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1754.3 | 20393 | 1.4 | 1 | 0 | QPSK | 22.94 | - |
| 1754.3 | 20393 | 1.4 | 1 | 2 | QPSK | 22.92 | - |
| 1754.3 | 20393 | 1.4 | 1 | 5 | QPSK | 23.00 | - |
| 1754.3 | 20393 | 1.4 | 3 | 0 | QPSK | 22.85 | - |
| 1754.3 | 20393 | 1.4 | 3 | 2 | QPSK | 22.90 | - |
| 1754.3 | 20393 | 1.4 | 3 | 3 | QPSK | 22.82 | - |
| 1754.3 | 20393 | 1.4 | 6 | 0 | QPSK | 21.96 | - |
| 1754.3 | 20393 | 1.4 | 1 | 0 | 16QAM | 21.69 | - |
| 1754.3 | 20393 | 1.4 | 1 | 2 | 16QAM | 21.63 | - |
| 1754.3 | 20393 | 1.4 | 1 | 5 | 16QAM | 21.66 | - |
| 1754.3 | 20393 | 1.4 | 3 | 0 | 16QAM | 21.85 | - |
| 1754.3 | 20393 | 1.4 | 3 | 2 | 16QAM | 21.76 | - |
| 1754.3 | 20393 | 1.4 | 3 | 3 | 16QAM | 21.84 | - |
| 1754.3 | 20393 | 1.4 | 6 | 0 | 16QAM | 20.95 | - |
| | | | | | | | |
| 1711.5 | 19965 | 3 | 1 | 0 | QPSK | 23.01 | 22.94 |
| 1711.5 | 19965 | 3 | 1 | 7 | QPSK | 23.03 | 22.89 |
| 1711.5 | 19965 | 3 | 1 | 14 | QPSK | 22.93 | 22.82 |
| 1711.5 | 19965 | 3 | 8 | 0 | QPSK | 21.97 | 20.97 |
| 1711.5 | 19965 | 3 | 8 | 3 | QPSK | 22.03 | 20.95 |
| 1711.5 | 19965 | 3 | 8 | 7 | QPSK | 21.91 | 20.92 |
| 1711.5 | 19965 | 3 | 15 | 0 | QPSK | 22.01 | 20.89 |
| 1711.5 | 19965 | 3 | 1 | 0 | 16QAM | 22.18 | 21.81 |
| 1711.5 | 19965 | 3 | 1 | 7 | 16QAM | 22.17 | 21.64 |
| 1711.5 | 19965 | 3 | 1 | 14 | 16QAM | 22.13 | 21.61 |
| 1732.5 | 20175 | 3 | 8 | 0 | 16QAM | 21.03 | 19.94 |
| 1732.5 | 20175 | 3 | 8 | 3 | 16QAM | 20.97 | 19.95 |
| 1732.5 | 20175 | 3 | 8 | 7 | 16QAM | 21.03 | 19.93 |
| 1732.5 | 20175 | 3 | 15 | 0 | 16QAM | 21.09 | 19.94 |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1732.5 | 20175 | 3 | 1 | 0 | QPSK | 22.96 | 22.72 |
| 1732.5 | 20175 | 3 | 1 | 7 | QPSK | 23.03 | 22.75 |
| 1732.5 | 20175 | 3 | 1 | 14 | QPSK | 22.99 | 22.76 |
| 1732.5 | 20175 | 3 | 8 | 0 | QPSK | 21.92 | 20.84 |
| 1732.5 | 20175 | 3 | 8 | 3 | QPSK | 21.93 | 20.79 |
| 1732.5 | 20175 | 3 | 8 | 7 | QPSK | 21.88 | 20.85 |
| 1732.5 | 20175 | 3 | 15 | 0 | QPSK | 21.94 | 20.79 |
| 1732.5 | 20175 | 3 | 1 | 0 | 16QAM | 22.22 | 21.56 |
| 1732.5 | 20175 | 3 | 1 | 7 | 16QAM | 22.13 | 21.67 |
| 1732.5 | 20175 | 3 | 1 | 14 | 16QAM | 22.25 | 21.54 |
| 1732.5 | 20175 | 3 | 8 | 0 | 16QAM | 20.91 | 19.86 |
| 1732.5 | 20175 | 3 | 8 | 3 | 16QAM | 20.94 | 19.88 |
| 1732.5 | 20175 | 3 | 8 | 7 | 16QAM | 20.93 | 19.84 |
| 1732.5 | 20175 | 3 | 15 | 0 | 16QAM | 20.99 | 19.92 |
| | | | | | | | |
| 1753.5 | 20385 | 3 | 1 | 0 | QPSK | 23.01 | 22.80 |
| 1753.5 | 20385 | 3 | 1 | 7 | QPSK | 23.04 | 22.74 |
| 1753.5 | 20385 | 3 | 1 | 14 | QPSK | 22.93 | 22.71 |
| 1753.5 | 20385 | 3 | 8 | 0 | QPSK | 21.84 | 20.80 |
| 1753.5 | 20385 | 3 | 8 | 3 | QPSK | 21.95 | 20.82 |
| 1753.5 | 20385 | 3 | 8 | 7 | QPSK | 21.82 | 20.85 |
| 1753.5 | 20385 | 3 | 15 | 0 | QPSK | 21.94 | 20.81 |
| 1753.5 | 20385 | 3 | 1 | 0 | 16QAM | 22.06 | 21.61 |
| 1753.5 | 20385 | 3 | 1 | 7 | 16QAM | 22.18 | 21.53 |
| 1753.5 | 20385 | 3 | 1 | 14 | 16QAM | 22.14 | 21.50 |
| 1753.5 | 20385 | 3 | 8 | 0 | 16QAM | 20.86 | 19.84 |
| 1753.5 | 20385 | 3 | 8 | 3 | 16QAM | 20.87 | 19.86 |
| 1753.5 | 20385 | 3 | 8 | 7 | 16QAM | 20.87 | 19.79 |
| 1753.5 | 20385 | 3 | 15 | 0 | 16QAM | 21.03 | 19.89 |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1712.5 | 19975 | 5 | 1 | 0 | QPSK | 23.06 | 22.87 |
| 1712.5 | 19975 | 5 | 1 | 12 | QPSK | 22.99 | 22.90 |
| 1712.5 | 19975 | 5 | 1 | 24 | QPSK | 22.98 | 22.88 |
| 1712.5 | 19975 | 5 | 12 | 0 | QPSK | 21.95 | 20.98 |
| 1712.5 | 19975 | 5 | 12 | 6 | QPSK | 22.04 | 20.89 |
| 1712.5 | 19975 | 5 | 12 | 13 | QPSK | 21.88 | 20.86 |
| 1712.5 | 19975 | 5 | 25 | 0 | QPSK | 21.95 | 20.86 |
| 1712.5 | 19975 | 5 | 1 | 0 | 16QAM | 22.06 | 21.82 |
| 1712.5 | 19975 | 5 | 1 | 12 | 16QAM | 21.89 | 21.74 |
| 1712.5 | 19975 | 5 | 1 | 24 | 16QAM | 21.93 | 21.75 |
| 1712.5 | 19975 | 5 | 12 | 0 | 16QAM | 20.97 | 19.94 |
| 1712.5 | 19975 | 5 | 12 | 6 | 16QAM | 21.01 | 19.90 |
| 1712.5 | 19975 | 5 | 12 | 13 | 16QAM | 21.00 | 19.91 |
| 1712.5 | 19975 | 5 | 25 | 0 | 16QAM | 20.99 | 19.89 |
| | | | | | | | |
| 1732.5 | 20175 | 5 | 1 | 0 | QPSK | 23.01 | 22.73 |
| 1732.5 | 20175 | 5 | 1 | 12 | QPSK | 22.98 | 22.68 |
| 1732.5 | 20175 | 5 | 1 | 24 | QPSK | 23.09 | 22.80 |
| 1732.5 | 20175 | 5 | 12 | 0 | QPSK | 21.87 | 20.79 |
| 1732.5 | 20175 | 5 | 12 | 6 | QPSK | 22.03 | 20.75 |
| 1732.5 | 20175 | 5 | 12 | 13 | QPSK | 21.89 | 20.80 |
| 1732.5 | 20175 | 5 | 25 | 0 | QPSK | 22.00 | 20.72 |
| 1732.5 | 20175 | 5 | 1 | 0 | 16QAM | 22.14 | 21.66 |
| 1732.5 | 20175 | 5 | 1 | 12 | 16QAM | 22.19 | 21.60 |
| 1732.5 | 20175 | 5 | 1 | 24 | 16QAM | 22.20 | 21.57 |
| 1732.5 | 20175 | 5 | 12 | 0 | 16QAM | 21.00 | 19.93 |
| 1732.5 | 20175 | 5 | 12 | 6 | 16QAM | 20.98 | 19.85 |
| 1732.5 | 20175 | 5 | 12 | 13 | 16QAM | 20.99 | 19.97 |
| 1732.5 | 20175 | 5 | 25 | 0 | 16QAM | 20.94 | 19.83 |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1752.5 | 20375 | 5 | 1 | 0 | QPSK | 23.12 | 22.82 |
| 1752.5 | 20375 | 5 | 1 | 12 | QPSK | 23.05 | 22.70 |
| 1752.5 | 20375 | 5 | 1 | 24 | QPSK | 22.94 | 22.66 |
| 1752.5 | 20375 | 5 | 12 | 0 | QPSK | 21.90 | 20.77 |
| 1752.5 | 20375 | 5 | 12 | 6 | QPSK | 21.90 | 20.81 |
| 1752.5 | 20375 | 5 | 12 | 13 | QPSK | 21.88 | 20.80 |
| 1752.5 | 20375 | 5 | 25 | 0 | QPSK | 21.86 | 20.70 |
| 1752.5 | 20375 | 5 | 1 | 0 | 16QAM | 22.14 | 21.56 |
| 1752.5 | 20375 | 5 | 1 | 12 | 16QAM | 22.20 | 21.53 |
| 1752.5 | 20375 | 5 | 1 | 24 | 16QAM | 22.06 | 21.34 |
| 1752.5 | 20375 | 5 | 12 | 0 | 16QAM | 20.97 | 19.83 |
| 1752.5 | 20375 | 5 | 12 | 6 | 16QAM | 21.00 | 19.95 |
| 1752.5 | 20375 | 5 | 12 | 13 | 16QAM | 20.86 | 19.81 |
| 1752.5 | 20375 | 5 | 25 | 0 | 16QAM | 20.95 | 19.74 |
| | | | | | | | |
| 1715.0 | 20000 | 10 | 1 | 0 | QPSK | 23.00 | 22.81 |
| 1715.0 | 20000 | 10 | 1 | 24 | QPSK | 23.06 | 22.78 |
| 1715.0 | 20000 | 10 | 1 | 49 | QPSK | 22.89 | 22.64 |
| 1715.0 | 20000 | 10 | 25 | 0 | QPSK | 21.85 | 20.83 |
| 1715.0 | 20000 | 10 | 25 | 12 | QPSK | 21.94 | 20.77 |
| 1715.0 | 20000 | 10 | 25 | 25 | QPSK | 21.81 | 20.83 |
| 1715.0 | 20000 | 10 | 50 | 0 | QPSK | 21.88 | 20.72 |
| 1715.0 | 20000 | 10 | 1 | 0 | 16QAM | 22.06 | 21.55 |
| 1715.0 | 20000 | 10 | 1 | 24 | 16QAM | 22.12 | 21.65 |
| 1715.0 | 20000 | 10 | 1 | 49 | 16QAM | 21.90 | 21.44 |
| 1715.0 | 20000 | 10 | 25 | 0 | 16QAM | 20.91 | 19.83 |
| 1715.0 | 20000 | 10 | 25 | 12 | 16QAM | 20.92 | 19.70 |
| 1715.0 | 20000 | 10 | 25 | 25 | 16QAM | 20.78 | 19.70 |
| 1715.0 | 20000 | 10 | 50 | 0 | 16QAM | 20.88 | 19.74 |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1732.5 | 20175 | 10 | 1 | 0 | QPSK | 22.95 | 22.74 |
| 1732.5 | 20175 | 10 | 1 | 24 | QPSK | 23.01 | 22.79 |
| 1732.5 | 20175 | 10 | 1 | 49 | QPSK | 23.04 | 22.79 |
| 1732.5 | 20175 | 10 | 25 | 0 | QPSK | 21.82 | 20.72 |
| 1732.5 | 20175 | 10 | 25 | 12 | QPSK | 21.92 | 20.72 |
| 1732.5 | 20175 | 10 | 25 | 25 | QPSK | 21.85 | 20.80 |
| 1732.5 | 20175 | 10 | 50 | 0 | QPSK | 21.86 | 20.64 |
| 1732.5 | 20175 | 10 | 1 | 0 | 16QAM | 21.95 | 21.53 |
| 1732.5 | 20175 | 10 | 1 | 24 | 16QAM | 21.94 | 21.40 |
| 1732.5 | 20175 | 10 | 1 | 49 | 16QAM | 21.89 | 21.46 |
| 1732.5 | 20175 | 10 | 25 | 0 | 16QAM | 20.82 | 19.77 |
| 1732.5 | 20175 | 10 | 25 | 12 | 16QAM | 20.90 | 19.74 |
| 1732.5 | 20175 | 10 | 25 | 25 | 16QAM | 20.90 | 19.77 |
| 1732.5 | 20175 | 10 | 50 | 0 | 16QAM | 20.78 | 19.72 |
| | | | | | | | |
| 1750.0 | 20350 | 10 | 1 | 0 | QPSK | 23.14 | 22.97 |
| 1750.0 | 20350 | 10 | 1 | 24 | QPSK | 23.07 | 22.75 |
| 1750.0 | 20350 | 10 | 1 | 49 | QPSK | 22.86 | 22.71 |
| 1750.0 | 20350 | 10 | 25 | 0 | QPSK | 21.88 | 20.89 |
| 1750.0 | 20350 | 10 | 25 | 12 | QPSK | 21.96 | 20.83 |
| 1750.0 | 20350 | 10 | 25 | 25 | QPSK | 21.78 | 20.79 |
| 1750.0 | 20350 | 10 | 50 | 0 | QPSK | 21.81 | 20.68 |
| 1750.0 | 20350 | 10 | 1 | 0 | 16QAM | 21.98 | 21.51 |
| 1750.0 | 20350 | 10 | 1 | 24 | 16QAM | 22.08 | 21.60 |
| 1750.0 | 20350 | 10 | 1 | 49 | 16QAM | 21.91 | 21.33 |
| 1750.0 | 20350 | 10 | 25 | 0 | 16QAM | 20.99 | 19.81 |
| 1750.0 | 20350 | 10 | 25 | 12 | 16QAM | 20.95 | 19.77 |
| 1750.0 | 20350 | 10 | 25 | 25 | 16QAM | 20.85 | 19.68 |
| 1750.0 | 20350 | 10 | 50 | 0 | 16QAM | 20.93 | 19.72 |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1717.5 | 20025 | 15 | 1 | 0 | QPSK | 23.10 | 22.87 |
| 1717.5 | 20025 | 15 | 1 | 36 | QPSK | 23.03 | 22.80 |
| 1717.5 | 20025 | 15 | 1 | 74 | QPSK | 22.94 | 22.61 |
| 1717.5 | 20025 | 15 | 37 | 0 | QPSK | 21.78 | 20.83 |
| 1717.5 | 20025 | 15 | 37 | 18 | QPSK | 21.89 | 20.75 |
| 1717.5 | 20025 | 15 | 37 | 38 | QPSK | 21.80 | 20.76 |
| 1717.5 | 20025 | 15 | 75 | 0 | QPSK | 21.78 | 20.71 |
| 1717.5 | 20025 | 15 | 1 | 0 | 16QAM | 22.09 | 21.68 |
| 1717.5 | 20025 | 15 | 1 | 36 | 16QAM | 21.92 | 21.53 |
| 1717.5 | 20025 | 15 | 1 | 74 | 16QAM | 21.99 | 21.56 |
| 1717.5 | 20025 | 15 | 37 | 0 | 16QAM | 20.86 | 19.75 |
| 1717.5 | 20025 | 15 | 37 | 18 | 16QAM | 20.87 | 19.70 |
| 1717.5 | 20025 | 15 | 37 | 38 | 16QAM | 20.77 | 19.72 |
| 1717.5 | 20025 | 15 | 75 | 0 | 16QAM | 20.80 | 19.56 |
| | | | | | | | |
| 1732.5 | 20175 | 15 | 1 | 0 | QPSK | 22.85 | 22.72 |
| 1732.5 | 20175 | 15 | 1 | 36 | QPSK | 23.06 | 22.71 |
| 1732.5 | 20175 | 15 | 1 | 74 | QPSK | 23.02 | 22.75 |
| 1732.5 | 20175 | 15 | 37 | 0 | QPSK | 21.81 | 20.76 |
| 1732.5 | 20175 | 15 | 37 | 18 | QPSK | 21.91 | 20.68 |
| 1732.5 | 20175 | 15 | 37 | 38 | QPSK | 21.91 | 20.78 |
| 1732.5 | 20175 | 15 | 75 | 0 | QPSK | 21.88 | 20.68 |
| 1732.5 | 20175 | 15 | 1 | 0 | 16QAM | 21.90 | 21.48 |
| 1732.5 | 20175 | 15 | 1 | 36 | 16QAM | 22.03 | 21.60 |
| 1732.5 | 20175 | 15 | 1 | 74 | 16QAM | 22.03 | 21.52 |
| 1732.5 | 20175 | 15 | 37 | 0 | 16QAM | 20.82 | 19.75 |
| 1732.5 | 20175 | 15 | 37 | 18 | 16QAM | 20.92 | 19.79 |
| 1732.5 | 20175 | 15 | 37 | 38 | 16QAM | 20.89 | 19.75 |
| 1732.5 | 20175 | 15 | 75 | 0 | 16QAM | 20.88 | 19.73 |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1747.5 | 20325 | 15 | 1 | 0 | QPSK | 23.17 | 23.01 |
| 1747.5 | 20325 | 15 | 1 | 36 | QPSK | 23.01 | 22.93 |
| 1747.5 | 20325 | 15 | 1 | 74 | QPSK | 22.90 | 22.70 |
| 1747.5 | 20325 | 15 | 37 | 0 | QPSK | 21.91 | 20.87 |
| 1747.5 | 20325 | 15 | 37 | 18 | QPSK | 21.92 | 20.80 |
| 1747.5 | 20325 | 15 | 37 | 38 | QPSK | 21.78 | 20.80 |
| 1747.5 | 20325 | 15 | 75 | 0 | QPSK | 21.89 | 20.76 |
| 1747.5 | 20325 | 15 | 1 | 0 | 16QAM | 22.25 | 21.69 |
| 1747.5 | 20325 | 15 | 1 | 36 | 16QAM | 22.08 | 21.61 |
| 1747.5 | 20325 | 15 | 1 | 74 | 16QAM | 21.80 | 21.51 |
| 1747.5 | 20325 | 15 | 37 | 0 | 16QAM | 20.98 | 19.87 |
| 1747.5 | 20325 | 15 | 37 | 18 | 16QAM | 20.97 | 19.85 |
| 1747.5 | 20325 | 15 | 37 | 38 | 16QAM | 20.98 | 19.81 |
| 1747.5 | 20325 | 15 | 75 | 0 | 16QAM | 20.91 | 19.76 |
| | | | | | | | |
| 1720.0 | 20050 | 20 | 1 | 0 | QPSK | 23.07 | 22.97 |
| 1720.0 | 20050 | 20 | 1 | 49 | QPSK | 22.85 | 22.71 |
| 1720.0 | 20050 | 20 | 1 | 99 | QPSK | 22.96 | 22.79 |
| 1720.0 | 20050 | 20 | 50 | 0 | QPSK | 21.76 | 20.79 |
| 1720.0 | 20050 | 20 | 50 | 24 | QPSK | 21.76 | 20.69 |
| 1720.0 | 20050 | 20 | 50 | 50 | QPSK | 21.76 | 20.69 |
| 1720.0 | 20050 | 20 | 100 | 0 | QPSK | 21.86 | 20.67 |
| 1720.0 | 20050 | 20 | 1 | 0 | 16QAM | 22.16 | 21.61 |
| 1720.0 | 20050 | 20 | 1 | 49 | 16QAM | 21.81 | 21.63 |
| 1720.0 | 20050 | 20 | 1 | 99 | 16QAM | 21.94 | 21.56 |
| 1720.0 | 20050 | 20 | 50 | 0 | 16QAM | 20.75 | 19.65 |
| 1720.0 | 20050 | 20 | 50 | 24 | 16QAM | 20.78 | 19.59 |
| 1720.0 | 20050 | 20 | 50 | 50 | 16QAM | 20.70 | 19.54 |
| 1720.0 | 20050 | 20 | 100 | 0 | 16QAM | 20.81 | 19.61 |

(Table LTE1700/2100, 004402/47/126326/3 continues)

(Table for LTE1700/2100, 004402/47/126326/3 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1732.5 | 20175 | 20 | 1 | 0 | QPSK | 23.03 | 22.74 |
| 1732.5 | 20175 | 20 | 1 | 49 | QPSK | 23.05 | 22.75 |
| 1732.5 | 20175 | 20 | 1 | 99 | QPSK | 23.07 | 22.87 |
| 1732.5 | 20175 | 20 | 50 | 0 | QPSK | 21.77 | 20.77 |
| 1732.5 | 20175 | 20 | 50 | 24 | QPSK | 21.88 | 20.64 |
| 1732.5 | 20175 | 20 | 50 | 50 | QPSK | 21.82 | 20.70 |
| 1732.5 | 20175 | 20 | 100 | 0 | QPSK | 21.93 | 20.70 |
| 1732.5 | 20175 | 20 | 1 | 0 | 16QAM | 21.91 | 21.54 |
| 1732.5 | 20175 | 20 | 1 | 49 | 16QAM | 22.05 | 21.52 |
| 1732.5 | 20175 | 20 | 1 | 99 | 16QAM | 22.11 | 21.49 |
| 1732.5 | 20175 | 20 | 50 | 0 | 16QAM | 20.74 | 19.67 |
| 1732.5 | 20175 | 20 | 50 | 24 | 16QAM | 20.82 | 19.69 |
| 1732.5 | 20175 | 20 | 50 | 50 | 16QAM | 20.80 | 19.67 |
| 1732.5 | 20175 | 20 | 100 | 0 | 16QAM | 20.89 | 19.76 |
| | | | | | | | |
| 1745.0 | 20300 | 20 | 1 | 0 | QPSK | 23.01 | 22.98 |
| 1745.0 | 20300 | 20 | 1 | 49 | QPSK | 23.01 | 22.98 |
| 1745.0 | 20300 | 20 | 1 | 99 | QPSK | 22.95 | 22.79 |
| 1745.0 | 20300 | 20 | 50 | 0 | QPSK | 21.92 | 20.78 |
| 1745.0 | 20300 | 20 | 50 | 24 | QPSK | 21.86 | 20.73 |
| 1745.0 | 20300 | 20 | 50 | 50 | QPSK | 21.67 | 20.72 |
| 1745.0 | 20300 | 20 | 100 | 0 | QPSK | 21.89 | 20.81 |
| 1745.0 | 20300 | 20 | 1 | 0 | 16QAM | 22.12 | 21.73 |
| 1745.0 | 20300 | 20 | 1 | 49 | 16QAM | 22.01 | 21.75 |
| 1745.0 | 20300 | 20 | 1 | 99 | 16QAM | 21.78 | 21.52 |
| 1745.0 | 20300 | 20 | 50 | 0 | 16QAM | 20.93 | 19.80 |
| 1745.0 | 20300 | 20 | 50 | 24 | 16QAM | 20.86 | 19.77 |
| 1745.0 | 20300 | 20 | 50 | 50 | 16QAM | 20.79 | 19.60 |
| 1745.0 | 20300 | 20 | 100 | 0 | 16QAM | 20.91 | 19.85 |

Type: RM-877; Serial number: 004402/47/126315/6 used for LTE1700/2100 (Band4) for Wireless Router SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE1700/2100 (Band 4) in 1.4MHz Channel BW in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1710.7 | 19957 | 1.4 | 1 | 0 | QPSK | 20.58 | - |
| 1710.7 | 19957 | 1.4 | 1 | 2 | QPSK | 20.69 | - |
| 1710.7 | 19957 | 1.4 | 1 | 5 | QPSK | 20.63 | - |
| 1710.7 | 19957 | 1.4 | 3 | 0 | QPSK | 20.95 | - |
| 1710.7 | 19957 | 1.4 | 3 | 2 | QPSK | 20.63 | - |
| 1710.7 | 19957 | 1.4 | 3 | 3 | QPSK | 20.94 | - |
| 1710.7 | 19957 | 1.4 | 6 | 0 | QPSK | 19.66 | - |
| 1710.7 | 19957 | 1.4 | 1 | 0 | 16QAM | 19.64 | - |
| 1710.7 | 19957 | 1.4 | 1 | 2 | 16QAM | 19.64 | - |
| 1710.7 | 19957 | 1.4 | 1 | 5 | 16QAM | 19.59 | - |
| 1710.7 | 19957 | 1.4 | 3 | 0 | 16QAM | 19.85 | - |
| 1710.7 | 19957 | 1.4 | 3 | 2 | 16QAM | 19.66 | - |
| 1710.7 | 19957 | 1.4 | 3 | 3 | 16QAM | 19.88 | - |
| 1710.7 | 19957 | 1.4 | 6 | 0 | 16QAM | 18.78 | - |
| | | | | | | | |
| 1732.5 | 20175 | 1.4 | 1 | 0 | QPSK | 20.57 | - |
| 1732.5 | 20175 | 1.4 | 1 | 2 | QPSK | 20.62 | - |
| 1732.5 | 20175 | 1.4 | 1 | 5 | QPSK | 20.56 | - |
| 1732.5 | 20175 | 1.4 | 3 | 0 | QPSK | 20.81 | - |
| 1732.5 | 20175 | 1.4 | 3 | 2 | QPSK | 20.57 | - |
| 1732.5 | 20175 | 1.4 | 3 | 3 | QPSK | 20.77 | - |
| 1732.5 | 20175 | 1.4 | 6 | 0 | QPSK | 19.52 | - |
| 1732.5 | 20175 | 1.4 | 1 | 0 | 16QAM | 19.51 | - |
| 1732.5 | 20175 | 1.4 | 1 | 2 | 16QAM | 19.49 | - |
| 1732.5 | 20175 | 1.4 | 1 | 5 | 16QAM | 19.51 | - |
| 1732.5 | 20175 | 1.4 | 3 | 0 | 16QAM | 19.70 | - |
| 1732.5 | 20175 | 1.4 | 3 | 2 | 16QAM | 19.58 | - |
| 1732.5 | 20175 | 1.4 | 3 | 3 | 16QAM | 19.63 | - |
| 1732.5 | 20175 | 1.4 | 6 | 0 | 16QAM | 18.73 | - |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1754.3 | 20393 | 1.4 | 1 | 0 | QPSK | 20.63 | - |
| 1754.3 | 20393 | 1.4 | 1 | 2 | QPSK | 20.67 | - |
| 1754.3 | 20393 | 1.4 | 1 | 5 | QPSK | 20.65 | - |
| 1754.3 | 20393 | 1.4 | 3 | 0 | QPSK | 20.75 | - |
| 1754.3 | 20393 | 1.4 | 3 | 2 | QPSK | 20.64 | - |
| 1754.3 | 20393 | 1.4 | 3 | 3 | QPSK | 20.75 | - |
| 1754.3 | 20393 | 1.4 | 6 | 0 | QPSK | 19.73 | - |
| 1754.3 | 20393 | 1.4 | 1 | 0 | 16QAM | 19.85 | - |
| 1754.3 | 20393 | 1.4 | 1 | 2 | 16QAM | 19.83 | - |
| 1754.3 | 20393 | 1.4 | 1 | 5 | 16QAM | 19.80 | - |
| 1754.3 | 20393 | 1.4 | 3 | 0 | 16QAM | 19.88 | - |
| 1754.3 | 20393 | 1.4 | 3 | 2 | 16QAM | 19.72 | - |
| 1754.3 | 20393 | 1.4 | 3 | 3 | 16QAM | 19.73 | - |
| 1754.3 | 20393 | 1.4 | 6 | 0 | 16QAM | 18.82 | - |
| | | | | | | | |
| 1711.5 | 19965 | 3 | 1 | 0 | QPSK | 20.64 | 20.69 |
| 1711.5 | 19965 | 3 | 1 | 7 | QPSK | 20.70 | 20.73 |
| 1711.5 | 19965 | 3 | 1 | 14 | QPSK | 20.60 | 20.65 |
| 1711.5 | 19965 | 3 | 8 | 0 | QPSK | 19.97 | 18.75 |
| 1711.5 | 19965 | 3 | 8 | 3 | QPSK | 19.64 | 18.74 |
| 1711.5 | 19965 | 3 | 8 | 7 | QPSK | 19.97 | 18.80 |
| 1711.5 | 19965 | 3 | 15 | 0 | QPSK | 19.58 | 18.75 |
| 1711.5 | 19965 | 3 | 1 | 0 | 16QAM | 19.78 | 19.88 |
| 1711.5 | 19965 | 3 | 1 | 7 | 16QAM | 19.84 | 19.82 |
| 1711.5 | 19965 | 3 | 1 | 14 | 16QAM | 19.71 | 19.86 |
| 1732.5 | 20175 | 3 | 8 | 0 | 16QAM | 18.96 | 17.90 |
| 1732.5 | 20175 | 3 | 8 | 3 | 16QAM | 18.64 | 17.70 |
| 1732.5 | 20175 | 3 | 8 | 7 | 16QAM | 18.98 | 17.82 |
| 1732.5 | 20175 | 3 | 15 | 0 | 16QAM | 18.64 | 17.73 |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1732.5 | 20175 | 3 | 1 | 0 | QPSK | 20.53 | 20.46 |
| 1732.5 | 20175 | 3 | 1 | 7 | QPSK | 20.54 | 20.42 |
| 1732.5 | 20175 | 3 | 1 | 14 | QPSK | 20.52 | 20.43 |
| 1732.5 | 20175 | 3 | 8 | 0 | QPSK | 19.82 | 18.53 |
| 1732.5 | 20175 | 3 | 8 | 3 | QPSK | 19.57 | 18.59 |
| 1732.5 | 20175 | 3 | 8 | 7 | QPSK | 19.81 | 18.55 |
| 1732.5 | 20175 | 3 | 15 | 0 | QPSK | 19.50 | 18.59 |
| 1732.5 | 20175 | 3 | 1 | 0 | 16QAM | 19.78 | 19.63 |
| 1732.5 | 20175 | 3 | 1 | 7 | 16QAM | 19.67 | 19.56 |
| 1732.5 | 20175 | 3 | 1 | 14 | 16QAM | 19.67 | 19.51 |
| 1732.5 | 20175 | 3 | 8 | 0 | 16QAM | 18.78 | 17.48 |
| 1732.5 | 20175 | 3 | 8 | 3 | 16QAM | 18.62 | 17.44 |
| 1732.5 | 20175 | 3 | 8 | 7 | 16QAM | 18.80 | 17.46 |
| 1732.5 | 20175 | 3 | 15 | 0 | 16QAM | 18.56 | 17.44 |
| | | | | | | | |
| 1753.5 | 20385 | 3 | 1 | 0 | QPSK | 20.78 | 20.56 |
| 1753.5 | 20385 | 3 | 1 | 7 | QPSK | 20.70 | 20.50 |
| 1753.5 | 20385 | 3 | 1 | 14 | QPSK | 20.65 | 20.46 |
| 1753.5 | 20385 | 3 | 8 | 0 | QPSK | 19.86 | 18.68 |
| 1753.5 | 20385 | 3 | 8 | 3 | QPSK | 19.76 | 18.60 |
| 1753.5 | 20385 | 3 | 8 | 7 | QPSK | 19.80 | 18.62 |
| 1753.5 | 20385 | 3 | 15 | 0 | QPSK | 19.67 | 18.50 |
| 1753.5 | 20385 | 3 | 1 | 0 | 16QAM | 19.89 | 19.78 |
| 1753.5 | 20385 | 3 | 1 | 7 | 16QAM | 19.87 | 19.60 |
| 1753.5 | 20385 | 3 | 1 | 14 | 16QAM | 19.88 | 19.57 |
| 1753.5 | 20385 | 3 | 8 | 0 | 16QAM | 18.80 | 17.66 |
| 1753.5 | 20385 | 3 | 8 | 3 | 16QAM | 18.76 | 17.55 |
| 1753.5 | 20385 | 3 | 8 | 7 | 16QAM | 18.72 | 17.57 |
| 1753.5 | 20385 | 3 | 15 | 0 | 16QAM | 18.77 | 17.42 |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1712.5 | 19975 | 5 | 1 | 0 | QPSK | 20.65 | 20.69 |
| 1712.5 | 19975 | 5 | 1 | 12 | QPSK | 20.67 | 20.67 |
| 1712.5 | 19975 | 5 | 1 | 24 | QPSK | 20.55 | 20.65 |
| 1712.5 | 19975 | 5 | 12 | 0 | QPSK | 19.96 | 18.77 |
| 1712.5 | 19975 | 5 | 12 | 6 | QPSK | 19.61 | 18.76 |
| 1712.5 | 19975 | 5 | 12 | 13 | QPSK | 19.96 | 18.79 |
| 1712.5 | 19975 | 5 | 25 | 0 | QPSK | 19.51 | 18.69 |
| 1712.5 | 19975 | 5 | 1 | 0 | 16QAM | 19.44 | 19.68 |
| 1712.5 | 19975 | 5 | 1 | 12 | 16QAM | 19.64 | 19.77 |
| 1712.5 | 19975 | 5 | 1 | 24 | 16QAM | 19.36 | 19.68 |
| 1712.5 | 19975 | 5 | 12 | 0 | 16QAM | 19.02 | 17.81 |
| 1712.5 | 19975 | 5 | 12 | 6 | 16QAM | 18.66 | 17.68 |
| 1712.5 | 19975 | 5 | 12 | 13 | 16QAM | 18.98 | 17.66 |
| 1712.5 | 19975 | 5 | 25 | 0 | 16QAM | 18.55 | 17.62 |
| | | | | | | | |
| 1732.5 | 20175 | 5 | 1 | 0 | QPSK | 20.50 | 20.42 |
| 1732.5 | 20175 | 5 | 1 | 12 | QPSK | 20.46 | 20.41 |
| 1732.5 | 20175 | 5 | 1 | 24 | QPSK | 20.55 | 20.40 |
| 1732.5 | 20175 | 5 | 12 | 0 | QPSK | 19.81 | 18.55 |
| 1732.5 | 20175 | 5 | 12 | 6 | QPSK | 19.50 | 18.54 |
| 1732.5 | 20175 | 5 | 12 | 13 | QPSK | 19.79 | 18.58 |
| 1732.5 | 20175 | 5 | 25 | 0 | QPSK | 19.43 | 18.41 |
| 1732.5 | 20175 | 5 | 1 | 0 | 16QAM | 19.40 | 19.32 |
| 1732.5 | 20175 | 5 | 1 | 12 | 16QAM | 19.39 | 19.25 |
| 1732.5 | 20175 | 5 | 1 | 24 | 16QAM | 19.34 | 19.16 |
| 1732.5 | 20175 | 5 | 12 | 0 | 16QAM | 18.90 | 17.47 |
| 1732.5 | 20175 | 5 | 12 | 6 | 16QAM | 18.61 | 17.45 |
| 1732.5 | 20175 | 5 | 12 | 13 | 16QAM | 18.82 | 17.38 |
| 1732.5 | 20175 | 5 | 25 | 0 | 16QAM | 18.56 | 17.49 |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1752.5 | 20375 | 5 | 1 | 0 | QPSK | 20.75 | 20.62 |
| 1752.5 | 20375 | 5 | 1 | 12 | QPSK | 20.80 | 20.43 |
| 1752.5 | 20375 | 5 | 1 | 24 | QPSK | 20.68 | 20.43 |
| 1752.5 | 20375 | 5 | 12 | 0 | QPSK | 19.83 | 18.63 |
| 1752.5 | 20375 | 5 | 12 | 6 | QPSK | 19.81 | 18.59 |
| 1752.5 | 20375 | 5 | 12 | 13 | QPSK | 19.81 | 18.59 |
| 1752.5 | 20375 | 5 | 25 | 0 | QPSK | 19.61 | 18.47 |
| 1752.5 | 20375 | 5 | 1 | 0 | 16QAM | 19.65 | 19.45 |
| 1752.5 | 20375 | 5 | 1 | 12 | 16QAM | 19.61 | 19.46 |
| 1752.5 | 20375 | 5 | 1 | 24 | 16QAM | 19.45 | 19.30 |
| 1752.5 | 20375 | 5 | 12 | 0 | 16QAM | 18.88 | 17.56 |
| 1752.5 | 20375 | 5 | 12 | 6 | 16QAM | 18.81 | 17.58 |
| 1752.5 | 20375 | 5 | 12 | 13 | 16QAM | 18.87 | 17.50 |
| 1752.5 | 20375 | 5 | 25 | 0 | 16QAM | 18.64 | 17.50 |
| | | | | | | | |
| 1715.0 | 20000 | 10 | 1 | 0 | QPSK | 20.84 | 20.72 |
| 1715.0 | 20000 | 10 | 1 | 24 | QPSK | 20.73 | 20.61 |
| 1715.0 | 20000 | 10 | 1 | 49 | QPSK | 20.55 | 20.43 |
| 1715.0 | 20000 | 10 | 25 | 0 | QPSK | 19.92 | 18.67 |
| 1715.0 | 20000 | 10 | 25 | 12 | QPSK | 19.62 | 18.62 |
| 1715.0 | 20000 | 10 | 25 | 25 | QPSK | 19.75 | 18.53 |
| 1715.0 | 20000 | 10 | 50 | 0 | QPSK | 19.49 | 18.47 |
| 1715.0 | 20000 | 10 | 1 | 0 | 16QAM | 19.77 | 19.59 |
| 1715.0 | 20000 | 10 | 1 | 24 | 16QAM | 19.70 | 19.49 |
| 1715.0 | 20000 | 10 | 1 | 49 | 16QAM | 19.60 | 19.30 |
| 1715.0 | 20000 | 10 | 25 | 0 | 16QAM | 18.96 | 17.77 |
| 1715.0 | 20000 | 10 | 25 | 12 | 16QAM | 18.69 | 17.63 |
| 1715.0 | 20000 | 10 | 25 | 25 | 16QAM | 18.80 | 17.55 |
| 1715.0 | 20000 | 10 | 50 | 0 | 16QAM | 18.58 | 17.42 |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1732.5 | 20175 | 10 | 1 | 0 | QPSK | 20.70 | 20.47 |
| 1732.5 | 20175 | 10 | 1 | 24 | QPSK | 20.53 | 20.44 |
| 1732.5 | 20175 | 10 | 1 | 49 | QPSK | 20.60 | 20.43 |
| 1732.5 | 20175 | 10 | 25 | 0 | QPSK | 19.73 | 18.50 |
| 1732.5 | 20175 | 10 | 25 | 12 | QPSK | 19.51 | 18.42 |
| 1732.5 | 20175 | 10 | 25 | 25 | QPSK | 19.71 | 18.43 |
| 1732.5 | 20175 | 10 | 50 | 0 | QPSK | 19.43 | 18.36 |
| 1732.5 | 20175 | 10 | 1 | 0 | 16QAM | 19.60 | 19.36 |
| 1732.5 | 20175 | 10 | 1 | 24 | 16QAM | 19.53 | 19.28 |
| 1732.5 | 20175 | 10 | 1 | 49 | 16QAM | 19.52 | 19.25 |
| 1732.5 | 20175 | 10 | 25 | 0 | 16QAM | 18.83 | 17.47 |
| 1732.5 | 20175 | 10 | 25 | 12 | 16QAM | 18.59 | 17.40 |
| 1732.5 | 20175 | 10 | 25 | 25 | 16QAM | 18.83 | 17.26 |
| 1732.5 | 20175 | 10 | 50 | 0 | 16QAM | 18.50 | 17.26 |
| | | | | | | | |
| 1750.0 | 20350 | 10 | 1 | 0 | QPSK | 20.77 | 20.60 |
| 1750.0 | 20350 | 10 | 1 | 24 | QPSK | 20.86 | 20.45 |
| 1750.0 | 20350 | 10 | 1 | 49 | QPSK | 20.71 | 20.41 |
| 1750.0 | 20350 | 10 | 25 | 0 | QPSK | 19.76 | 18.50 |
| 1750.0 | 20350 | 10 | 25 | 12 | QPSK | 19.75 | 18.48 |
| 1750.0 | 20350 | 10 | 25 | 25 | QPSK | 19.74 | 18.55 |
| 1750.0 | 20350 | 10 | 50 | 0 | QPSK | 19.58 | 18.37 |
| 1750.0 | 20350 | 10 | 1 | 0 | 16QAM | 19.77 | 19.42 |
| 1750.0 | 20350 | 10 | 1 | 24 | 16QAM | 19.85 | 19.41 |
| 1750.0 | 20350 | 10 | 1 | 49 | 16QAM | 19.73 | 19.27 |
| 1750.0 | 20350 | 10 | 25 | 0 | 16QAM | 18.78 | 17.42 |
| 1750.0 | 20350 | 10 | 25 | 12 | 16QAM | 18.72 | 17.46 |
| 1750.0 | 20350 | 10 | 25 | 25 | 16QAM | 18.81 | 17.47 |
| 1750.0 | 20350 | 10 | 50 | 0 | 16QAM | 18.62 | 17.32 |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1717.5 | 20025 | 15 | 1 | 0 | QPSK | 20.84 | 20.63 |
| 1717.5 | 20025 | 15 | 1 | 36 | QPSK | 20.70 | 20.50 |
| 1717.5 | 20025 | 15 | 1 | 74 | QPSK | 20.47 | 20.49 |
| 1717.5 | 20025 | 15 | 37 | 0 | QPSK | 19.85 | 18.62 |
| 1717.5 | 20025 | 15 | 37 | 18 | QPSK | 19.46 | 18.49 |
| 1717.5 | 20025 | 15 | 37 | 38 | QPSK | 19.81 | 18.51 |
| 1717.5 | 20025 | 15 | 75 | 0 | QPSK | 19.45 | 18.48 |
| 1717.5 | 20025 | 15 | 1 | 0 | 16QAM | 19.81 | 19.36 |
| 1717.5 | 20025 | 15 | 1 | 36 | 16QAM | 19.64 | 19.30 |
| 1717.5 | 20025 | 15 | 1 | 74 | 16QAM | 19.45 | 19.16 |
| 1717.5 | 20025 | 15 | 37 | 0 | 16QAM | 18.89 | 17.52 |
| 1717.5 | 20025 | 15 | 37 | 18 | 16QAM | 18.53 | 17.37 |
| 1717.5 | 20025 | 15 | 37 | 38 | 16QAM | 18.85 | 17.43 |
| 1717.5 | 20025 | 15 | 75 | 0 | 16QAM | 18.49 | 17.43 |
| | | | | | | | |
| 1732.5 | 20175 | 15 | 1 | 0 | QPSK | 20.68 | 20.47 |
| 1732.5 | 20175 | 15 | 1 | 36 | QPSK | 20.62 | 20.43 |
| 1732.5 | 20175 | 15 | 1 | 74 | QPSK | 20.55 | 20.34 |
| 1732.5 | 20175 | 15 | 37 | 0 | QPSK | 19.73 | 18.47 |
| 1732.5 | 20175 | 15 | 37 | 18 | QPSK | 19.47 | 18.39 |
| 1732.5 | 20175 | 15 | 37 | 38 | QPSK | 19.71 | 18.40 |
| 1732.5 | 20175 | 15 | 75 | 0 | QPSK | 19.45 | 18.37 |
| 1732.5 | 20175 | 15 | 1 | 0 | 16QAM | 19.59 | 19.06 |
| 1732.5 | 20175 | 15 | 1 | 36 | 16QAM | 19.53 | 19.04 |
| 1732.5 | 20175 | 15 | 1 | 74 | 16QAM | 19.49 | 19.05 |
| 1732.5 | 20175 | 15 | 37 | 0 | 16QAM | 18.83 | 17.30 |
| 1732.5 | 20175 | 15 | 37 | 18 | 16QAM | 18.52 | 17.21 |
| 1732.5 | 20175 | 15 | 37 | 38 | 16QAM | 18.78 | 17.21 |
| 1732.5 | 20175 | 15 | 75 | 0 | 16QAM | 18.51 | 17.27 |
| | | | | | | | |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1747.5 | 20325 | 15 | 1 | 0 | QPSK | 20.86 | 20.68 |
| 1747.5 | 20325 | 15 | 1 | 36 | QPSK | 20.70 | 20.50 |
| 1747.5 | 20325 | 15 | 1 | 74 | QPSK | 20.49 | 20.30 |
| 1747.5 | 20325 | 15 | 37 | 0 | QPSK | 19.72 | 18.58 |
| 1747.5 | 20325 | 15 | 37 | 18 | QPSK | 19.54 | 18.49 |
| 1747.5 | 20325 | 15 | 37 | 38 | QPSK | 19.72 | 18.43 |
| 1747.5 | 20325 | 15 | 75 | 0 | QPSK | 19.56 | 18.50 |
| 1747.5 | 20325 | 15 | 1 | 0 | 16QAM | 19.80 | 19.41 |
| 1747.5 | 20325 | 15 | 1 | 36 | 16QAM | 19.69 | 19.20 |
| 1747.5 | 20325 | 15 | 1 | 74 | 16QAM | 19.54 | 19.11 |
| 1747.5 | 20325 | 15 | 37 | 0 | 16QAM | 18.79 | 17.41 |
| 1747.5 | 20325 | 15 | 37 | 18 | 16QAM | 18.56 | 17.34 |
| 1747.5 | 20325 | 15 | 37 | 38 | 16QAM | 18.69 | 17.32 |
| 1747.5 | 20325 | 15 | 75 | 0 | 16QAM | 18.60 | 17.33 |
| | | | | | | | |
| 1720.0 | 20050 | 20 | 1 | 0 | QPSK | 20.86 | 20.63 |
| 1720.0 | 20050 | 20 | 1 | 49 | QPSK | 20.60 | 20.45 |
| 1720.0 | 20050 | 20 | 1 | 99 | QPSK | 20.45 | 20.30 |
| 1720.0 | 20050 | 20 | 50 | 0 | QPSK | 19.73 | 18.53 |
| 1720.0 | 20050 | 20 | 50 | 24 | QPSK | 19.38 | 18.44 |
| 1720.0 | 20050 | 20 | 50 | 50 | QPSK | 19.69 | 18.45 |
| 1720.0 | 20050 | 20 | 100 | 0 | QPSK | 19.38 | 18.42 |
| 1720.0 | 20050 | 20 | 1 | 0 | 16QAM | 19.76 | 19.44 |
| 1720.0 | 20050 | 20 | 1 | 49 | 16QAM | 19.47 | 19.24 |
| 1720.0 | 20050 | 20 | 1 | 99 | 16QAM | 19.48 | 19.13 |
| 1720.0 | 20050 | 20 | 50 | 0 | 16QAM | 18.79 | 17.69 |
| 1720.0 | 20050 | 20 | 50 | 24 | 16QAM | 18.47 | 17.38 |
| 1720.0 | 20050 | 20 | 50 | 50 | 16QAM | 18.73 | 17.45 |
| 1720.0 | 20050 | 20 | 100 | 0 | 16QAM | 18.47 | 17.51 |

(Table LTE1700/2100, 004402/47/126315/6 continues)

(Table for LTE1700/2100, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1732.5 | 20175 | 20 | 1 | 0 | QPSK | 20.70 | 20.53 |
| 1732.5 | 20175 | 20 | 1 | 49 | QPSK | 20.53 | 20.40 |
| 1732.5 | 20175 | 20 | 1 | 99 | QPSK | 20.61 | 20.53 |
| 1732.5 | 20175 | 20 | 50 | 0 | QPSK | 19.74 | 18.51 |
| 1732.5 | 20175 | 20 | 50 | 24 | QPSK | 19.43 | 18.40 |
| 1732.5 | 20175 | 20 | 50 | 50 | QPSK | 19.64 | 18.37 |
| 1732.5 | 20175 | 20 | 100 | 0 | QPSK | 19.46 | 18.44 |
| 1732.5 | 20175 | 20 | 1 | 0 | 16QAM | 19.70 | 19.21 |
| 1732.5 | 20175 | 20 | 1 | 49 | 16QAM | 19.57 | 19.10 |
| 1732.5 | 20175 | 20 | 1 | 99 | 16QAM | 19.56 | 19.11 |
| 1732.5 | 20175 | 20 | 50 | 0 | 16QAM | 18.79 | 17.51 |
| 1732.5 | 20175 | 20 | 50 | 24 | 16QAM | 18.49 | 17.25 |
| 1732.5 | 20175 | 20 | 50 | 50 | 16QAM | 18.72 | 17.24 |
| 1732.5 | 20175 | 20 | 100 | 0 | 16QAM | 18.55 | 17.33 |
| | | | | | | | |
| 1745.0 | 20300 | 20 | 1 | 0 | QPSK | 20.87 | 20.64 |
| 1745.0 | 20300 | 20 | 1 | 49 | QPSK | 20.79 | 20.60 |
| 1745.0 | 20300 | 20 | 1 | 99 | QPSK | 20.48 | 20.37 |
| 1745.0 | 20300 | 20 | 50 | 0 | QPSK | 19.74 | 18.51 |
| 1745.0 | 20300 | 20 | 50 | 24 | QPSK | 19.51 | 18.47 |
| 1745.0 | 20300 | 20 | 50 | 50 | QPSK | 19.64 | 18.41 |
| 1745.0 | 20300 | 20 | 100 | 0 | QPSK | 19.61 | 18.44 |
| 1745.0 | 20300 | 20 | 1 | 0 | 16QAM | 19.75 | 19.36 |
| 1745.0 | 20300 | 20 | 1 | 49 | 16QAM | 19.71 | 19.27 |
| 1745.0 | 20300 | 20 | 1 | 99 | 16QAM | 19.57 | 19.06 |
| 1745.0 | 20300 | 20 | 50 | 0 | 16QAM | 18.79 | 17.51 |
| 1745.0 | 20300 | 20 | 50 | 24 | 16QAM | 18.60 | 17.35 |
| 1745.0 | 20300 | 20 | 50 | 50 | 16QAM | 18.67 | 17.23 |
| 1745.0 | 20300 | 20 | 100 | 0 | 16QAM | 18.64 | 17.30 |

Type: RM-877; Serial number: 004402/47/126333/9 used for LTE1900 (Band2) for Head and Body-worn SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE1900 (Band 2) in 1.4MHz Channel BW in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1850.7 | 18607 | 1.4 | 1 | 0 | QPSK | 22.97 | - |
| 1850.7 | 18607 | 1.4 | 1 | 2 | QPSK | 23.02 | - |
| 1850.7 | 18607 | 1.4 | 1 | 5 | QPSK | 23.00 | - |
| 1850.7 | 18607 | 1.4 | 3 | 0 | QPSK | 22.92 | - |
| 1850.7 | 18607 | 1.4 | 3 | 2 | QPSK | 22.88 | - |
| 1850.7 | 18607 | 1.4 | 3 | 3 | QPSK | 22.94 | - |
| 1850.7 | 18607 | 1.4 | 6 | 0 | QPSK | 21.95 | - |
| 1850.7 | 18607 | 1.4 | 1 | 0 | 16QAM | 22.12 | - |
| 1850.7 | 18607 | 1.4 | 1 | 2 | 16QAM | 22.07 | - |
| 1850.7 | 18607 | 1.4 | 1 | 5 | 16QAM | 22.16 | - |
| 1850.7 | 18607 | 1.4 | 3 | 0 | 16QAM | 22.02 | - |
| 1850.7 | 18607 | 1.4 | 3 | 2 | 16QAM | 21.94 | - |
| 1850.7 | 18607 | 1.4 | 3 | 3 | 16QAM | 21.95 | - |
| 1850.7 | 18607 | 1.4 | 6 | 0 | 16QAM | 21.03 | - |
| | | | | | | | |
| 1880.0 | 18900 | 1.4 | 1 | 0 | QPSK | 23.04 | - |
| 1880.0 | 18900 | 1.4 | 1 | 2 | QPSK | 23.06 | - |
| 1880.0 | 18900 | 1.4 | 1 | 5 | QPSK | 23.06 | - |
| 1880.0 | 18900 | 1.4 | 3 | 0 | QPSK | 23.09 | - |
| 1880.0 | 18900 | 1.4 | 3 | 2 | QPSK | 22.94 | - |
| 1880.0 | 18900 | 1.4 | 3 | 3 | QPSK | 23.07 | - |
| 1880.0 | 18900 | 1.4 | 6 | 0 | QPSK | 22.07 | - |
| 1880.0 | 18900 | 1.4 | 1 | 0 | 16QAM | 21.91 | - |
| 1880.0 | 18900 | 1.4 | 1 | 2 | 16QAM | 22.02 | - |
| 1880.0 | 18900 | 1.4 | 1 | 5 | 16QAM | 21.98 | - |
| 1880.0 | 18900 | 1.4 | 3 | 0 | 16QAM | 22.09 | - |
| 1880.0 | 18900 | 1.4 | 3 | 2 | 16QAM | 22.07 | - |
| 1880.0 | 18900 | 1.4 | 3 | 3 | 16QAM | 22.09 | - |
| 1880.0 | 18900 | 1.4 | 6 | 0 | 16QAM | 20.92 | - |
| | | | | | | | |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1909.3 | 19193 | 1.4 | 1 | 0 | QPSK | 23.12 | - |
| 1909.3 | 19193 | 1.4 | 1 | 2 | QPSK | 23.09 | - |
| 1909.3 | 19193 | 1.4 | 1 | 5 | QPSK | 23.19 | - |
| 1909.3 | 19193 | 1.4 | 3 | 0 | QPSK | 23.22 | - |
| 1909.3 | 19193 | 1.4 | 3 | 2 | QPSK | 23.10 | - |
| 1909.3 | 19193 | 1.4 | 3 | 3 | QPSK | 23.27 | - |
| 1909.3 | 19193 | 1.4 | 6 | 0 | QPSK | 22.11 | - |
| 1909.3 | 19193 | 1.4 | 1 | 0 | 16QAM | 21.94 | - |
| 1909.3 | 19193 | 1.4 | 1 | 2 | 16QAM | 22.09 | - |
| 1909.3 | 19193 | 1.4 | 1 | 5 | 16QAM | 22.06 | - |
| 1909.3 | 19193 | 1.4 | 3 | 0 | 16QAM | 22.29 | - |
| 1909.3 | 19193 | 1.4 | 3 | 2 | 16QAM | 22.15 | - |
| 1909.3 | 19193 | 1.4 | 3 | 3 | 16QAM | 22.32 | - |
| 1909.3 | 19193 | 1.4 | 6 | 0 | 16QAM | 21.07 | - |
| | | | | | | | |
| 1851.5 | 18615 | 3 | 1 | 0 | QPSK | 23.05 | 22.90 |
| 1851.5 | 18615 | 3 | 1 | 7 | QPSK | 23.03 | 22.86 |
| 1851.5 | 18615 | 3 | 1 | 14 | QPSK | 22.94 | 22.88 |
| 1851.5 | 18615 | 3 | 8 | 0 | QPSK | 22.00 | 20.96 |
| 1851.5 | 18615 | 3 | 8 | 3 | QPSK | 21.95 | 20.96 |
| 1851.5 | 18615 | 3 | 8 | 7 | QPSK | 21.97 | 20.89 |
| 1851.5 | 18615 | 3 | 15 | 0 | QPSK | 21.94 | 20.89 |
| 1851.5 | 18615 | 3 | 1 | 0 | 16QAM | 21.93 | 21.67 |
| 1851.5 | 18615 | 3 | 1 | 7 | 16QAM | 21.95 | 21.72 |
| 1851.5 | 18615 | 3 | 1 | 14 | 16QAM | 21.87 | 21.62 |
| 1851.5 | 18615 | 3 | 8 | 0 | 16QAM | 20.85 | 19.91 |
| 1851.5 | 18615 | 3 | 8 | 3 | 16QAM | 20.74 | 19.90 |
| 1851.5 | 18615 | 3 | 8 | 7 | 16QAM | 20.83 | 19.86 |
| 1851.5 | 18615 | 3 | 15 | 0 | 16QAM | 20.92 | 19.88 |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1880.0 | 18900 | 3 | 1 | 0 | QPSK | 23.05 | 22.93 |
| 1880.0 | 18900 | 3 | 1 | 7 | QPSK | 23.11 | 22.92 |
| 1880.0 | 18900 | 3 | 1 | 14 | QPSK | 23.04 | 23.02 |
| 1880.0 | 18900 | 3 | 8 | 0 | QPSK | 22.17 | 20.98 |
| 1880.0 | 18900 | 3 | 8 | 3 | QPSK | 22.09 | 20.96 |
| 1880.0 | 18900 | 3 | 8 | 7 | QPSK | 22.17 | 20.96 |
| 1880.0 | 18900 | 3 | 15 | 0 | QPSK | 22.03 | 20.90 |
| 1880.0 | 18900 | 3 | 1 | 0 | 16QAM | 21.91 | 21.63 |
| 1880.0 | 18900 | 3 | 1 | 7 | 16QAM | 22.02 | 21.74 |
| 1880.0 | 18900 | 3 | 1 | 14 | 16QAM | 22.05 | 21.63 |
| 1880.0 | 18900 | 3 | 8 | 0 | 16QAM | 20.94 | 19.94 |
| 1880.0 | 18900 | 3 | 8 | 3 | 16QAM | 20.79 | 19.92 |
| 1880.0 | 18900 | 3 | 8 | 7 | 16QAM | 20.92 | 19.91 |
| 1880.0 | 18900 | 3 | 15 | 0 | 16QAM | 20.93 | 19.95 |
| | | | | | | | |
| 1908.5 | 19185 | 3 | 1 | 0 | QPSK | 23.21 | 23.20 |
| 1908.5 | 19185 | 3 | 1 | 7 | QPSK | 23.13 | 23.11 |
| 1908.5 | 19185 | 3 | 1 | 14 | QPSK | 23.10 | 23.15 |
| 1908.5 | 19185 | 3 | 8 | 0 | QPSK | 22.35 | 21.21 |
| 1908.5 | 19185 | 3 | 8 | 3 | QPSK | 22.11 | 21.18 |
| 1908.5 | 19185 | 3 | 8 | 7 | QPSK | 22.30 | 21.17 |
| 1908.5 | 19185 | 3 | 15 | 0 | QPSK | 22.04 | 21.15 |
| 1908.5 | 19185 | 3 | 1 | 0 | 16QAM | 22.29 | 21.88 |
| 1908.5 | 19185 | 3 | 1 | 7 | 16QAM | 22.15 | 21.85 |
| 1908.5 | 19185 | 3 | 1 | 14 | 16QAM | 22.14 | 21.98 |
| 1908.5 | 19185 | 3 | 8 | 0 | 16QAM | 21.16 | 20.01 |
| 1908.5 | 19185 | 3 | 8 | 3 | 16QAM | 20.99 | 20.06 |
| 1908.5 | 19185 | 3 | 8 | 7 | 16QAM | 21.15 | 20.03 |
| 1908.5 | 19185 | 3 | 15 | 0 | 16QAM | 21.02 | 20.02 |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1852.5 | 18625 | 5 | 1 | 0 | QPSK | 23.08 | 23.03 |
| 1852.5 | 18625 | 5 | 1 | 12 | QPSK | 23.07 | 23.00 |
| 1852.5 | 18625 | 5 | 1 | 24 | QPSK | 22.99 | 23.06 |
| 1852.5 | 18625 | 5 | 12 | 0 | QPSK | 21.99 | 20.95 |
| 1852.5 | 18625 | 5 | 12 | 6 | QPSK | 21.96 | 21.03 |
| 1852.5 | 18625 | 5 | 12 | 13 | QPSK | 22.02 | 21.00 |
| 1852.5 | 18625 | 5 | 25 | 0 | QPSK | 21.86 | 20.96 |
| 1852.5 | 18625 | 5 | 1 | 0 | 16QAM | 22.19 | 21.69 |
| 1852.5 | 18625 | 5 | 1 | 12 | 16QAM | 22.13 | 21.80 |
| 1852.5 | 18625 | 5 | 1 | 24 | 16QAM | 22.03 | 21.67 |
| 1852.5 | 18625 | 5 | 12 | 0 | 16QAM | 20.99 | 19.96 |
| 1852.5 | 18625 | 5 | 12 | 6 | 16QAM | 21.02 | 20.07 |
| 1852.5 | 18625 | 5 | 12 | 13 | 16QAM | 20.97 | 20.04 |
| 1852.5 | 18625 | 5 | 25 | 0 | 16QAM | 20.84 | 19.86 |
| | | | | | | | |
| 1880.0 | 18900 | 5 | 1 | 0 | QPSK | 23.09 | 23.03 |
| 1880.0 | 18900 | 5 | 1 | 12 | QPSK | 23.03 | 23.05 |
| 1880.0 | 18900 | 5 | 1 | 24 | QPSK | 23.00 | 22.97 |
| 1880.0 | 18900 | 5 | 12 | 0 | QPSK | 22.11 | 20.98 |
| 1880.0 | 18900 | 5 | 12 | 6 | QPSK | 22.03 | 20.94 |
| 1880.0 | 18900 | 5 | 12 | 13 | QPSK | 22.15 | 20.98 |
| 1880.0 | 18900 | 5 | 25 | 0 | QPSK | 21.97 | 20.91 |
| 1880.0 | 18900 | 5 | 1 | 0 | 16QAM | 22.25 | 21.76 |
| 1880.0 | 18900 | 5 | 1 | 12 | 16QAM | 22.28 | 21.66 |
| 1880.0 | 18900 | 5 | 1 | 24 | 16QAM | 22.24 | 21.65 |
| 1880.0 | 18900 | 5 | 12 | 0 | 16QAM | 21.09 | 20.06 |
| 1880.0 | 18900 | 5 | 12 | 6 | 16QAM | 20.99 | 20.01 |
| 1880.0 | 18900 | 5 | 12 | 13 | 16QAM | 21.09 | 19.97 |
| 1880.0 | 18900 | 5 | 25 | 0 | 16QAM | 20.87 | 19.85 |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1907.5 | 19175 | 5 | 1 | 0 | QPSK | 23.11 | 23.16 |
| 1907.5 | 19175 | 5 | 1 | 12 | QPSK | 23.19 | 23.22 |
| 1907.5 | 19175 | 5 | 1 | 24 | QPSK | 23.12 | 23.24 |
| 1907.5 | 19175 | 5 | 12 | 0 | QPSK | 22.31 | 21.16 |
| 1907.5 | 19175 | 5 | 12 | 6 | QPSK | 22.14 | 21.26 |
| 1907.5 | 19175 | 5 | 12 | 13 | QPSK | 22.22 | 21.18 |
| 1907.5 | 19175 | 5 | 25 | 0 | QPSK | 21.92 | 21.03 |
| 1907.5 | 19175 | 5 | 1 | 0 | 16QAM | 22.29 | 21.93 |
| 1907.5 | 19175 | 5 | 1 | 12 | 16QAM | 22.37 | 22.02 |
| 1907.5 | 19175 | 5 | 1 | 24 | 16QAM | 22.36 | 21.92 |
| 1907.5 | 19175 | 5 | 12 | 0 | 16QAM | 21.37 | 20.19 |
| 1907.5 | 19175 | 5 | 12 | 6 | 16QAM | 21.15 | 20.32 |
| 1907.5 | 19175 | 5 | 12 | 13 | 16QAM | 21.27 | 20.10 |
| 1907.5 | 19175 | 5 | 25 | 0 | 16QAM | 20.96 | 19.98 |
| | | | | | | | |
| 1855.0 | 18650 | 10 | 1 | 0 | QPSK | 23.03 | 22.99 |
| 1855.0 | 18650 | 10 | 1 | 24 | QPSK | 22.87 | 23.02 |
| 1855.0 | 18650 | 10 | 1 | 49 | QPSK | 23.03 | 22.93 |
| 1855.0 | 18650 | 10 | 25 | 0 | QPSK | 21.90 | 20.98 |
| 1855.0 | 18650 | 10 | 25 | 12 | QPSK | 21.86 | 20.89 |
| 1855.0 | 18650 | 10 | 25 | 25 | QPSK | 21.85 | 20.85 |
| 1855.0 | 18650 | 10 | 50 | 0 | QPSK | 21.69 | 20.77 |
| 1855.0 | 18650 | 10 | 1 | 0 | 16QAM | 21.92 | 22.18 |
| 1855.0 | 18650 | 10 | 1 | 24 | 16QAM | 22.04 | 22.19 |
| 1855.0 | 18650 | 10 | 1 | 49 | 16QAM | 22.05 | 22.31 |
| 1855.0 | 18650 | 10 | 25 | 0 | 16QAM | 20.85 | 19.86 |
| 1855.0 | 18650 | 10 | 25 | 12 | 16QAM | 20.81 | 19.91 |
| 1855.0 | 18650 | 10 | 25 | 25 | 16QAM | 20.80 | 19.90 |
| 1855.0 | 18650 | 10 | 50 | 0 | 16QAM | 20.71 | 19.72 |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1880.0 | 18900 | 10 | 1 | 0 | QPSK | 23.15 | 22.94 |
| 1880.0 | 18900 | 10 | 1 | 24 | QPSK | 23.02 | 22.92 |
| 1880.0 | 18900 | 10 | 1 | 49 | QPSK | 22.97 | 22.91 |
| 1880.0 | 18900 | 10 | 25 | 0 | QPSK | 21.98 | 20.85 |
| 1880.0 | 18900 | 10 | 25 | 12 | QPSK | 21.94 | 20.86 |
| 1880.0 | 18900 | 10 | 25 | 25 | QPSK | 22.02 | 20.85 |
| 1880.0 | 18900 | 10 | 50 | 0 | QPSK | 21.74 | 20.74 |
| 1880.0 | 18900 | 10 | 1 | 0 | 16QAM | 22.10 | 22.25 |
| 1880.0 | 18900 | 10 | 1 | 24 | 16QAM | 21.95 | 22.22 |
| 1880.0 | 18900 | 10 | 1 | 49 | 16QAM | 21.94 | 22.16 |
| 1880.0 | 18900 | 10 | 25 | 0 | 16QAM | 20.93 | 19.84 |
| 1880.0 | 18900 | 10 | 25 | 12 | 16QAM | 20.88 | 19.86 |
| 1880.0 | 18900 | 10 | 25 | 25 | 16QAM | 20.98 | 19.87 |
| 1880.0 | 18900 | 10 | 50 | 0 | 16QAM | 20.72 | 19.68 |
| | | | | | | | |
| 1905.0 | 19150 | 10 | 1 | 0 | QPSK | 23.08 | 23.10 |
| 1905.0 | 19150 | 10 | 1 | 24 | QPSK | 23.12 | 23.13 |
| 1905.0 | 19150 | 10 | 1 | 49 | QPSK | 23.12 | 23.14 |
| 1905.0 | 19150 | 10 | 25 | 0 | QPSK | 22.17 | 21.08 |
| 1905.0 | 19150 | 10 | 25 | 12 | QPSK | 22.02 | 21.07 |
| 1905.0 | 19150 | 10 | 25 | 25 | QPSK | 22.23 | 21.05 |
| 1905.0 | 19150 | 10 | 50 | 0 | QPSK | 21.94 | 20.97 |
| 1905.0 | 19150 | 10 | 1 | 0 | 16QAM | 22.20 | 22.40 |
| 1905.0 | 19150 | 10 | 1 | 24 | 16QAM | 22.25 | 22.42 |
| 1905.0 | 19150 | 10 | 1 | 49 | 16QAM | 22.15 | 22.21 |
| 1905.0 | 19150 | 10 | 25 | 0 | 16QAM | 21.12 | 19.98 |
| 1905.0 | 19150 | 10 | 25 | 12 | 16QAM | 21.09 | 20.05 |
| 1905.0 | 19150 | 10 | 25 | 25 | 16QAM | 21.26 | 20.02 |
| 1905.0 | 19150 | 10 | 50 | 0 | 16QAM | 20.91 | 19.96 |
| | | | | | | | |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1857.5 | 18675 | 15 | 1 | 0 | QPSK | 23.15 | 22.97 |
| 1857.5 | 18675 | 15 | 1 | 36 | QPSK | 23.05 | 22.98 |
| 1857.5 | 18675 | 15 | 1 | 74 | QPSK | 22.97 | 22.90 |
| 1857.5 | 18675 | 15 | 37 | 0 | QPSK | 21.82 | 20.91 |
| 1857.5 | 18675 | 15 | 37 | 18 | QPSK | 21.92 | 20.84 |
| 1857.5 | 18675 | 15 | 37 | 38 | QPSK | 21.89 | 20.85 |
| 1857.5 | 18675 | 15 | 75 | 0 | QPSK | 21.82 | 20.80 |
| 1857.5 | 18675 | 15 | 1 | 0 | 16QAM | 22.09 | 22.29 |
| 1857.5 | 18675 | 15 | 1 | 36 | 16QAM | 22.14 | 22.07 |
| 1857.5 | 18675 | 15 | 1 | 74 | 16QAM | 21.96 | 22.29 |
| 1857.5 | 18675 | 15 | 37 | 0 | 16QAM | 20.81 | 19.86 |
| 1857.5 | 18675 | 15 | 37 | 18 | 16QAM | 20.86 | 19.92 |
| 1857.5 | 18675 | 15 | 37 | 38 | 16QAM | 20.85 | 19.84 |
| 1857.5 | 18675 | 15 | 75 | 0 | 16QAM | 20.74 | 19.79 |
| | | | | | | | |
| 1880.0 | 18900 | 15 | 1 | 0 | QPSK | 23.07 | 23.02 |
| 1880.0 | 18900 | 15 | 1 | 36 | QPSK | 23.01 | 22.91 |
| 1880.0 | 18900 | 15 | 1 | 74 | QPSK | 22.98 | 23.00 |
| 1880.0 | 18900 | 15 | 37 | 0 | QPSK | 21.92 | 20.81 |
| 1880.0 | 18900 | 15 | 37 | 18 | QPSK | 21.79 | 20.80 |
| 1880.0 | 18900 | 15 | 37 | 38 | QPSK | 21.96 | 20.82 |
| 1880.0 | 18900 | 15 | 75 | 0 | QPSK | 21.76 | 20.74 |
| 1880.0 | 18900 | 15 | 1 | 0 | 16QAM | 22.12 | 22.25 |
| 1880.0 | 18900 | 15 | 1 | 36 | 16QAM | 22.09 | 22.26 |
| 1880.0 | 18900 | 15 | 1 | 74 | 16QAM | 21.94 | 22.07 |
| 1880.0 | 18900 | 15 | 37 | 0 | 16QAM | 20.92 | 19.86 |
| 1880.0 | 18900 | 15 | 37 | 18 | 16QAM | 20.82 | 19.85 |
| 1880.0 | 18900 | 15 | 37 | 38 | 16QAM | 20.94 | 19.82 |
| 1880.0 | 18900 | 15 | 75 | 0 | 16QAM | 20.76 | 19.79 |
| | | | | | | | |

(Table LTE1900, 004402/47/126333/9 continues)

(Table LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1902.5 | 19125 | 15 | 1 | 0 | QPSK | 23.08 | 23.01 |
| 1902.5 | 19125 | 15 | 1 | 36 | QPSK | 23.09 | 23.07 |
| 1902.5 | 19125 | 15 | 1 | 74 | QPSK | 23.18 | 23.18 |
| 1902.5 | 19125 | 15 | 37 | 0 | QPSK | 22.05 | 20.92 |
| 1902.5 | 19125 | 15 | 37 | 18 | QPSK | 21.91 | 20.89 |
| 1902.5 | 19125 | 15 | 37 | 38 | QPSK | 21.98 | 21.00 |
| 1902.5 | 19125 | 15 | 75 | 0 | QPSK | 21.82 | 20.89 |
| 1902.5 | 19125 | 15 | 1 | 0 | 16QAM | 22.06 | 22.17 |
| 1902.5 | 19125 | 15 | 1 | 36 | 16QAM | 22.19 | 22.39 |
| 1902.5 | 19125 | 15 | 1 | 74 | 16QAM | 22.05 | 22.38 |
| 1902.5 | 19125 | 15 | 37 | 0 | 16QAM | 21.01 | 19.96 |
| 1902.5 | 19125 | 15 | 37 | 18 | 16QAM | 20.90 | 20.01 |
| 1902.5 | 19125 | 15 | 37 | 38 | 16QAM | 21.04 | 19.97 |
| 1902.5 | 19125 | 15 | 75 | 0 | 16QAM | 20.81 | 19.93 |
| | | | | | | | |
| 1860.0 | 18700 | 20 | 1 | 0 | QPSK | 23.16 | 22.31 |
| 1860.0 | 18700 | 20 | 1 | 49 | QPSK | 23.06 | 22.18 |
| 1860.0 | 18700 | 20 | 1 | 99 | QPSK | 22.97 | 21.90 |
| 1860.0 | 18700 | 20 | 50 | 0 | QPSK | 21.87 | 19.75 |
| 1860.0 | 18700 | 20 | 50 | 24 | QPSK | 21.79 | 19.83 |
| 1860.0 | 18700 | 20 | 50 | 50 | QPSK | 21.88 | 19.79 |
| 1860.0 | 18700 | 20 | 100 | 0 | QPSK | 21.91 | 19.85 |
| 1860.0 | 18700 | 20 | 1 | 0 | 16QAM | 22.18 | 22.31 |
| 1860.0 | 18700 | 20 | 1 | 49 | 16QAM | 22.17 | 22.18 |
| 1860.0 | 18700 | 20 | 1 | 99 | 16QAM | 22.05 | 21.90 |
| 1860.0 | 18700 | 20 | 50 | 0 | 16QAM | 20.86 | 19.75 |
| 1860.0 | 18700 | 20 | 50 | 24 | 16QAM | 20.83 | 19.83 |
| 1860.0 | 18700 | 20 | 50 | 50 | 16QAM | 20.83 | 19.79 |
| 1860.0 | 18700 | 20 | 100 | 0 | 16QAM | 20.88 | 19.85 |

(Table LTE1900, 004402/47/126333/9 continues)

(Table for LTE1900, 004402/47/126333/9 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1880.0 | 18900 | 20 | 1 | 0 | QPSK | 23.09 | 22.96 |
| 1880.0 | 18900 | 20 | 1 | 49 | QPSK | 23.10 | 23.02 |
| 1880.0 | 18900 | 20 | 1 | 99 | QPSK | 23.04 | 23.04 |
| 1880.0 | 18900 | 20 | 50 | 0 | QPSK | 21.86 | 20.70 |
| 1880.0 | 18900 | 20 | 50 | 24 | QPSK | 21.74 | 20.71 |
| 1880.0 | 18900 | 20 | 50 | 50 | QPSK | 21.88 | 20.66 |
| 1880.0 | 18900 | 20 | 100 | 0 | QPSK | 21.83 | 20.74 |
| 1880.0 | 18900 | 20 | 1 | 0 | 16QAM | 22.06 | 21.94 |
| 1880.0 | 18900 | 20 | 1 | 49 | 16QAM | 22.14 | 21.81 |
| 1880.0 | 18900 | 20 | 1 | 99 | 16QAM | 22.09 | 21.82 |
| 1880.0 | 18900 | 20 | 50 | 0 | 16QAM | 20.82 | 19.77 |
| 1880.0 | 18900 | 20 | 50 | 24 | 16QAM | 20.70 | 19.69 |
| 1880.0 | 18900 | 20 | 50 | 50 | 16QAM | 20.80 | 19.69 |
| 1880.0 | 18900 | 20 | 100 | 0 | 16QAM | 20.78 | 19.77 |
| | | | | | | | |
| 1900.0 | 19100 | 20 | 1 | 0 | QPSK | 22.97 | 22.91 |
| 1900.0 | 19100 | 20 | 1 | 49 | QPSK | 23.12 | 23.08 |
| 1900.0 | 19100 | 20 | 1 | 99 | QPSK | 23.12 | 23.08 |
| 1900.0 | 19100 | 20 | 50 | 0 | QPSK | 21.86 | 20.80 |
| 1900.0 | 19100 | 20 | 50 | 24 | QPSK | 21.86 | 20.87 |
| 1900.0 | 19100 | 20 | 50 | 50 | QPSK | 22.00 | 20.92 |
| 1900.0 | 19100 | 20 | 100 | 0 | QPSK | 21.95 | 20.97 |
| 1900.0 | 19100 | 20 | 1 | 0 | 16QAM | 22.00 | 22.01 |
| 1900.0 | 19100 | 20 | 1 | 49 | 16QAM | 22.18 | 22.03 |
| 1900.0 | 19100 | 20 | 1 | 99 | 16QAM | 22.17 | 22.02 |
| 1900.0 | 19100 | 20 | 50 | 0 | 16QAM | 20.82 | 19.83 |
| 1900.0 | 19100 | 20 | 50 | 24 | 16QAM | 20.82 | 19.95 |
| 1900.0 | 19100 | 20 | 50 | 50 | 16QAM | 20.95 | 19.98 |
| 1900.0 | 19100 | 20 | 100 | 0 | 16QAM | 20.88 | 19.98 |

Type: RM-877; Serial number: 004402/47/126315/6 used for LTE1900 (Band2) for Wireless Router SAR measurements.

"Max Average Power (dBm)" column lists measured powers with MPR active. The "Reduced Power (dBm)" column lists measured powers with MPR and A-MPR active (as defined by 3GPP TS 36.101). A-MPR is not specified for LTE1900 (Band 2) in 1.4MHz Channel BW in this specification (Table 6.2.4-1).

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1850.7 | 18607 | 1.4 | 1 | 0 | QPSK | 20.71 | - |
| 1850.7 | 18607 | 1.4 | 1 | 2 | QPSK | 20.77 | - |
| 1850.7 | 18607 | 1.4 | 1 | 5 | QPSK | 20.68 | - |
| 1850.7 | 18607 | 1.4 | 3 | 0 | QPSK | 20.48 | - |
| 1850.7 | 18607 | 1.4 | 3 | 2 | QPSK | 20.68 | - |
| 1850.7 | 18607 | 1.4 | 3 | 3 | QPSK | 20.49 | - |
| 1850.7 | 18607 | 1.4 | 6 | 0 | QPSK | 19.70 | - |
| 1850.7 | 18607 | 1.4 | 1 | 0 | 16QAM | 19.77 | - |
| 1850.7 | 18607 | 1.4 | 1 | 2 | 16QAM | 19.87 | - |
| 1850.7 | 18607 | 1.4 | 1 | 5 | 16QAM | 19.87 | - |
| 1850.7 | 18607 | 1.4 | 3 | 0 | 16QAM | 19.47 | - |
| 1850.7 | 18607 | 1.4 | 3 | 2 | 16QAM | 19.64 | - |
| 1850.7 | 18607 | 1.4 | 3 | 3 | 16QAM | 19.57 | - |
| 1850.7 | 18607 | 1.4 | 6 | 0 | 16QAM | 18.85 | - |
| | | | | | | | |
| 1880.0 | 18900 | 1.4 | 1 | 0 | QPSK | 20.80 | - |
| 1880.0 | 18900 | 1.4 | 1 | 2 | QPSK | 20.74 | - |
| 1880.0 | 18900 | 1.4 | 1 | 5 | QPSK | 20.80 | - |
| 1880.0 | 18900 | 1.4 | 3 | 0 | QPSK | 20.59 | - |
| 1880.0 | 18900 | 1.4 | 3 | 2 | QPSK | 20.69 | - |
| 1880.0 | 18900 | 1.4 | 3 | 3 | QPSK | 20.60 | - |
| 1880.0 | 18900 | 1.4 | 6 | 0 | QPSK | 19.73 | - |
| 1880.0 | 18900 | 1.4 | 1 | 0 | 16QAM | 19.89 | - |
| 1880.0 | 18900 | 1.4 | 1 | 2 | 16QAM | 19.86 | - |
| 1880.0 | 18900 | 1.4 | 1 | 5 | 16QAM | 19.91 | - |
| 1880.0 | 18900 | 1.4 | 3 | 0 | 16QAM | 19.48 | - |
| 1880.0 | 18900 | 1.4 | 3 | 2 | 16QAM | 19.73 | - |
| 1880.0 | 18900 | 1.4 | 3 | 3 | 16QAM | 19.53 | - |
| 1880.0 | 18900 | 1.4 | 6 | 0 | 16QAM | 18.90 | - |
| | | | | | | | |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1909.3 | 19193 | 1.4 | 1 | 0 | QPSK | 21.00 | - |
| 1909.3 | 19193 | 1.4 | 1 | 2 | QPSK | 21.09 | - |
| 1909.3 | 19193 | 1.4 | 1 | 5 | QPSK | 20.98 | - |
| 1909.3 | 19193 | 1.4 | 3 | 0 | QPSK | 20.78 | - |
| 1909.3 | 19193 | 1.4 | 3 | 2 | QPSK | 20.94 | - |
| 1909.3 | 19193 | 1.4 | 3 | 3 | QPSK | 20.82 | - |
| 1909.3 | 19193 | 1.4 | 6 | 0 | QPSK | 19.97 | - |
| 1909.3 | 19193 | 1.4 | 1 | 0 | 16QAM | 20.02 | - |
| 1909.3 | 19193 | 1.4 | 1 | 2 | 16QAM | 20.12 | - |
| 1909.3 | 19193 | 1.4 | 1 | 5 | 16QAM | 20.12 | - |
| 1909.3 | 19193 | 1.4 | 3 | 0 | 16QAM | 19.72 | - |
| 1909.3 | 19193 | 1.4 | 3 | 2 | 16QAM | 19.96 | - |
| 1909.3 | 19193 | 1.4 | 3 | 3 | 16QAM | 19.70 | - |
| 1909.3 | 19193 | 1.4 | 6 | 0 | 16QAM | 19.08 | - |
| | | | | | | | |
| 1851.5 | 18615 | 3 | 1 | 0 | QPSK | 20.72 | 20.74 |
| 1851.5 | 18615 | 3 | 1 | 7 | QPSK | 20.67 | 20.76 |
| 1851.5 | 18615 | 3 | 1 | 14 | QPSK | 20.71 | 20.71 |
| 1851.5 | 18615 | 3 | 8 | 0 | QPSK | 19.51 | 18.77 |
| 1851.5 | 18615 | 3 | 8 | 3 | QPSK | 19.69 | 18.74 |
| 1851.5 | 18615 | 3 | 8 | 7 | QPSK | 19.52 | 18.79 |
| 1851.5 | 18615 | 3 | 15 | 0 | QPSK | 19.65 | 18.69 |
| 1851.5 | 18615 | 3 | 1 | 0 | 16QAM | 19.88 | 19.56 |
| 1851.5 | 18615 | 3 | 1 | 7 | 16QAM | 19.88 | 19.50 |
| 1851.5 | 18615 | 3 | 1 | 14 | 16QAM | 19.86 | 19.45 |
| 1851.5 | 18615 | 3 | 8 | 0 | 16QAM | 18.56 | 17.79 |
| 1851.5 | 18615 | 3 | 8 | 3 | 16QAM | 18.75 | 17.86 |
| 1851.5 | 18615 | 3 | 8 | 7 | 16QAM | 18.55 | 17.78 |
| 1851.5 | 18615 | 3 | 15 | 0 | 16QAM | 18.80 | 17.71 |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1880.0 | 18900 | 3 | 1 | 0 | QPSK | 20.79 | 20.75 |
| 1880.0 | 18900 | 3 | 1 | 7 | QPSK | 20.72 | 20.64 |
| 1880.0 | 18900 | 3 | 1 | 14 | QPSK | 20.72 | 20.67 |
| 1880.0 | 18900 | 3 | 8 | 0 | QPSK | 19.66 | 18.79 |
| 1880.0 | 18900 | 3 | 8 | 3 | QPSK | 19.74 | 18.81 |
| 1880.0 | 18900 | 3 | 8 | 7 | QPSK | 19.62 | 18.85 |
| 1880.0 | 18900 | 3 | 15 | 0 | QPSK | 19.77 | 18.80 |
| 1880.0 | 18900 | 3 | 1 | 0 | 16QAM | 19.79 | 19.59 |
| 1880.0 | 18900 | 3 | 1 | 7 | 16QAM | 19.85 | 19.61 |
| 1880.0 | 18900 | 3 | 1 | 14 | 16QAM | 19.81 | 19.53 |
| 1880.0 | 18900 | 3 | 8 | 0 | 16QAM | 18.70 | 17.78 |
| 1880.0 | 18900 | 3 | 8 | 3 | 16QAM | 18.83 | 17.78 |
| 1880.0 | 18900 | 3 | 8 | 7 | 16QAM | 18.72 | 17.77 |
| 1880.0 | 18900 | 3 | 15 | 0 | 16QAM | 18.81 | 17.61 |
| | | | | | | | |
| 1908.5 | 19185 | 3 | 1 | 0 | QPSK | 20.84 | 20.99 |
| 1908.5 | 19185 | 3 | 1 | 7 | QPSK | 20.92 | 21.05 |
| 1908.5 | 19185 | 3 | 1 | 14 | QPSK | 20.96 | 21.03 |
| 1908.5 | 19185 | 3 | 8 | 0 | QPSK | 19.81 | 18.98 |
| 1908.5 | 19185 | 3 | 8 | 3 | QPSK | 19.93 | 18.99 |
| 1908.5 | 19185 | 3 | 8 | 7 | QPSK | 19.82 | 19.10 |
| 1908.5 | 19185 | 3 | 15 | 0 | QPSK | 19.93 | 18.96 |
| 1908.5 | 19185 | 3 | 1 | 0 | 16QAM | 19.74 | 19.84 |
| 1908.5 | 19185 | 3 | 1 | 7 | 16QAM | 19.82 | 19.89 |
| 1908.5 | 19185 | 3 | 1 | 14 | 16QAM | 19.77 | 19.94 |
| 1908.5 | 19185 | 3 | 8 | 0 | 16QAM | 18.76 | 18.06 |
| 1908.5 | 19185 | 3 | 8 | 3 | 16QAM | 19.07 | 17.98 |
| 1908.5 | 19185 | 3 | 8 | 7 | 16QAM | 18.88 | 18.01 |
| 1908.5 | 19185 | 3 | 15 | 0 | 16QAM | 19.06 | 18.00 |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1852.5 | 18625 | 5 | 1 | 0 | QPSK | 20.72 | 20.73 |
| 1852.5 | 18625 | 5 | 1 | 12 | QPSK | 20.70 | 20.76 |
| 1852.5 | 18625 | 5 | 1 | 24 | QPSK | 20.77 | 20.81 |
| 1852.5 | 18625 | 5 | 12 | 0 | QPSK | 19.54 | 18.85 |
| 1852.5 | 18625 | 5 | 12 | 6 | QPSK | 19.73 | 18.87 |
| 1852.5 | 18625 | 5 | 12 | 13 | QPSK | 19.63 | 18.95 |
| 1852.5 | 18625 | 5 | 25 | 0 | QPSK | 19.67 | 18.79 |
| 1852.5 | 18625 | 5 | 1 | 0 | 16QAM | 19.51 | 19.72 |
| 1852.5 | 18625 | 5 | 1 | 12 | 16QAM | 19.56 | 19.69 |
| 1852.5 | 18625 | 5 | 1 | 24 | 16QAM | 19.63 | 19.72 |
| 1852.5 | 18625 | 5 | 12 | 0 | 16QAM | 18.62 | 17.72 |
| 1852.5 | 18625 | 5 | 12 | 6 | 16QAM | 18.88 | 17.66 |
| 1852.5 | 18625 | 5 | 12 | 13 | 16QAM | 18.72 | 17.73 |
| 1852.5 | 18625 | 5 | 25 | 0 | 16QAM | 18.77 | 17.69 |
| | | | | | | | |
| 1880.0 | 18900 | 5 | 1 | 0 | QPSK | 20.82 | 20.66 |
| 1880.0 | 18900 | 5 | 1 | 12 | QPSK | 20.79 | 20.65 |
| 1880.0 | 18900 | 5 | 1 | 24 | QPSK | 20.77 | 20.63 |
| 1880.0 | 18900 | 5 | 12 | 0 | QPSK | 19.67 | 18.86 |
| 1880.0 | 18900 | 5 | 12 | 6 | QPSK | 19.77 | 18.78 |
| 1880.0 | 18900 | 5 | 12 | 13 | QPSK | 19.70 | 18.72 |
| 1880.0 | 18900 | 5 | 25 | 0 | QPSK | 19.74 | 18.76 |
| 1880.0 | 18900 | 5 | 1 | 0 | 16QAM | 19.43 | 19.75 |
| 1880.0 | 18900 | 5 | 1 | 12 | 16QAM | 19.47 | 19.59 |
| 1880.0 | 18900 | 5 | 1 | 24 | 16QAM | 19.44 | 19.58 |
| 1880.0 | 18900 | 5 | 12 | 0 | 16QAM | 18.79 | 17.65 |
| 1880.0 | 18900 | 5 | 12 | 6 | 16QAM | 18.94 | 17.68 |
| 1880.0 | 18900 | 5 | 12 | 13 | 16QAM | 18.86 | 17.63 |
| 1880.0 | 18900 | 5 | 25 | 0 | 16QAM | 18.78 | 17.77 |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1907.5 | 19175 | 5 | 1 | 0 | QPSK | 20.88 | 21.02 |
| 1907.5 | 19175 | 5 | 1 | 12 | QPSK | 20.95 | 20.95 |
| 1907.5 | 19175 | 5 | 1 | 24 | QPSK | 21.00 | 21.06 |
| 1907.5 | 19175 | 5 | 12 | 0 | QPSK | 19.76 | 19.00 |
| 1907.5 | 19175 | 5 | 12 | 6 | QPSK | 19.97 | 19.06 |
| 1907.5 | 19175 | 5 | 12 | 13 | QPSK | 19.86 | 19.09 |
| 1907.5 | 19175 | 5 | 25 | 0 | QPSK | 19.90 | 18.92 |
| 1907.5 | 19175 | 5 | 1 | 0 | 16QAM | 19.62 | 19.94 |
| 1907.5 | 19175 | 5 | 1 | 12 | 16QAM | 19.58 | 19.89 |
| 1907.5 | 19175 | 5 | 1 | 24 | 16QAM | 19.68 | 19.93 |
| 1907.5 | 19175 | 5 | 12 | 0 | 16QAM | 18.81 | 17.89 |
| 1907.5 | 19175 | 5 | 12 | 6 | 16QAM | 19.03 | 17.97 |
| 1907.5 | 19175 | 5 | 12 | 13 | 16QAM | 18.96 | 17.92 |
| 1907.5 | 19175 | 5 | 25 | 0 | 16QAM | 18.94 | 17.95 |
| | | | | | | | |
| 1855.0 | 18650 | 10 | 1 | 0 | QPSK | 20.88 | 20.83 |
| 1855.0 | 18650 | 10 | 1 | 24 | QPSK | 20.85 | 20.87 |
| 1855.0 | 18650 | 10 | 1 | 49 | QPSK | 20.85 | 20.72 |
| 1855.0 | 18650 | 10 | 25 | 0 | QPSK | 19.57 | 18.82 |
| 1855.0 | 18650 | 10 | 25 | 12 | QPSK | 19.80 | 18.82 |
| 1855.0 | 18650 | 10 | 25 | 25 | QPSK | 19.54 | 18.85 |
| 1855.0 | 18650 | 10 | 50 | 0 | QPSK | 19.73 | 18.80 |
| 1855.0 | 18650 | 10 | 1 | 0 | 16QAM | 19.92 | 19.75 |
| 1855.0 | 18650 | 10 | 1 | 24 | 16QAM | 19.92 | 19.77 |
| 1855.0 | 18650 | 10 | 1 | 49 | 16QAM | 19.81 | 19.69 |
| 1855.0 | 18650 | 10 | 25 | 0 | 16QAM | 18.58 | 17.71 |
| 1855.0 | 18650 | 10 | 25 | 12 | 16QAM | 18.89 | 17.70 |
| 1855.0 | 18650 | 10 | 25 | 25 | 16QAM | 18.64 | 17.70 |
| 1855.0 | 18650 | 10 | 50 | 0 | 16QAM | 18.84 | 17.77 |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1880.0 | 18900 | 10 | 1 | 0 | QPSK | 20.84 | 20.84 |
| 1880.0 | 18900 | 10 | 1 | 24 | QPSK | 20.80 | 20.76 |
| 1880.0 | 18900 | 10 | 1 | 49 | QPSK | 20.80 | 20.62 |
| 1880.0 | 18900 | 10 | 25 | 0 | QPSK | 19.62 | 18.75 |
| 1880.0 | 18900 | 10 | 25 | 12 | QPSK | 19.70 | 18.75 |
| 1880.0 | 18900 | 10 | 25 | 25 | QPSK | 19.62 | 18.72 |
| 1880.0 | 18900 | 10 | 50 | 0 | QPSK | 19.62 | 18.67 |
| 1880.0 | 18900 | 10 | 1 | 0 | 16QAM | 19.87 | 19.74 |
| 1880.0 | 18900 | 10 | 1 | 24 | 16QAM | 19.75 | 19.67 |
| 1880.0 | 18900 | 10 | 1 | 49 | 16QAM | 19.72 | 19.65 |
| 1880.0 | 18900 | 10 | 25 | 0 | 16QAM | 18.73 | 17.71 |
| 1880.0 | 18900 | 10 | 25 | 12 | 16QAM | 18.78 | 17.69 |
| 1880.0 | 18900 | 10 | 25 | 25 | 16QAM | 18.73 | 17.56 |
| 1880.0 | 18900 | 10 | 50 | 0 | 16QAM | 18.71 | 17.60 |
| | | | | | | | |
| 1905.0 | 19150 | 10 | 1 | 0 | QPSK | 20.83 | 20.96 |
| 1905.0 | 19150 | 10 | 1 | 24 | QPSK | 20.89 | 20.92 |
| 1905.0 | 19150 | 10 | 1 | 49 | QPSK | 20.97 | 21.00 |
| 1905.0 | 19150 | 10 | 25 | 0 | QPSK | 19.69 | 18.91 |
| 1905.0 | 19150 | 10 | 25 | 12 | QPSK | 19.90 | 18.97 |
| 1905.0 | 19150 | 10 | 25 | 25 | QPSK | 19.73 | 18.98 |
| 1905.0 | 19150 | 10 | 50 | 0 | QPSK | 19.75 | 18.94 |
| 1905.0 | 19150 | 10 | 1 | 0 | 16QAM | 19.90 | 20.08 |
| 1905.0 | 19150 | 10 | 1 | 24 | 16QAM | 19.88 | 20.09 |
| 1905.0 | 19150 | 10 | 1 | 49 | 16QAM | 19.97 | 20.09 |
| 1905.0 | 19150 | 10 | 25 | 0 | 16QAM | 18.72 | 17.83 |
| 1905.0 | 19150 | 10 | 25 | 12 | 16QAM | 18.91 | 17.92 |
| 1905.0 | 19150 | 10 | 25 | 25 | 16QAM | 18.80 | 17.84 |
| 1905.0 | 19150 | 10 | 50 | 0 | 16QAM | 18.86 | 17.88 |
| | | | | | | | |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1857.5 | 18675 | 15 | 1 | 0 | QPSK | 20.90 | 20.85 |
| 1857.5 | 18675 | 15 | 1 | 36 | QPSK | 20.89 | 20.80 |
| 1857.5 | 18675 | 15 | 1 | 74 | QPSK | 20.78 | 20.80 |
| 1857.5 | 18675 | 15 | 37 | 0 | QPSK | 19.58 | 18.84 |
| 1857.5 | 18675 | 15 | 37 | 18 | QPSK | 19.80 | 18.78 |
| 1857.5 | 18675 | 15 | 37 | 38 | QPSK | 19.44 | 18.74 |
| 1857.5 | 18675 | 15 | 75 | 0 | QPSK | 19.74 | 18.75 |
| 1857.5 | 18675 | 15 | 1 | 0 | 16QAM | 19.89 | 19.93 |
| 1857.5 | 18675 | 15 | 1 | 36 | 16QAM | 19.83 | 19.97 |
| 1857.5 | 18675 | 15 | 1 | 74 | 16QAM | 19.80 | 19.85 |
| 1857.5 | 18675 | 15 | 37 | 0 | 16QAM | 18.66 | 17.93 |
| 1857.5 | 18675 | 15 | 37 | 18 | 16QAM | 18.84 | 17.69 |
| 1857.5 | 18675 | 15 | 37 | 38 | 16QAM | 18.56 | 17.75 |
| 1857.5 | 18675 | 15 | 75 | 0 | 16QAM | 18.82 | 17.80 |
| | | | | | | | |
| 1880.0 | 18900 | 15 | 1 | 0 | QPSK | 20.90 | 20.82 |
| 1880.0 | 18900 | 15 | 1 | 36 | QPSK | 20.83 | 20.69 |
| 1880.0 | 18900 | 15 | 1 | 74 | QPSK | 20.70 | 20.70 |
| 1880.0 | 18900 | 15 | 37 | 0 | QPSK | 19.53 | 18.67 |
| 1880.0 | 18900 | 15 | 37 | 18 | QPSK | 19.67 | 18.69 |
| 1880.0 | 18900 | 15 | 37 | 38 | QPSK | 19.57 | 18.73 |
| 1880.0 | 18900 | 15 | 75 | 0 | QPSK | 19.67 | 18.67 |
| 1880.0 | 18900 | 15 | 1 | 0 | 16QAM | 19.85 | 19.97 |
| 1880.0 | 18900 | 15 | 1 | 36 | 16QAM | 19.77 | 19.80 |
| 1880.0 | 18900 | 15 | 1 | 74 | 16QAM | 19.71 | 19.80 |
| 1880.0 | 18900 | 15 | 37 | 0 | 16QAM | 18.67 | 17.65 |
| 1880.0 | 18900 | 15 | 37 | 18 | 16QAM | 18.81 | 17.66 |
| 1880.0 | 18900 | 15 | 37 | 38 | 16QAM | 18.68 | 17.61 |
| 1880.0 | 18900 | 15 | 75 | 0 | 16QAM | 18.75 | 17.72 |
| | | | | | | | |

(Table LTE1900, 004402/47/126315/6 continues)

(Table LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1902.5 | 19125 | 15 | 1 | 0 | QPSK | 20.79 | 20.79 |
| 1902.5 | 19125 | 15 | 1 | 36 | QPSK | 20.89 | 20.99 |
| 1902.5 | 19125 | 15 | 1 | 74 | QPSK | 21.00 | 21.03 |
| 1902.5 | 19125 | 15 | 37 | 0 | QPSK | 19.66 | 18.86 |
| 1902.5 | 19125 | 15 | 37 | 18 | QPSK | 19.72 | 18.90 |
| 1902.5 | 19125 | 15 | 37 | 38 | QPSK | 19.66 | 18.90 |
| 1902.5 | 19125 | 15 | 75 | 0 | QPSK | 19.72 | 18.82 |
| 1902.5 | 19125 | 15 | 1 | 0 | 16QAM | 19.75 | 19.87 |
| 1902.5 | 19125 | 15 | 1 | 36 | 16QAM | 19.85 | 19.98 |
| 1902.5 | 19125 | 15 | 1 | 74 | 16QAM | 20.01 | 20.11 |
| 1902.5 | 19125 | 15 | 37 | 0 | 16QAM | 18.72 | 17.79 |
| 1902.5 | 19125 | 15 | 37 | 18 | 16QAM | 18.85 | 17.89 |
| 1902.5 | 19125 | 15 | 37 | 38 | 16QAM | 18.74 | 17.69 |
| 1902.5 | 19125 | 15 | 75 | 0 | 16QAM | 18.79 | 17.85 |
| | | | | | | | |
| 1860.0 | 18700 | 20 | 1 | 0 | QPSK | 20.94 | 20.80 |
| 1860.0 | 18700 | 20 | 1 | 49 | QPSK | 20.87 | 20.82 |
| 1860.0 | 18700 | 20 | 1 | 99 | QPSK | 20.71 | 20.79 |
| 1860.0 | 18700 | 20 | 50 | 0 | QPSK | 19.52 | 18.79 |
| 1860.0 | 18700 | 20 | 50 | 24 | QPSK | 19.72 | 18.69 |
| 1860.0 | 18700 | 20 | 50 | 50 | QPSK | 19.40 | 18.63 |
| 1860.0 | 18700 | 20 | 100 | 0 | QPSK | 19.74 | 18.68 |
| 1860.0 | 18700 | 20 | 1 | 0 | 16QAM | 19.90 | 19.94 |
| 1860.0 | 18700 | 20 | 1 | 49 | 16QAM | 19.82 | 19.91 |
| 1860.0 | 18700 | 20 | 1 | 99 | 16QAM | 19.80 | 19.85 |
| 1860.0 | 18700 | 20 | 50 | 0 | 16QAM | 18.56 | 17.80 |
| 1860.0 | 18700 | 20 | 50 | 24 | 16QAM | 18.78 | 17.63 |
| 1860.0 | 18700 | 20 | 50 | 50 | 16QAM | 18.47 | 17.57 |
| 1860.0 | 18700 | 20 | 100 | 0 | 16QAM | 18.81 | 17.86 |

(Table LTE1900, 004402/47/126315/6 continues)

(Table for LTE1900, 004402/47/126315/6 continues)

| Frequency (MHz) | Channel Number | Bandwidth (MHz) | RB Number | RB Offset | Modulation | Max Average Power (dBm) | Reduced Power(dBm) |
|---|---|---|---|---|---|---|---|
| 1880.0 | 18900 | 20 | 1 | 0 | QPSK | 20.72 | 20.76 |
| 1880.0 | 18900 | 20 | 1 | 49 | QPSK | 20.74 | 20.64 |
| 1880.0 | 18900 | 20 | 1 | 99 | QPSK | 20.75 | 20.71 |
| 1880.0 | 18900 | 20 | 50 | 0 | QPSK | 19.50 | 18.67 |
| 1880.0 | 18900 | 20 | 50 | 24 | QPSK | 19.64 | 18.64 |
| 1880.0 | 18900 | 20 | 50 | 50 | QPSK | 19.51 | 18.64 |
| 1880.0 | 18900 | 20 | 100 | 0 | QPSK | 19.65 | 18.67 |
| 1880.0 | 18900 | 20 | 1 | 0 | 16QAM | 19.78 | 19.88 |
| 1880.0 | 18900 | 20 | 1 | 49 | 16QAM | 19.78 | 19.77 |
| 1880.0 | 18900 | 20 | 1 | 99 | 16QAM | 19.79 | 19.79 |
| 1880.0 | 18900 | 20 | 50 | 0 | 16QAM | 18.63 | 17.62 |
| 1880.0 | 18900 | 20 | 50 | 24 | 16QAM | 18.74 | 17.62 |
| 1880.0 | 18900 | 20 | 50 | 50 | 16QAM | 18.63 | 17.49 |
| 1880.0 | 18900 | 20 | 100 | 0 | 16QAM | 18.72 | 17.61 |
| | | | | | | | |
| 1900.0 | 19100 | 20 | 1 | 0 | QPSK | 20.81 | 20.75 |
| 1900.0 | 19100 | 20 | 1 | 49 | QPSK | 20.94 | 20.87 |
| 1900.0 | 19100 | 20 | 1 | 99 | QPSK | 21.05 | 20.92 |
| 1900.0 | 19100 | 20 | 50 | 0 | QPSK | 19.62 | 18.78 |
| 1900.0 | 19100 | 20 | 50 | 24 | QPSK | 19.69 | 18.84 |
| 1900.0 | 19100 | 20 | 50 | 50 | QPSK | 19.65 | 18.87 |
| 1900.0 | 19100 | 20 | 100 | 0 | QPSK | 19.75 | 18.83 |
| 1900.0 | 19100 | 20 | 1 | 0 | 16QAM | 19.84 | 20.00 |
| 1900.0 | 19100 | 20 | 1 | 49 | 16QAM | 19.89 | 20.06 |
| 1900.0 | 19100 | 20 | 1 | 99 | 16QAM | 19.99 | 20.11 |
| 1900.0 | 19100 | 20 | 50 | 0 | 16QAM | 18.74 | 17.75 |
| 1900.0 | 19100 | 20 | 50 | 24 | 16QAM | 18.81 | 17.83 |
| 1900.0 | 19100 | 20 | 50 | 50 | 16QAM | 18.74 | 17.66 |
| 1900.0 | 19100 | 20 | 100 | 0 | 16QAM | 18.85 | 17.83 |

# APPENDIX H: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED GSM/GPRS/EGPRS TRANSMISSION MODES

## H.1 Power Tuning Targets

| GSM/GPRS/EGPRS 850<br>Head, Body-worn and Wireless Router Body | | | |
|---|---|---|---|
| Slot configuration | Low channel | Mid channel | High channel |
| GSM 1-slot | 32.0 | 32.0 | 32.0 |
| GPRS 2-slot | 31.2 | 31.2 | 31.2 |
| GPRS 3-slot | 29.7 | 29.7 | 29.7 |
| GPRS 4-slot | 28.3 | 28.3 | 28.3 |
| EGRPS 1-slot | 26.0 | 26.0 | 26.0 |
| EGPRS 2-slot | 26.0 | 26.0 | 26.0 |
| EGPRS 3-slot | 25.0 | 25.0 | 25.0 |
| EGPRS 4-slot | 23.5 | 23.5 | 23.5 |

| GSM/GPRS/EGPRS 1900<br>Head and Body-worn | | | |
|---|---|---|---|
| Slot configuration | Low channel | Mid channel | High channel |
| GSM 1-slot | 30.0 | 30.0 | 30.0 |
| GPRS 2-slot | 27.5 | 27.5 | 27.5 |
| GPRS 3-slot | 25.7 | 25.7 | 25.7 |
| GPRS 4-slot | 24.5 | 24.5 | 24.5 |
| EGRPS 1-slot | 26.0 | 26.0 | 26.0 |
| EGPRS 2-slot | 25.3 | 25.3 | 25.3 |
| EGPRS 3-slot | 24.4 | 24.4 | 24.4 |
| EGPRS 4-slot | 23.3 | 23.3 | 23.3 |

## H.2 Conducted Power from the Samples used in the Testing

Type: RM-877; Serial number: 004402/47/126350/3 used for

- GSM/GPRS/EGPRS850 Head, Body-worn and Wireless Router SAR measurements
- GSM/GPRS/EGPRS1900 Head and Body-worn and Wireless Router SAR measurements

| GSM/GPRS/EGPRS 850<br>Head, Body-worn and Wireless Router | | | |
|---|---|---|---|
| Slot configuration | CH 128<br>824.2 MHz | CH 190<br>836.6 MHz | CH 251<br>848.8 MHz |
| GSM 1-slot | 32.49 | 32.69 | 32.48 |
| GPRS 2-slot | 31.86 | 31.93 | 31.61 |
| GPRS 3-slot | 30.44 | 30.61 | 30.14 |
| GPRS 4-slot | 29.07 | 28.82 | 28.41 |
| EGRPS 1-slot | 26.56 | 25.99 | 26.01 |
| EGPRS 2-slot | 26.60 | 26.64 | 26.16 |
| EGPRS 3-slot | 25.69 | 25.67 | 25.27 |
| EGPRS 4-slot | 24.39 | 24.34 | 23.85 |

| GSM/GPRS/EGPRS 1900<br>Head, Body-worn and Wireless Router | | | |
|---|---|---|---|
| Slot configuration | CH 512<br>1850.2 MHz | CH 661<br>1880.0 MHz | CH 810<br>1909.8 MHz |
| GSM 1-slot | 30.11 | 30.01 | 30.16 |
| GPRS 2-slot | 27.92 | 27.97 | 27.92 |
| GPRS 3-slot | 26.00 | 26.02 | 26.01 |
| GPRS 4-slot | 24.63 | 24.70 | 24.61 |
| EGRPS 1-slot | 26.10 | 26.08 | 25.98 |
| EGPRS 2-slot | 25.62 | 25.54 | 25.51 |
| EGPRS 3-slot | 24.52 | 24.44 | 24.50 |
| EGPRS 4-slot | 23.47 | 23.45 | 23.38 |

## APPENDIX I: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED WCDMA TRANSMISSION MODES

### I.1 Power Tuning Targets

| WCDMA 850 (Band 5)<br>Head, Body-worn and Wireless Router | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |

| WCDMA1700/2100 (Band 4)<br>Head and Body-worn | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |
| **WCDMA1700/2100 (Band 4)<br>Wireless Router** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.0 | 21.0 | 21.0 |

| WCDMA1900 (Band 2)<br>Head and Body-worn | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |
| **WCDMA1900 (Band 2)<br>Wireless Router** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.0 | 21.0 | 21.0 |

## I.2 Conducted Power from the Samples used in the Testing

Type: RM-877; Serial number: 004402/47/126350/3 used for WCDMA850 (Band 5) Head, Body-worn and Wireless router SAR measurements

| WCDMA850 (Band 5) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.67 | 23.61 | 23.72 |

Type: RM-877; Serial number: 004402/47/126302/4 used for WCDMA1700/2100 (Band 4) Head and Body-worn SAR measurements

| WCDMA1700/2100 (Band 4) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.74 | 23.84 | 23.65 |

Type: RM-877; Serial number: 004402/47/126349/5 used for WCDMA1900 (Band 2) Head and Body-worn SAR measurements

| WCDMA1900 (Band 2) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.67 | 23.55 | 23.73 |

Type: RM-877; Serial number: 004402/47/126315/6 used for WCDMA1700/2100 (Band 4) and WCDMA1900 (Band 2) Wireless router SAR measurements

| WCDMA1700/2100 (Band 4) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.02 | 21.19 | 21.16 |
| **WCDMA1900 (Band 2)** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.16 | 21.20 | 21.24 |

WCDMA and HSUPA Subtest mode conducted powers, measured from a separate, fully representative sample are presented in Appendix D.

## APPENDIX I: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED WCDMA TRANSMISSION MODES

### I.1 Power Tuning Targets

| WCDMA 850 (Band 5)<br>Head, Body-worn and Wireless Router | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |

| WCDMA1700/2100 (Band 4)<br>Head and Body-worn | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |
| **WCDMA1700/2100 (Band 4)<br>Wireless Router** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.0 | 21.0 | 21.0 |

| WCDMA1900 (Band 2)<br>Head and Body-worn | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.5 | 23.5 | 23.5 |
| **WCDMA1900 (Band 2)<br>Wireless Router** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.0 | 21.0 | 21.0 |

## I.2 Conducted Power from the Samples used in the Testing

Type: RM-877; Serial number: 004402/47/126350/3 used for WCDMA850 (Band 5) Head, Body-worn and Wireless router SAR measurements

| WCDMA850 (Band 5) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.67 | 23.61 | 23.72 |

Type: RM-877; Serial number: 004402/47/126302/4 used for WCDMA1700/2100 (Band 4) Head and Body-worn SAR measurements

| WCDMA1700/2100 (Band 4) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.74 | 23.84 | 23.65 |

Type: RM-877; Serial number: 004402/47/126349/5 used for WCDMA1900 (Band 2) Head and Body-worn SAR measurements

| WCDMA1900 (Band 2) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 23.67 | 23.55 | 23.73 |

Type: RM-877; Serial number: 004402/47/126315/6 used for WCDMA1700/2100 (Band 4) and WCDMA1900 (Band 2) Wireless router SAR measurements

| WCDMA1700/2100 (Band 4) | | | |
|---|---|---|---|
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.02 | 21.19 | 21.16 |
| **WCDMA1900 (Band 2)** | | | |
| Mode | Low channel | Mid channel | High channel |
| WCDMA | 21.16 | 21.20 | 21.24 |

WCDMA and HSUPA Subtest mode conducted powers, measured from a separate, fully representative sample are presented in Appendix D.

## APPENDIX J: CONDUCTED POWER MEASUREMENTS FOR SUPPORTED WLAN TRANSMISSION MODES

### J.1 Power Tuning Targets for Head, Body worn and Wireless Router Measurements

| WLAN 2.4 GHz Tuning Targets | | | | | |
|---|---|---|---|---|---|
| **Mode** | CH 1 | CH 2 | CH 6 | CH 10 | CH 11 |
| b-mode WLAN DSSS 1 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| b-mode WLAN DSSS 2 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| b-mode WLAN DSSS 5.5 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| b-mode WLAN DSSS 11 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| g-mode WLAN OFDM 6 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| g-mode WLAN OFDM 9 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| g-mode WLAN OFDM 12 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| g-mode WLAN OFDM 18 Mbps | 16.0 | 16.0 | 16.0 | 16.0 | 14.0 |
| g-mode WLAN OFDM 24 Mbps | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 |
| g-mode WLAN OFDM 36 Mbps | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 |
| g-mode WLAN OFDM 48 Mbps | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| g-mode WLAN OFDM 54 Mbps | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| n-mode MCS 0: OFDM 6.5 / 7.25 Mbps | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| n-mode MCS 1: OFDM 13.0 / 14.4 Mbps | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| n-mode MCS 2: OFDM 19.5 / 21.7 Mbps | 12.0 | 12.0 | 12.0 | 14.0 | 12.0 |
| n-mode MCS 3: OFDM 26.0 / 28.9 Mbps | 12.0 | 12.0 | 12.0 | 14.0 | 12.0 |
| n-mode MCS 4: OFDM 39.0 / 43.3 Mbps | 12.0 | 12.0 | 12.0 | 14.0 | 12.0 |
| n-mode MCS 5: OFDM 52.0 / 57.8 Mbps | 12.0 | 12.0 | 12.0 | 14.0 | 12.0 |
| n-mode MCS 6: OFDM 58.5 / 65.0 Mbps | 11.0 | 11.0 | 11.0 | 14.0 | 11.0 |
| n-mode MCS 7: OFDM 65.0 / 72.2 Mbps | 11.0 | 11.0 | 11.0 | 14.0 | 11.0 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz Tuning Targets | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 36 | 40 | 44 | 48 | 52 | 56 |
| 802.11g | BPSK | 6 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | BPSK | 9 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 12 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 18 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 24 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 36 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 64QAM | 48 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11g | 64QAM | 54 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | BPSK | 6.5 / 7.25 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 13.0 / 14.4 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 19.5 / 21.7 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 26.0 / 28.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 39.0 / 43.3 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 52.0 / 57.8 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz Tuning Targets | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 38 (36+40) | 42 (40+44) | 46 (44+48) | 50 (48+52) | 54 (52+56) | 58 (56+60) | 62 (60+64) |
| 802.11n | BPSK | 13.5 / 15.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 27.0 / 30.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 40.5 / 45.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 54.0 / 60.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 81.0 / 90.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 108.0 / 120.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 121.5 / 135.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 802.11n | 64QAM | 135.0 / 150.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz Tuning Targets | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 60 | 64 | 100 | 104 | 108 | 112 |
| 802.11g | BPSK | 6 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | BPSK | 9 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 12 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 18 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 24 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 36 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 64QAM | 48 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11g | 64QAM | 54 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | BPSK | 6.5 / 7.25 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 13.0 / 14.4 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 19.5 / 21.7 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 26.0 / 28.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 39.0 / 43.3 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 52.0 / 57.8 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz Tuning Targets | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 102 (100+104) | 106 (104+108) | 110 (108+112) | 114 (112+116) | 118 (116+120) | 122 (120+124) |
| 802.11n | BPSK | 13.5 / 15.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 27.0 / 30.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 40.5 / 45.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 54.0 / 60.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 81.0 / 90.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 108.0 / 120.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 121.5 / 135.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 802.11n | 64QAM | 135.0 / 150.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz Tuning Targets | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 116 | 120 | 124 | 128 | 132 | 136 |
| 802.11g | BPSK | 6 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | BPSK | 9 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 12 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 18 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 24 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 36 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 64QAM | 48 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11g | 64QAM | 54 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | BPSK | 6.5 / 7.25 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 13.0 / 14.4 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 19.5 / 21.7 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 26.0 / 28.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 39.0 / 43.3 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 52.0 / 57.8 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz Tuning Targets | | | |
|---|---|---|---|---|---|---|
| | | | 126 (124+128) | 130 (128+132) | 134 (132+136) | 138 (136+140) |
| 802.11n | BPSK | 13.5 / 15.0 | 13.0 | 13.0 | 13.0 | 9.0 |
| 802.11n | QPSK | 27.0 / 30.0 | 13.0 | 13.0 | 13.0 | 9.0 |
| 802.11n | QPSK | 40.5 / 45.0 | 13.0 | 13.0 | 13.0 | 9.0 |
| 802.11n | 16QAM | 54.0 / 60.0 | 13.0 | 13.0 | 13.0 | 9.0 |
| 802.11n | 16QAM | 81.0 / 90.0 | 12.0 | 12.0 | 12.0 | 9.0 |
| 802.11n | 64QAM | 108.0 / 120.0 | 11.0 | 11.0 | 11.0 | 9.0 |
| 802.11n | 64QAM | 121.5 / 135.0 | 10.0 | 10.0 | 10.0 | 9.0 |
| 802.11n | 64QAM | 135.0 / 150.0 | 10.0 | 10.0 | 10.0 | 9.0 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz Tuning Targets | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 140 | 149 | 153 | 157 | 161 | 165 |
| 802.11g | BPSK | 6 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | BPSK | 9 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 12 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | QPSK | 18 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 24 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 16QAM | 36 | 11.00 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 802.11g | 64QAM | 48 | 11.00 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11g | 64QAM | 54 | 11.00 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | BPSK | 6.5 / 7.25 | 11.00 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 13.0 / 14.4 | 11.00 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 19.5 / 21.7 | 11.00 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 26.0 / 28.9 | 11.00 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 39.0 / 43.3 | 11.00 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 52.0 / 57.8 | 11.00 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.00 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.00 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz Tuning Targets | | | |
|---|---|---|---|---|---|---|
| | | | 151 (149+153) | 155 (153+157) | 159 (157+161) | 163 (161+165) |
| 802.11n | BPSK | 13.5 / 15.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 27.0 / 30.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | QPSK | 40.5 / 45.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 54.0 / 60.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 802.11n | 16QAM | 81.0 / 90.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| 802.11n | 64QAM | 108.0 / 120.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| 802.11n | 64QAM | 121.5 / 135.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| 802.11n | 64QAM | 135.0 / 150.0 | 10.0 | 10.0 | 10.0 | 10.0 |

## J.2 Conducted Power from the Samples used in the Testing

Type: RM-877; Serial number: 004402/47/126323/0 used for WLAN2450 Head, Body-worn and Wireless router SAR measurements

| WLAN 2.4 GHz Conducted Power Measurements | | | | | |
|---|---|---|---|---|---|
| **Mode** | CH 1 | CH 2 | CH 6 | CH 10 | CH 11 |
| b-mode WLAN DSSS 1 Mbps | 16.63 | 16.05 | 16.53 | 16.17 | 15.58 |
| b-mode WLAN DSSS 2 Mbps | 15.76 | 16.03 | 16.69 | 16.04 | 15.54 |
| b-mode WLAN DSSS 5.5 Mbps | 16.03 | 16.17 | 15.95 | 16.09 | 15.65 |
| b-mode WLAN DSSS 11 Mbps | 15.94 | 16.11 | 16.83 | 15.12 | 15.68 |
| g-mode WLAN OFDM 6 Mbps | 15.77 | 15.93 | 15.70 | 16.00 | 14.59 |
| g-mode WLAN OFDM 9 Mbps | 15.80 | 16.00 | 15.75 | 15.15 | 14.59 |
| g-mode WLAN OFDM 12 Mbps | 15.83 | 16.04 | 15.76 | 15.16 | 14.58 |
| g-mode WLAN OFDM 18 Mbps | 15.85 | 15.19 | 15.80 | 16.06 | 14.64 |
| g-mode WLAN OFDM 24 Mbps | 14.17 | 15.10 | 15.02 | 14.24 | 14.62 |
| g-mode WLAN OFDM 36 Mbps | 14.17 | 14.44 | 14.15 | 14.24 | 14.55 |
| g-mode WLAN OFDM 48 Mbps | 14.08 | 14.18 | 14.19 | 13.13 | 13.85 |
| g-mode WLAN OFDM 54 Mbps | 13.19 | 14.13 | 13.12 | 14.07 | 13.58 |
| n-mode MCS 0: OFDM 6.5 / 7.25 Mbps | 13.03 | 14.10 | 13.92 | 13.98 | 13.52 |
| n-mode MCS 1: OFDM 13.0 / 14.4 Mbps | 14.00 | 14.12 | 14.01 | 13.14 | 14.53 |
| n-mode MCS 2: OFDM 19.5 / 21.7 Mbps | 11.11 | 11.25 | 11.16 | 12.05 | 11.55 |
| n-mode MCS 3: OFDM 26.0 / 28.9 Mbps | 11.09 | 12.26 | 12.05 | 12.08 | 12.57 |
| n-mode MCS 4: OFDM 39.0 / 43.3 Mbps | 11.12 | 11.28 | 11.19 | 11.12 | 11.68 |
| n-mode MCS 5: OFDM 52.0 / 57.8 Mbps | 11.19 | 11.38 | 12.18 | 11.19 | 11.51 |
| n-mode MCS 6: OFDM 58.5 / 65.0 Mbps | 8.69 | 10.28 | 10.15 | 10.00 | 10.57 |
| n-mode MCS 7: OFDM 65.0 / 72.2 Mbps | 10.06 | 8.96 | 8.88 | 10.13 | 9.60 |

Type: RM-877; Serial number: 004402/47/126329/7 used for WLAN5000 Head and Body-worn measurements

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz channel bandwidth: Measured values | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 36 | 40 | 44 | 48 | 52 | 56 |
| 802.11g | BPSK | 6 | 14.08 | 14.05 | 14.35 | 14.02 | 14.11 | 14.02 |
| 802.11g | BPSK | 9 | 14.02 | 14.14 | 14.09 | 14.10 | 13.57 | 13.66 |
| 802.11g | QPSK | 12 | 14.09 | 14.04 | 14.10 | 14.05 | 13.61 | 13.70 |
| 802.11g | QPSK | 18 | 13.99 | 14.14 | 14.01 | 13.76 | 13.58 | 13.67 |
| 802.11g | 16QAM | 24 | 14.11 | 14.14 | 14.18 | 13.75 | 13.54 | 13.59 |
| 802.11g | 16QAM | 36 | 14.02 | 14.28 | 14.17 | 13.76 | 13.52 | 13.69 |
| 802.11g | 64QAM | 48 | 12.70 | 13.26 | 13.11 | 12.39 | 12.74 | 12.77 |
| 802.11g | 64QAM | 54 | 11.89 | 12.25 | 11.96 | 11.85 | 11.83 | 11.76 |
| 802.11n | BPSK | 6.5 / 7.25 | 12.75 | 13.22 | 13.24 | 13.14 | 12.56 | 13.07 |
| 802.11n | QPSK | 13.0 / 14.4 | 12.88 | 13.33 | 13.12 | 12.95 | 12.75 | 12.81 |
| 802.11n | QPSK | 19.5 / 21.7 | 12.88 | 13.20 | 12.92 | 12.85 | 12.58 | 12.83 |
| 802.11n | 16QAM | 26.0 / 28.9 | 12.79 | 13.10 | 12.79 | 12.94 | 12.74 | 12.79 |
| 802.11n | 16QAM | 39.0 / 43.3 | 11.90 | 12.24 | 12.28 | 11.79 | 11.79 | 11.99 |
| 802.11n | 64QAM | 52.0 / 57.8 | 11.92 | 12.43 | 12.24 | 11.87 | 11.41 | 11.82 |
| 802.11n | 64QAM | 58.5 / 65.0 | 10.94 | 10.94 | 11.29 | 10.93 | 10.73 | 10.82 |
| 802.11n | 64QAM | 65.0 / 72.2 | 10.96 | 11.35 | 11.02 | 10.98 | 10.68 | 10.92 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz channel bandwidth: Measured values | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 38 (36+40) | 42 (40+44) | 46 (44+48) | 50 (48+52) | 54 (52+56) | 58 (56+60) | 62 (60+64) |
| 802.11n | BPSK | 13.5 / 15.0 | 12.20 | 12.28 | 11.68 | 11.82 | 11.75 | 11.95 | 12.26 |
| 802.11n | QPSK | 27.0 / 30.0 | 12.26 | 12.29 | 12.17 | 11.89 | 11.76 | 11.99 | 12.33 |
| 802.11n | QPSK | 40.5 / 45.0 | 12.21 | 12.32 | 11.73 | 11.88 | 11.83 | 12.07 | 12.35 |
| 802.11n | 16QAM | 54.0 / 60.0 | 11.82 | 12.23 | 12.20 | 11.87 | 11.78 | 12.08 | 12.28 |
| 802.11n | 16QAM | 81.0 / 90.0 | 11.27 | 11.31 | 10.77 | 10.46 | 10.81 | 11.10 | 11.32 |
| 802.11n | 64QAM | 108.0 / 120.0 | 10.24 | 9.80 | 10.15 | 9.83 | 9.78 | 10.06 | 10.35 |
| 802.11n | 64QAM | 121.5 / 135.0 | 9.34 | 9.47 | 8.71 | 9.03 | 8.88 | 8.72 | 8.93 |
| 802.11n | 64QAM | 135.0 / 150.0 | 9.24 | 9.28 | 9.14 | 8.90 | 8.79 | 9.02 | 9.31 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz channel bandwidth: Measured values | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 60 | 64 | 100 | 104 | 108 | 112 |
| 802.11g | BPSK | 6 | 14.30 | 14.40 | 14.41 | 14.51 | 14.28 | 14.07 |
| 802.11g | BPSK | 9 | 13.97 | 14.28 | 14.40 | 14.29 | 14.20 | 14.15 |
| 802.11g | QPSK | 12 | 14.38 | 14.27 | 14.43 | 14.51 | 14.26 | 13.97 |
| 802.11g | QPSK | 18 | 14.04 | 14.34 | 14.39 | 14.39 | 14.21 | 14.08 |
| 802.11g | 16QAM | 24 | 14.03 | 14.10 | 14.22 | 14.22 | 14.22 | 14.01 |
| 802.11g | 16QAM | 36 | 14.09 | 14.38 | 14.43 | 14.24 | 14.17 | 14.07 |
| 802.11g | 64QAM | 48 | 13.12 | 13.10 | 13.12 | 13.44 | 13.03 | 13.31 |
| 802.11g | 64QAM | 54 | 12.17 | 12.07 | 12.04 | 12.49 | 12.15 | 12.19 |
| 802.11n | BPSK | 6.5 / 7.25 | 13.09 | 13.11 | 13.49 | 13.40 | 13.24 | 13.09 |
| 802.11n | QPSK | 13.0 / 14.4 | 13.10 | 13.05 | 13.43 | 13.32 | 13.46 | 13.18 |
| 802.11n | QPSK | 19.5 / 21.7 | 13.19 | 13.04 | 13.20 | 13.40 | 13.44 | 13.23 |
| 802.11n | 16QAM | 26.0 / 28.9 | 13.19 | 13.28 | 13.52 | 13.53 | 13.43 | 13.33 |
| 802.11n | 16QAM | 39.0 / 43.3 | 12.24 | 12.28 | 12.21 | 12.51 | 12.07 | 11.92 |
| 802.11n | 64QAM | 52.0 / 57.8 | 12.26 | 12.19 | 12.29 | 12.58 | 12.11 | 12.18 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.21 | 11.35 | 11.19 | 11.13 | 11.41 | 11.15 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.20 | 11.33 | 11.25 | 11.15 | 11.31 | 11.03 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz channel bandwidth: Measured values | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 102 (100+104) | 106 (104+108) | 110 (108+112) | 114 (112+116) | 118 (116+120) | 122 (120+124) |
| 802.11n | BPSK | 13.5 / 15.0 | 11.26 | 12.64 | 12.29 | 12.43 | 12.18 | 12.52 |
| 802.11n | QPSK | 27.0 / 30.0 | 11.31 | 12.69 | 12.31 | 12.10 | 12.21 | 12.21 |
| 802.11n | QPSK | 40.5 / 45.0 | 11.34 | 12.67 | 12.32 | 12.11 | 12.25 | 12.20 |
| 802.11n | 16QAM | 54.0 / 60.0 | 11.30 | 12.65 | 11.98 | 12.03 | 12.19 | 12.12 |
| 802.11n | 16QAM | 81.0 / 90.0 | 11.33 | 11.34 | 11.01 | 11.20 | 11.18 | 11.26 |
| 802.11n | 64QAM | 108.0 / 120.0 | 10.36 | 10.42 | 10.03 | 10.28 | 10.33 | 10.16 |
| 802.11n | 64QAM | 121.5 / 135.0 | 9.44 | 9.49 | 9.20 | 8.92 | 9.51 | 9.05 |
| 802.11n | 64QAM | 135.0 / 150.0 | 9.38 | 9.42 | 9.47 | 9.20 | 9.35 | 9.32 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz channel bandwidth: Measured values | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 116 | 120 | 124 | 128 | 132 | 136 |
| 802.11g | BPSK | 6 | 14.33 | 14.17 | 14.32 | 14.28 | 14.00 | 14.23 |
| 802.11g | BPSK | 9 | 14.26 | 14.22 | 14.39 | 14.19 | 14.07 | 14.27 |
| 802.11g | QPSK | 12 | 14.32 | 14.24 | 14.23 | 14.24 | 14.48 | 14.30 |
| 802.11g | QPSK | 18 | 14.34 | 14.23 | 14.35 | 14.35 | 14.12 | 14.24 |
| 802.11g | 16QAM | 24 | 14.23 | 14.19 | 14.31 | 14.40 | 13.96 | 14.14 |
| 802.11g | 16QAM | 36 | 14.45 | 14.30 | 14.31 | 14.34 | 14.60 | 14.34 |
| 802.11g | 64QAM | 48 | 13.24 | 13.19 | 13.11 | 13.41 | 13.11 | 13.19 |
| 802.11g | 64QAM | 54 | 11.98 | 12.33 | 12.38 | 12.24 | 12.21 | 12.33 |
| 802.11n | BPSK | 6.5 / 7.25 | 13.08 | 13.39 | 13.35 | 13.33 | 13.13 | 13.34 |
| 802.11n | QPSK | 13.0 / 14.4 | 13.14 | 13.21 | 13.42 | 13.37 | 13.12 | 13.29 |
| 802.11n | QPSK | 19.5 / 21.7 | 13.44 | 13.42 | 13.48 | 13.47 | 13.70 | 13.13 |
| 802.11n | 16QAM | 26.0 / 28.9 | 13.20 | 13.41 | 13.14 | 13.41 | 13.16 | 13.14 |
| 802.11n | 16QAM | 39.0 / 43.3 | 12.26 | 12.11 | 12.18 | 12.30 | 12.31 | 12.36 |
| 802.11n | 64QAM | 52.0 / 57.8 | 12.21 | 12.24 | 12.22 | 12.22 | 12.32 | 12.43 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.21 | 11.49 | 11.18 | 10.88 | 11.30 | 11.24 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.26 | 11.31 | 10.99 | 11.32 | 11.23 | 11.18 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz channel bandwidth: Measured values | | | |
|---|---|---|---|---|---|---|
| | | | 126 (124+128) | 130 (128+132) | 134 (132+136) | 138 (136+140) |
| 802.11n | BPSK | 13.5 / 15.0 | 12.12 | 12.29 | 12.34 | 8.69 |
| 802.11n | QPSK | 27.0 / 30.0 | 12.53 | 12.36 | 12.38 | 8.35 |
| 802.11n | QPSK | 40.5 / 45.0 | 12.20 | 12.37 | 12.46 | 8.38 |
| 802.11n | 16QAM | 54.0 / 60.0 | 12.48 | 11.96 | 12.45 | 8.34 |
| 802.11n | 16QAM | 81.0 / 90.0 | 11.30 | 11.05 | 11.04 | 8.39 |
| 802.11n | 64QAM | 108.0 / 120.0 | 10.24 | 10.22 | 10.19 | 8.38 |
| 802.11n | 64QAM | 121.5 / 135.0 | 9.02 | 9.66 | 9.32 | 8.35 |
| 802.11n | 64QAM | 135.0 / 150.0 | 9.28 | 9.10 | 9.15 | 8.30 |

(Tables continues)

(Tables continues)

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 20 MHz channel bandwidth: Measured values | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 140 | 149 | 153 | 157 | 161 | 165 |
| 802.11g | BPSK | 6 | 11.07 | 14.54 | 14.57 | 14.56 | 14.59 | 14.35 |
| 802.11g | BPSK | 9 | 11.23 | 14.55 | 14.56 | 14.58 | 14.53 | 14.30 |
| 802.11g | QPSK | 12 | 11.14 | 14.31 | 14.58 | 14.63 | 14.59 | 14.44 |
| 802.11g | QPSK | 18 | 11.12 | 14.32 | 14.59 | 14.67 | 14.62 | 14.49 |
| 802.11g | 16QAM | 24 | 11.18 | 14.44 | 14.28 | 14.38 | 14.63 | 14.39 |
| 802.11g | 16QAM | 36 | 11.08 | 14.43 | 14.32 | 14.46 | 14.24 | 14.39 |
| 802.11g | 64QAM | 48 | 11.23 | 13.09 | 13.36 | 13.26 | 13.41 | 13.60 |
| 802.11g | 64QAM | 54 | 11.21 | 12.12 | 12.67 | 12.58 | 12.61 | 12.30 |
| 802.11n | BPSK | 6.5 / 7.25 | 11.24 | 13.31 | 13.37 | 13.49 | 13.65 | 13.43 |
| 802.11n | QPSK | 13.0 / 14.4 | 11.15 | 13.47 | 13.41 | 13.57 | 13.70 | 13.57 |
| 802.11n | QPSK | 19.5 / 21.7 | 11.27 | 13.13 | 13.47 | 13.53 | 13.48 | 13.63 |
| 802.11n | 16QAM | 26.0 / 28.9 | 11.18 | 13.50 | 13.42 | 13.47 | 13.48 | 13.34 |
| 802.11n | 16QAM | 39.0 / 43.3 | 11.29 | 12.09 | 12.51 | 12.37 | 12.66 | 12.38 |
| 802.11n | 64QAM | 52.0 / 57.8 | 11.12 | 12.06 | 12.53 | 12.75 | 12.57 | 12.31 |
| 802.11n | 64QAM | 58.5 / 65.0 | 11.33 | 11.14 | 11.14 | 11.36 | 11.54 | 11.35 |
| 802.11n | 64QAM | 65.0 / 72.2 | 11.24 | 11.23 | 11.35 | 11.68 | 11.51 | 11.49 |

| Standard | Modulation | Data speed [MBPS] | RLAN 5 GHz / 40 MHz channel bandwidth: Measured values | | | |
|---|---|---|---|---|---|---|
| | | | 151 (149+153) | 155 (153+157) | 159 (157+161) | 163 (161+165) |
| 802.11n | BPSK | 13.5 / 15.0 | 12.53 | 12.59 | 12.68 | 12.52 |
| 802.11n | QPSK | 27.0 / 30.0 | 12.57 | 12.21 | 12.71 | 12.55 |
| 802.11n | QPSK | 40.5 / 45.0 | 12.63 | 12.68 | 12.76 | 12.56 |
| 802.11n | 16QAM | 54.0 / 60.0 | 12.63 | 12.28 | 12.34 | 12.57 |
| 802.11n | 16QAM | 81.0 / 90.0 | 11.27 | 11.33 | 11.55 | 11.25 |
| 802.11n | 64QAM | 108.0 / 120.0 | 10.39 | 10.52 | 10.48 | 10.37 |
| 802.11n | 64QAM | 121.5 / 135.0 | 9.07 | 9.50 | 9.67 | 9.52 |
| 802.11n | 64QAM | 135.0 / 150.0 | 9.40 | 9.41 | 9.93 | 9.36 |