DASY5 Validation Report for Head TSL

Date: 15.05.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1765 MHz; Type: D1765V2; Serial: D1765V2 - SN:1008

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; $\sigma = 1.34 \text{ S/m}$; $\varepsilon_r = 39$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: EX3DV4 - SN7349; ConvF(8.5, 8.5, 8.5) @ 1750 MHz; Calibrated: 30.12.2017

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 26.10.2017

• Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

• DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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

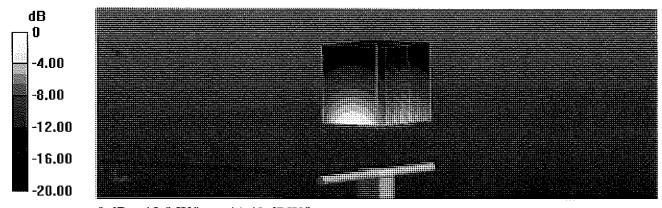
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.6 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 16.4 W/kg

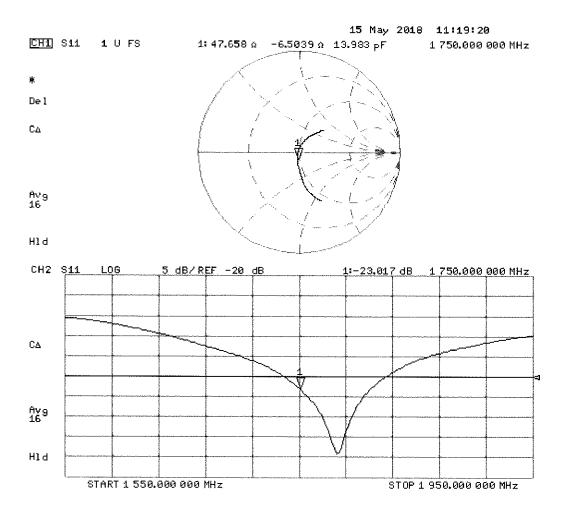
SAR(1 g) = 8.94 W/kg; SAR(10 g) = 4.71 W/kg

Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg = 11.40 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 15.05.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1765 MHz; Type: D1765V2; Serial: D1765V2 - SN:1008

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; $\sigma = 1.46 \text{ S/m}$; $\varepsilon_r = 53.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.35, 8.35, 8.35) @ 1750 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 26.10.2017

• Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

• DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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

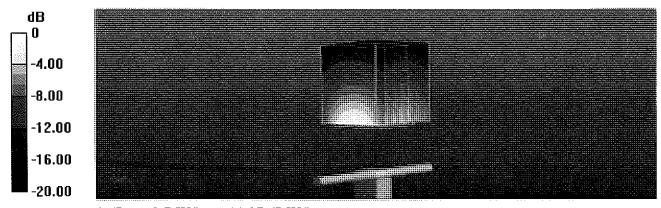
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.4 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 16.1 W/kg

SAR(1 g) = 9.21 W/kg; SAR(10 g) = 4.92 W/kg

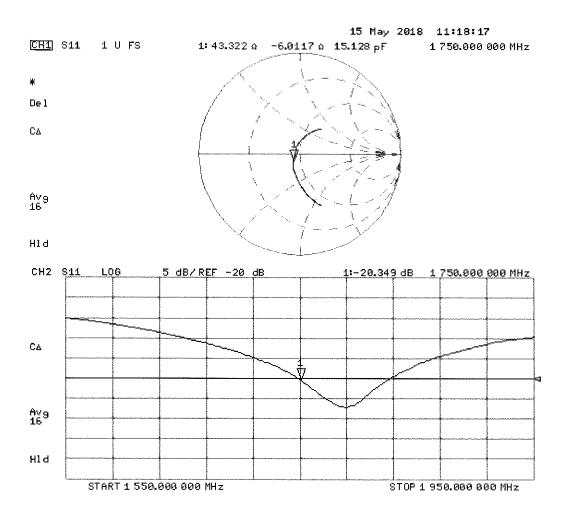
Maximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

Certificate No: D1765V2-1008_May18 Page 8 of 11

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 23.05.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1765 MHz; Type: D1765V2; Serial: D1765V2 - SN:1008

Communication System: UID 0 - CW; Frequency: 1750 MHz

Medium parameters used: f = 1750 MHz; $\sigma = 1.37 \text{ S/m}$; $\varepsilon_r = 41.8$; $\rho = 1000 \text{ kg/m}^3$

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: EX3DV4 - SN7349; ConvF(8.5, 8.5, 8.5) @ 1750 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 26.10.2017

· Phantom: SAM Head

• DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

SAM/Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 105.8 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 9.26 W/kg; SAR(10 g) = 4.95 W/kg

Maximum value of SAR (measured) = 13.9 W/kg

SAM/Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.2 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 9.47 W/kg; SAR(10 g) = 5.06 W/kg

Maximum value of SAR (measured) = 13.7 W/kg

SAM/Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.7 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 9.26 W/kg; SAR(10 g) = 5.02 W/kg

Maximum value of SAR (measured) = 13.8 W/kg

SAM/Head/Ear/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

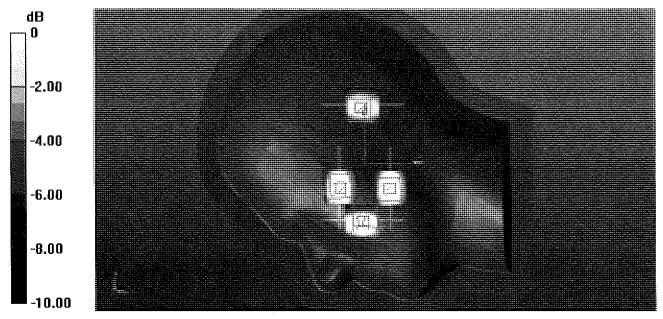
Reference Value = 90.46 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 11.8 W/kg

SAR(1 g) = 7.12 W/kg; SAR(10 g) = 4.01 W/kg

Maximum value of SAR (measured) = 10.3 W/kg

Certificate No: D1765V2-1008_May18



0 dB = 10.3 W/kg = 10.13 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.



7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.pctest.com



Certification of Calibration

Object D1765V2 – SN: 1008

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: 5/17/2019

Description: SAR Validation Dipole at 1750 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|-----------|---|------------|--------------|------------|---------------|
| Agilent | 8753ES | S-Parameter Network Analyzer | 3/11/2019 | Annual | 3/11/2020 | US39170122 |
| Agilent | N5182A | MXG Vector Signal Generator | 11/28/2018 | Annual | 11/28/2019 | MY47420603 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 433971 |
| Anritsu | MA2411B | Pulse Power Sensor | 11/20/2018 | Annual | 11/20/2019 | 1027293 |
| Anritsu | MA2411B | Pulse Power Sensor | 10/30/2018 | Annual | 10/30/2019 | 1126066 |
| Anritsu | ML2495A | Power Meter | 10/21/2018 | Annual | 10/21/2019 | 941001 |
| Control Company | 4040 | Therm./ Clock/ Humidity Monitor | 10/9/2018 | Biennial | 10/9/2020 | 181647811 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 6/6/2018 | Biennial | 6/6/2020 | 181334678 |
| Keysight | 772D | Dual Directional Coupler | CBT | N/A | CBT | MY52180215 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 6/4/2018 | Annual | 6/4/2019 | MY53401181 |
| MiniCircuits | VLF-6000+ | Low Pass Filter | CBT | N/A | CBT | N/A |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Pasternack | PE2209-10 | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| Seekonk | NC-100 | Torque Wrench | 7/11/2018 | Annual | 7/11/2019 | N/A |
| SPEAG | EX3DV4 | SAR Probe | 6/25/2018 | Annual | 6/25/2019 | 7409 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 6/18/2018 | Annual | 6/18/2019 | 1334 |
| SPEAG | EX3DV4 | SAR Probe | 2/19/2019 | Annual | 2/19/2020 | 3914 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 2/14/2019 | Annual | 2/14/2020 | 1272 |
| SPEAG | DAK-3.5 | Dielectric Assessment Kit | 9/11/2018 | Annual | 9/11/2019 | 1091 |

Measurement Uncertainty = $\pm 23\%$ (k=2)

| | Name | Function | Signature |
|----------------|-------------------|-----------------------------|-------------------|
| Calibrated By: | Brodie Halbfoster | Test Engineer | BRODIE HALBFOSTER |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 20K |

| Object: | Date Issued: | Page 1 of 4 |
|--------------------|--------------|-------------|
| D1765V2 – SN: 1008 | 05/17/2019 | rage 1014 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

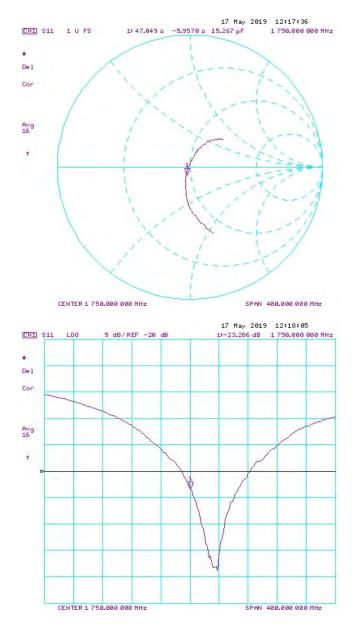
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

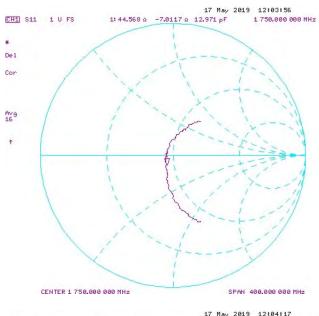
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Head (1g) W/kg @ 20.0 dBm | W/kg @ 20.0 | (94) | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | Measured Head SAR (10g) W/kg @ 20.0 dBm | Deviation 10g (%) | | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|--|-------------|-------|---|--|----------------------|------|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 5/23/2019 | 5/17/2019 | 1.21 | 3.62 | 3.63 | 0.28% | 1.9 | 1.92 | 1.05% | 47.7 | 47 | 0.7 | -6.5 | -6 | 0.5 | -23 | -23.3 | -1.20% | PASS |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Body (1g) W/kg @ 20.0 dBm | W/kg @ 20.0 | (%) | Certificate SAR Target Body (10g) W/kg @ 20.0 dBm | Measured Body SAR (10g) W/kg @ 20.0 dBm | Deviation 10g (%) | | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 5/23/2019 | 5/17/2019 | 1.21 | 3.74 | 3.95 | 5.61% | 1.99 | 2.08 | 4.52% | 43.3 | 44.6 | 1.3 | -6 | -7 | 1 | -20.3 | -20.5 | -0.90% | PASS |

| Object: | Date Issued: | Page 2 of 4 | |
|--------------------|--------------|-------------|--|
| D1765V2 – SN: 1008 | 05/17/2019 | Fage 2 01 4 | |

Impedance & Return-Loss Measurement Plot for Head TSL



Impedance & Return-Loss Measurement Plot for Body TSL





Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

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

Client

PC Test

Certificate No: D1900V2-5d148 Feb19

CALIBRATION CERTIFICATE

Object

D1900V2 - SN:5d148

Calibration procedure(s)

QA CAL-05.v11

Calibration Procedure for SAR Validation Sources between 0.7-3 GHz

1300

Calibration date:

February 21, 2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 \pm 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID# | Cal Date (Certificate No.) | Scheduled Calibration |
|---------------------------------|--------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 04-Apr-18 (No. 217-02672/02673) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103244 | 04-Apr-18 (No. 217-02672) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103245 | 04-Apr-18 (No. 217-02673) | Apr-19 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 04-Apr-18 (No. 217-02682) | Apr-19 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-18 (No. 217-02683) | Apr-19 |
| Reference Probe EX3DV4 | SN: 7349 | 31-Dec-18 (No. EX3-7349_Dec18) | Dec-19 |
| DAE4 | SN: 601 | 04-Oct-18 (No. DAE4-601_Oct18) | Oct-19 |
| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB39512475 | 07-Oct-15 (in house check Feb-19) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-18) | In house check: Oct-20 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |
| | Name | Function | Signature |
| Calibrated by: | Manu Seltz | Laboratory Technician | - Pi |
| | | | 770 |
| Approved by: | Katja Pokovic | Technical Manager | AUG |

Issued: February 21, 2019

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
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Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL

tissue simulating liquid

ConvF N/A sensitivity in TSL / NORM x,y,z

not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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%.

Certificate No: D1900V2-5d148_Feb19

Page 2 of 8

Measurement Conditions

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

| DASY Version | DASY5 | V52.10.2 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy , $dz = 5 mm$ | |
| Frequency | 1900 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 40.0 | 1.40 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 40.9 ± 6 % | 1.38 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 | 9.65 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 39.1 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.05 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 20.4 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 | 53.3 | 1.52 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 53.6 ± 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 | 9.56 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 39.1 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.05 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 20.5 W/kg ± 16.5 % (k=2) |

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 51.8 Ω + 6.8 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.2 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 48.4 Ω + 7.8 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.9 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 4 4 = 0 |
|----------------------------------|----------------|
| Licetical Delay (one direction) | 1.170 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 |
|-----------------|-------|
| - | |

DASY5 Validation Report for Head TSL

Date: 21.02,2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d148

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.38 \text{ S/m}$; $\varepsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.26, 8.26, 8.26) @ 1900 MHz; Calibrated: 31.12.2018

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 04.10.2018

Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

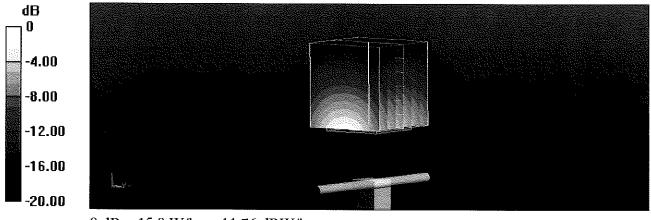
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 109.4 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.8 W/kg

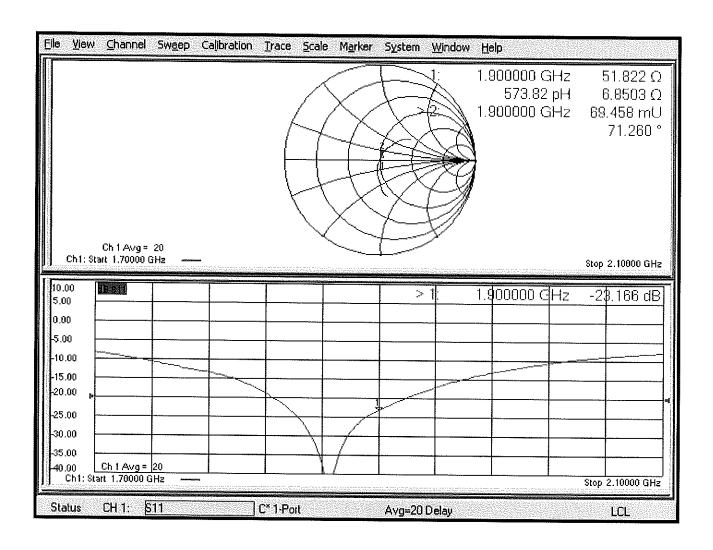
SAR(1 g) = 9.65 W/kg; SAR(10 g) = 5.05 W/kg

Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 21.02.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d148

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.47 \text{ S/m}$; $\varepsilon_r = 53.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.23, 8.23, 8.23) @ 1900 MHz; Calibrated: 31.12.2018

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 04.10,2018

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

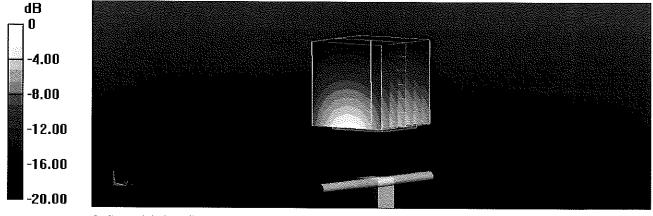
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.7 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 17.0 W/kg

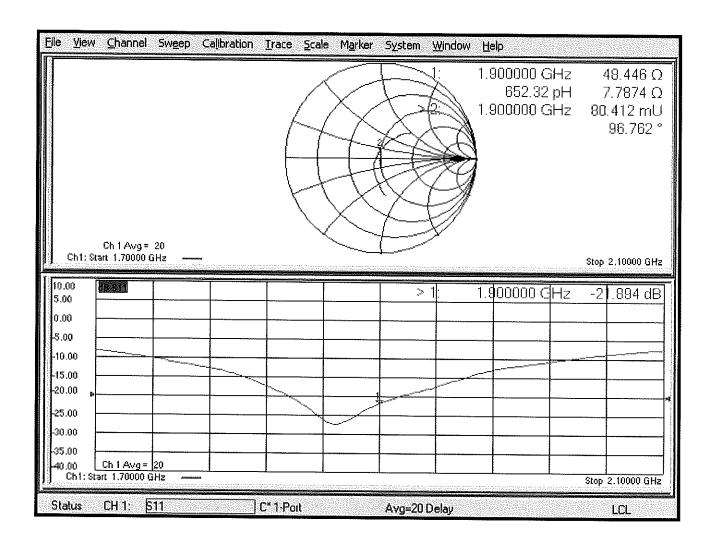
SAR(1 g) = 9.56 W/kg; SAR(10 g) = 5.05 W/kg

Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

Impedance Measurement Plot for Body TSL



Calibration Laboratory of Schmid & Partner







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Accreditation No.: SCS 0108

Client

PC Test

Certificate No: D2300V2-1073_Aug18

BRATION CERTIFICATE

Object

D2300V2 - SN:1073

Calibration procedure(s)

QA CAL-05.v10

Calibration procedure for dipole validation kits above 700 MHz

Calibration date:

August 13, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}$ C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID# | Cal Date (Certificate No.) | Scheduled Calibration |
|---------------------------------|--|--|------------------------|
| Power meter NRP | SN: 104778 | 04-Apr-18 (No. 217-02672/02673) | |
| Power sensor NRP-Z91 | SN: 103244 | 04-Apr-18 (No. 217-02672) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103245 | 04-Apr-18 (No. 217-02673) | Apr-19 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 04-Apr-18 (No. 217-02682) | Apr-19 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-18 (No. 217-02683) | Apr-19 |
| Reference Probe EX3DV4 | SN: 7349 | | Apr-19 |
| DAE4 | SN: 601 | 30-Dec-17 (No. EX3-7349_Dec17) | Dec-18 |
| | SIN, 60 | 26-Oct-17 (No. DAE4-601_Oct17) | Oct-18 |
| Secondary Standards | ID# | Charle Date (In f. | |
| Power meter EPM-442A | + | Check Date (in house) | Scheduled Check |
| Power sensor HP 8481A | SN: GB37480704 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| 1 | SN: US37292783 | 07-Oct-15 (iπ house check Oct-16) | In house check: Oct-18 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-16) | Iπ house check: Oct-18 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-17) | In house check: Oct-18 |
| | Name | Function | Signature |
| Calibrated by: | Michael Weber | Laboratory Technician | |
| | | | 17.110°E) |
| Approved by: | Katja Pokovic | Technical Manager | and the |
| | And the second s | en e | Jex cos |

Issued: August 13, 2018

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage

Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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

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 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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%.

Certificate No: D2300V2-1073_Aug18

Page 2 of 8

Measurement Conditions

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

| DASY Version | DASY5 | V52.10.1 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 2300 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 39.5 | 1.67 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 38.2 ± 6 % | 1.70 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | | |

SAR result with Head TSL

| SAR averaged over 1 cm³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 12.5 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 49.2 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.02 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.8 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 | 52.9 | 1.81 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 52.2 ± 6 % | 1.85 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 | 12.1 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 47.7 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.86 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 23.2 W/kg ± 16.5 % (k=2) |

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 50.1 Ω - 5.2 jΩ | | |
|--------------------------------------|-----------------|--|--|
| Return Loss | - 25.7 dB | | |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 45.5 Ω - 4.1 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.9 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) 1.171 ns | Fleet-te-I Del (P. d.) | |
|---|----------------------------------|------------|
| 1.17 (115 | Electrical Delay (one direction) | 1 171 pc |
| | | 1.17 (115 |

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 | November 16, 2015 |

Certificate No: D2300V2-1073_Aug18

DASY5 Validation Report for Head TSL

Date: 13.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN: 1073

Communication System: UID 0 - CW; Frequency: 2300 MHz

Medium parameters used: f = 2300 MHz; $\sigma = 1.7$ S/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.08, 8.08, 8.08) @ 2300 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 26.10.2017

Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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 = 115.9 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 24.1 W/kg

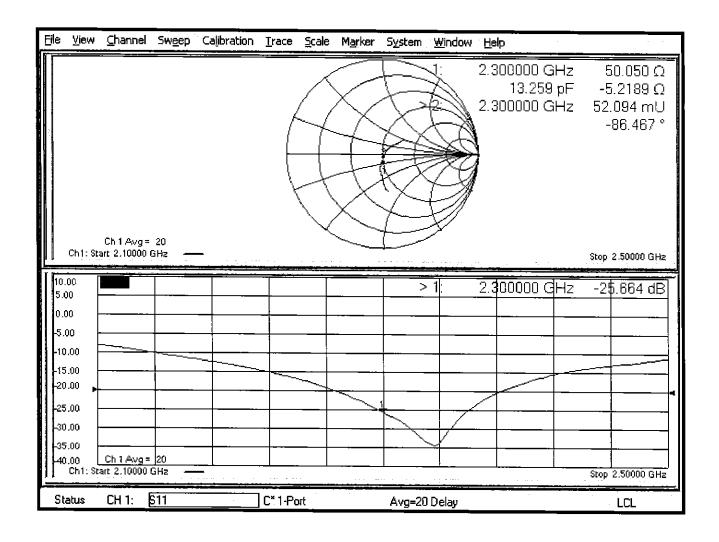
SAR(1 g) = 12.5 W/kg; SAR(10 g) = 6.02 W/kg

Maximum value of SAR (measured) = 20.2 W/kg



0 dB = 20.2 W/kg = 13.05 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 13.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN: 1073

Communication System: UID 0 - CW; Frequency: 2300 MHz

Medium parameters used: f = 2300 MHz; $\sigma = 1.85$ S/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.08, 8.08, 8.08) @ 2300 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 26.10.2017

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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

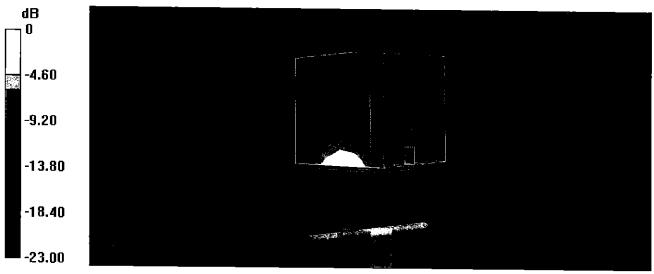
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.5 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 22.9 W/kg

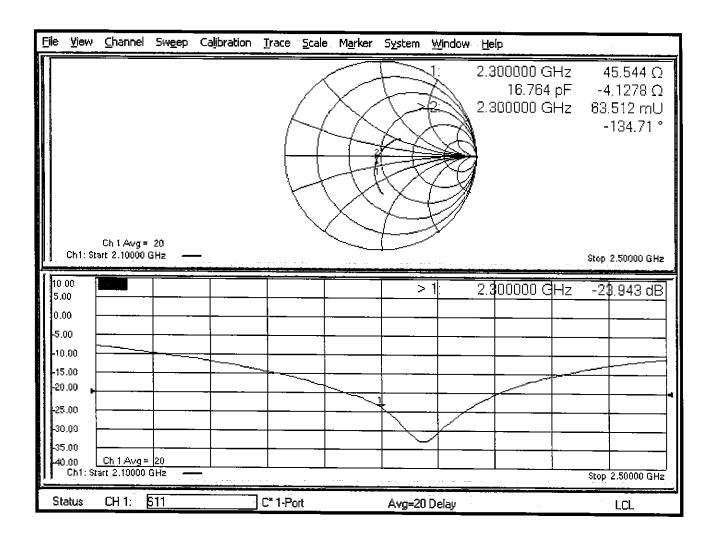
SAR(1 g) = 12.1 W/kg; SAR(10 g) = 5.86 W/kg

Maximum value of SAR (measured) = 19.1 W/kg



0 dB = 19.1 W/kg = 12.81 dBW/kg

Impedance Measurement Plot for Body TSL



PCTEST ENGINEERING LABORATORY, INC.



7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.pctest.com



Certification of Calibration

Object D2300V2 – SN: 1073

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Calibration date: 08/09/2019

Description: SAR Validation Dipole at 2300 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|-----------|---|------------|--------------|------------|---------------|
| Agilent | 8753ES | S-Parameter Network Analyzer | 10/2/2018 | Annual | 10/2/2019 | US39170118 |
| Agilent | N5182A | MXG Vector Signal Generator | 6/27/2019 | Annual | 6/27/2020 | US46240505 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 343972 |
| Anritsu | ML2495A | Power Meter | 10/21/2018 | Annual | 10/21/2019 | 941001 |
| Anritsu | MA2411B | Pulse Power Sensor | 10/30/2018 | Annual | 10/30/2019 | 1207470 |
| Anritsu | MA2411B | Pulse Power Sensor | 11/20/2018 | Annual | 11/20/2019 | 1339007 |
| Control Company | 4040 | Temperature / Humidity Monitor | 2/28/2018 | Biennial | 2/28/2020 | 150761911 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 2/28/2018 | Biennial | 2/28/2020 | 170330160 |
| Keysight | 772D | Dual Directional Coupler | CBT | N/A | CBT | MY52180215 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 7/2/2019 | Annual | 7/2/2020 | MY53401181 |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| Mini-Circuits | NLP-2950+ | Low Pass Filter DC to 2700 MHz | CBT | N/A | CBT | N/A |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Pasternack | PE2209-10 | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| Pasternack | NC-100 | Torque Wrench | 5/23/2018 | Biennial | 5/23/2020 | N/A |
| SPEAG | EX3DV4 | SAR Probe | 2/19/2019 | Annual | 2/19/2020 | 7417 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 2/13/2019 | Annual | 2/13/2020 | 665 |
| SPEAG | EX3DV4 | SAR Probe | 7/15/2019 | Annual | 7/15/2020 | 7547 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 7/11/2019 | Annual | 7/11/2020 | 1323 |
| SPEAG | DAK-3.5 | Dielectric Assessment Kit | 9/11/2018 | Annual | 9/11/2019 | 1091 |

Measurement Uncertainty = $\pm 23\%$ (k=2)

| | Name | Function | Signature |
|----------------|-------------------|-----------------------------|-------------------|
| Calibrated By: | Brodie Halbfoster | Test Engineer | BRODIE HALBFOSTER |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 20K |

| Object: | Date Issued: | Page 1 of 4 |
|--------------------|--------------|-------------|
| D2300V2 – SN: 1073 | 08/09/2019 | Page 1 of 4 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

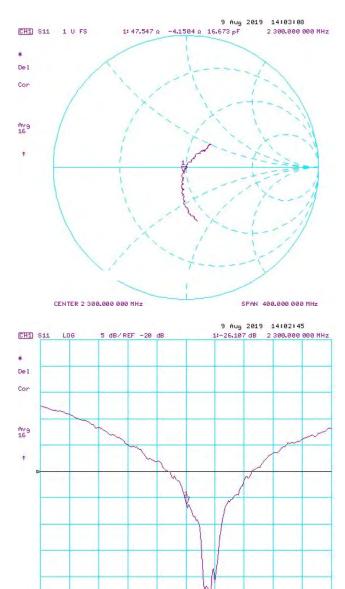
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Head (1g) W/kg @ 20.0 dBm | Measured Head SAR (1g) W/kg @ 20.0 dBm | (0/) | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | (40-) M(4 (C) | Deviation 10g (%) | Certificate Impedance Head (Ohm) Real | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|--|---|---------------------|---|--|----------------------|--|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 8/13/2018 | 8/9/2019 | 1.171 | 4.92 | 5.21 | 5.89% | 2.38 | 2.49 | 4.62% | 50.1 | 47.5 | 2.6 | -5.2 | -4.2 | 1 | -25.7 | -26.1 | -1.60% | PASS |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | | Measured Body SAR (1g) W/kg @ 20.0 dBm | Deviation 1g (%) | Certificate SAR Target Body (10g) W/kg @ 20.0 dBm | Measured Body SAR (10g) W/kg @ 20.0 dBm | Deviation 10g (%) | Certificate Impedance Body (Ohm) Real | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 8/13/2018 | 8/9/2019 | 1.171 | 4.77 | 5.05 | 5.87% | 2.32 | 2.4 | 3.45% | 45.5 | 44.4 | 1.1 | -4.1 | -3.3 | 0.8 | -23.9 | -23.2 | 2.80% | PASS |

| Object: | Date Issued: | Page 2 of 4 | |
|--------------------|--------------|-------------|--|
| D2300V2 – SN: 1073 | 08/09/2019 | Fage 2 01 4 | |

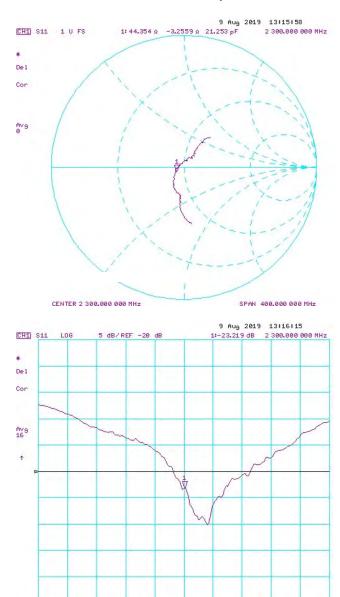
Impedance & Return-Loss Measurement Plot for Head TSL



CENTER 2 300.000 000 MHz

SPAN 400.000 000 MHz

Impedance & Return-Loss Measurement Plot for Body TSL



CENTER 2 300.000 000 MHz

SPAN 400.000 000 MHz

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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S Swiss Calibration Service

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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 0108

Client

PC Test

Certificate No: D2450V2-981_Aug18

CALIBRATION CERTIFICATE

Object

D2450V2 - SN:981

Calibration procedure(s)

QA CAL-05.v10

Calibration procedure for dipole validation kits above 700 MHz

BN V 09-06/201

Calibration date:

August 16, 2018

BNV 08/10/2016

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 |
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| Type-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-18 (No. 217-02682) | Apr-19 |
| Reference Probe EX3DV4 | SN: 7349 | 04-Apr-18 (No. 217-02683) | Apr-19 |
| DAE4 | 1 | 30-Dec-17 (No. EX3-7349_Dec17) | Dec-18 |
| UAL- | SN: 601 | 26-Oct-17 (No. DAE4-601_Oct17) | Oct-18 |
| Secondary Standards | ₹D# | Check Date (in house) | Scheduled Check |
| Power meter EPM-442A | SN: GB37480704 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-16) | |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-16) | In house check, Oct-18 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-16) | In house check: Oct-18 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-17) | In house check: Oct-18 |
| - | , | or marity (in house check Oct-17) | In house check: Oct-18 |
| | Name | Function | Signature |
| Calibrated by: | Leif Klysner | Laboratory Technician | D 1 42/4 |
| | | • | Sel Tile |
| | | | |
| Approved by: | Katja Pokovic | Technical Manager | |
| | * | | ASE COS |

Issued: August 23, 2018

Certificate No: D2450V2-981_Aug18

Page 1 of 11

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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 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
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- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

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 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 | V52.10.1 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5.0 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 | 37.7 ± 6 % | 1.86 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 | 13.4 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 52.3 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.20 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.4 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 | 52.7 | 1.95 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 51.8 ± 6 % | 2.02 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 | 13.0 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 50.9 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.11 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 24.2 W/kg ± 16.5 % (k=2) |

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 55.0 Ω + 2.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 25.6 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 50.2 Ω + 4.7 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 26.6 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) 1.162 ns | Electrical Delay (one direction) | 1.162 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 30, 2014 |

Certificate No: D2450V2-981_Aug18

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

| Phantom | 0.4144 | |
|-------------|------------------|--------------------------------|
| T Halltolli | SAM Head Phantom | For usage with cSAR3DV2-R/L |
| | | 1 0 404g0 Will OOA 10D VZ-11/L |

SAR result with SAM Head (Top)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 13.6 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 54.0 W/kg ± 17.5 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.33 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 25.2 W/kg ± 16.9 % (k=2) |

SAR result with SAM Head (Mouth)

| SAR averaged over 1 cm³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 13.6 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 54.0 W/kg ± 17.5 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.35 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 25.3 W/kg ± 16.9 % (k=2) |

SAR result with SAM Head (Neck)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 12.9 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 51.2 W/kg ± 17.5 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.11 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.4 W/kg ± 16.9 % (k=2) |

SAR result with SAM Head (Ear)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 8.74 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 34.7 W/kg ± 17.5 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 4.40 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 17.5 W/kg ± 16.9 % (k=2) |

Certificate No: D2450V2-981_Aug18

DASY5 Validation Report for Head TSL

Date: 13.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:981

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 1.86$ S/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.88, 7.88, 7.88) @ 2450 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 26.10.2017

Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

• DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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 = 116.6 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 26.7 W/kg

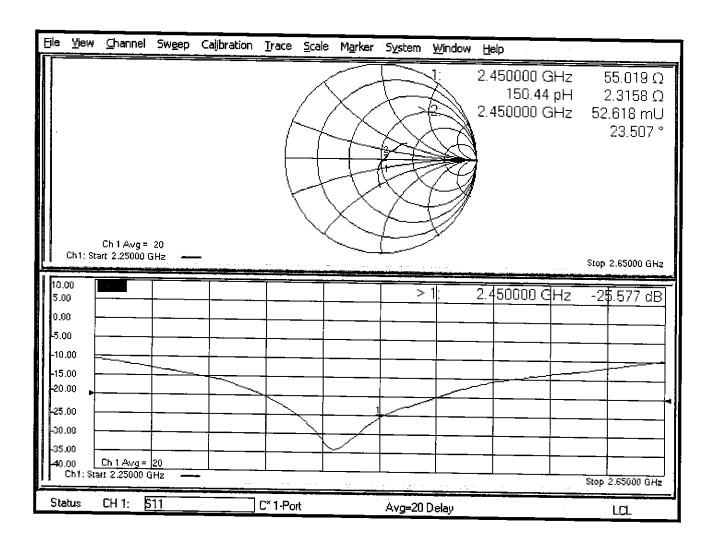
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.2 W/kg

Maximum value of SAR (measured) = 22.1 W/kg



0 dB = 22.1 W/kg = 13.44 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 13.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:981

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: EX3DV4 - SN7349; ConvF(8.01, 8.01, 8.01) @ 2450 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 26.10.2017

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

• DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

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 = 107.0 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 25.3 W/kg

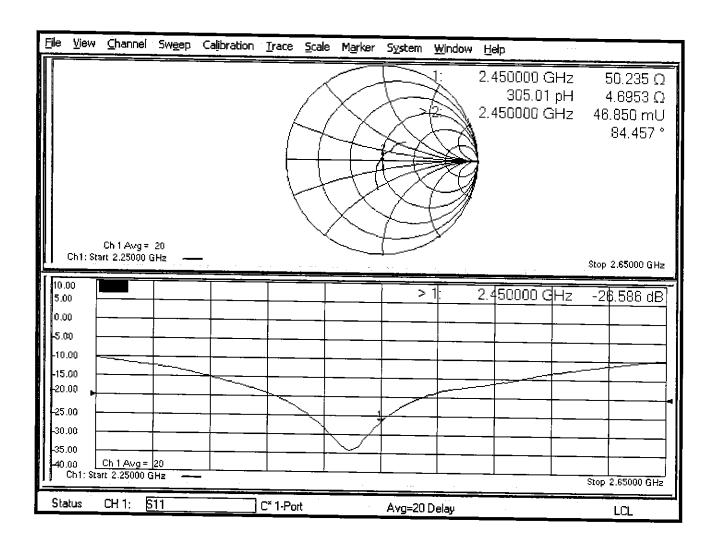
SAR(1 g) = 13 W/kg; SAR(10 g) = 6.11 W/kg

Maximum value of SAR (measured) = 20.7 W/kg



0 dB = 20.7 W/kg = 13.16 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 16.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:981

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 1.85$ S/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.88, 7.88, 7.88) @ 2450 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: SAM Head
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

SAM Head Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 116.2 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 26.4 W/kg

SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.33 W/kg

Maximum value of SAR (measured) = 22.0 W/kg

SAM Head Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 116.9 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 26.3 W/kg

SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.35 W/kg

Maximum value of SAR (measured) = 21.7 W/kg

SAM Head Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 112.0 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 24.1 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.11 W/kg

Maximum value of SAR (measured) = 20.5 W/kg

SAM Head Ear/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

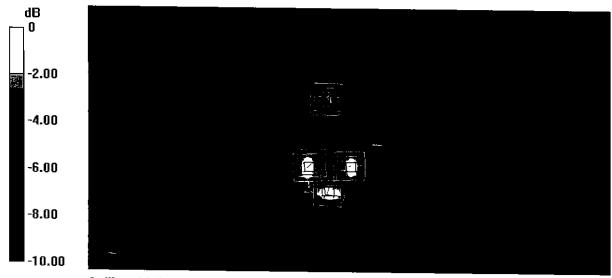
Reference Value = 91.03 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 8.74 W/kg; SAR(10 g) = 4.4 W/kg

Maximum value of SAR (measured) = 13.5 W/kg

Certificate No: D2450V2-981_Aug18



0 dB = 22.0 W/kg = 13.42 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.



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Certification of Calibration

Object D2450V2 – SN: 981

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Calibration date: 08/09/2019

Description: SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|-----------|---|------------|--------------|------------|---------------|
| Agilent | 8753ES | S-Parameter Network Analyzer | 10/2/2018 | Annual | 10/2/2019 | US39170118 |
| Agilent | N5182A | MXG Vector Signal Generator | 6/27/2019 | Annual | 6/27/2020 | US46240505 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 343972 |
| Anritsu | ML2495A | Power Meter | 10/21/2018 | Annual | 10/21/2019 | 941001 |
| Anritsu | MA2411B | Pulse Power Sensor | 10/30/2018 | Annual | 10/30/2019 | 1207470 |
| Anritsu | MA2411B | Pulse Power Sensor | 11/20/2018 | Annual | 11/20/2019 | 1339007 |
| Control Company | 4040 | Temperature / Humidity Monitor | 2/28/2018 | Biennial | 2/28/2020 | 150761911 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 2/28/2018 | Biennial | 2/28/2020 | 170330160 |
| Keysight | 772D | Dual Directional Coupler | CBT | N/A | CBT | MY52180215 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 7/2/2019 | Annual | 7/2/2020 | MY53401181 |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| Mini-Circuits | NLP-2950+ | Low Pass Filter DC to 2700 MHz | CBT | N/A | CBT | N/A |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Pasternack | PE2209-10 | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| Pasternack | NC-100 | Torque Wrench | 5/23/2018 | Biennial | 5/23/2020 | N/A |
| SPEAG | EX3DV4 | SAR Probe | 2/19/2019 | Annual | 2/19/2020 | 7417 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 2/13/2019 | Annual | 2/13/2020 | 665 |
| SPEAG | EX3DV4 | SAR Probe | 7/15/2019 | Annual | 7/15/2020 | 7547 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 7/11/2019 | Annual | 7/11/2020 | 1323 |
| SPEAG | DAK-3.5 | Dielectric Assessment Kit | 9/11/2018 | Annual | 9/11/2019 | 1091 |

Measurement Uncertainty = $\pm 23\%$ (k=2)

| | Name | Function | Signature |
|----------------|-------------------|-----------------------------|-------------------|
| Calibrated By: | Brodie Halbfoster | Test Engineer | BRODIE HALBFOSTER |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 304 |

| Object: | Date Issued: | Page 1 of 4 |
|-------------------|--------------|-------------|
| D2450V2 – SN: 981 | 08/09/2019 | Page 1 of 4 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

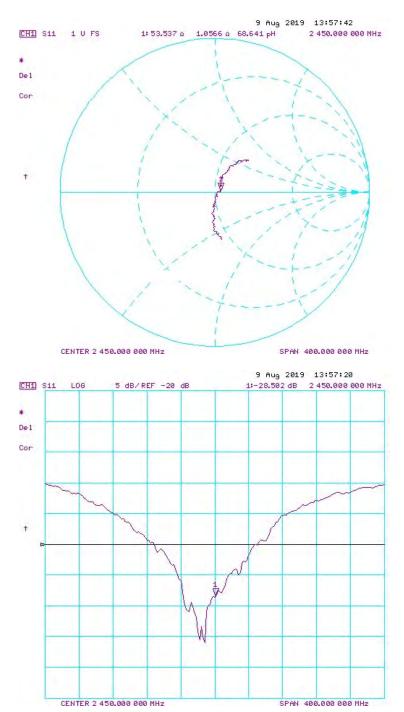
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Head (1g) W/kg @ 20.0 dBm | Measured Head SAR (1g) W/kg @ 20.0 dBm | (0/) | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | (40-) M(4 © | Deviation 10g (%) | Certificate Impedance Head (Ohm) Real | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|--|---|--------|---|-------------|----------------------|--|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 8/16/2018 | 8/9/2019 | 1.162 | 5.23 | 5.53 | 5.74% | 2.44 | 2.56 | 4.92% | 55 | 53.5 | 1.5 | 2.3 | 1.1 | 1.2 | -25.6 | -28.5 | -11.30% | PASS |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Body (1g) W/kg @ 20.0 dBm | Measured Body SAR (1g) W/kg @ 20.0 dBm | (0/) | Certificate SAR Target Body (10g) W/kg @ 20.0 dBm | (40-) M(4 @ | Deviation 10g (%) | | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 8/16/2018 | 8/9/2019 | 1.162 | 5.09 | 4.98 | -2.16% | 2.42 | 2.28 | -5.79% | 50.2 | 47.8 | 2.4 | 4.7 | 1.1 | 3.6 | -26.6 | -31.8 | -19.60% | PASS |

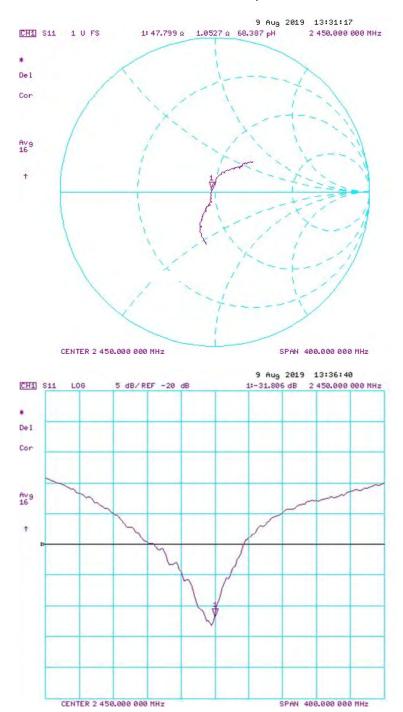
| Object: | Date Issued: | Page 2 of 4 | |
|-------------------|--------------|-------------|--|
| D2450V2 – SN: 981 | 08/09/2019 | Fage 2 01 4 | |

Impedance & Return-Loss Measurement Plot for Head TSL



| Object: | Date Issued: | Page 3 of 4 |
|-------------------|--------------|-------------|
| D2450V2 - SN: 981 | 08/09/2019 | rage 3 01 4 |

Impedance & Return-Loss Measurement Plot for Body TSL



| Object: | Date Issued: | Dogo 4 of 4 | |
|-------------------|--------------|-------------|--|
| D2450V2 – SN: 981 | 08/09/2019 | Page 4 of 4 | |

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
Service suisse d'étalonnage
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S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client

PC Test

Certificate No: D2450V2-719_Aug19

CALIBRATION CERTIFICATE

Object D2450V2 - SN:719

Calibration procedure(s) QA CAL-05.v11

Calibration Procedure for SAR Validation Sources between 0.7-3 GHz

Calibration date:

August 14, 2019

98/20/20

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)

| ID# | Cal Date (Certificate No.) | Scheduled Calibration |
|--------------------|--|------------------------|
| SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| SN: 5058 (20k) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| SN: 5047,2 / 06327 | 04-Apr-19 (No. 217-02895) | Apr-20 |
| SN: 7349 | 29-May-19 (No. EX3-7349_May19) | May-20 |
| SN: 601 | 30-Apr-19 (No. DAE4-601_Apr19) | Apr-20 |
| ID# | Check Date (in house) | Scheduled Check |
| SN: GB39512475 | 30-Oct-14 (in house check Feb-19) | In house check: Oct-20 |
| SN: US37292783 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| SN: MY41092317 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| SN: 100972 | 15-Jun-15 (in house check Oct-18) | In house check: Oct-20 |
| SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |
| Name | Function | Signature 1 |
| Claudio Leubler | Laboratory Technician | |
| Katja Pokovic | Technical Manager | |
| | SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047,2 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 Name Claudio Leubler | SN: 104778 |

Issued: August 15, 2019

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

Certificate No: D2450V2-719_Aug19

Page 1 of 8

Calibration Laboratory of

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Zeughausstrasse 43, 8004 Zurich, Switzerland





S

C

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

Accreditation No.: SCS 0108

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

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 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

Certificate No: D2450V2-719_Aug19

e) 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 | V52.10.2 |
|------------------------------|------------------------|-------------|
| 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 | 37.8 ± 6 % | 1.83 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 | 13.5 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 53.1 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.25 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.7 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 | 52.7 | 1.95 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 50.8 ± 6 % | 2.01 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 | 13.0 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 50.8 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.09 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 24.0 W/kg ± 16.5 % (k=2) |

Certificate No: D2450V2-719_Aug19 Page 3 of 8

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 54.6 Ω + 5.6 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.2 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 51.0 Ω + 8.4 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.6 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 1.150 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 |
|-----------------|-------|

DASY5 Validation Report for Head TSL

Date: 14.08,2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:719

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 1.83 \text{ S/m}$; $\varepsilon_r = 37.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 29.05.2019

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2019

• Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

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

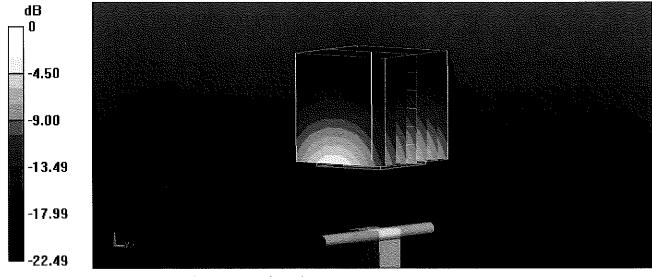
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 117.1 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 26.6 W/kg

SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.25 W/kg

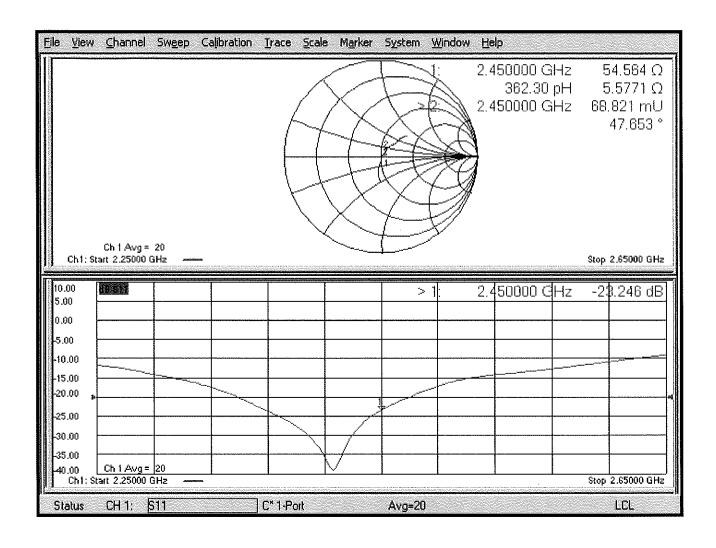
Maximum value of SAR (measured) = 21.8 W/kg



0 dB = 21.8 W/kg = 13.38 dBW/kg

Certificate No: D2450V2-719_Aug19 Page 5 of 8

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 14.08.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:719

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 2.01 \text{ S/m}$; $\varepsilon_r = 50.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.94, 7.94, 7.94) @ 2450 MHz; Calibrated: 29.05.2019

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2019

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

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

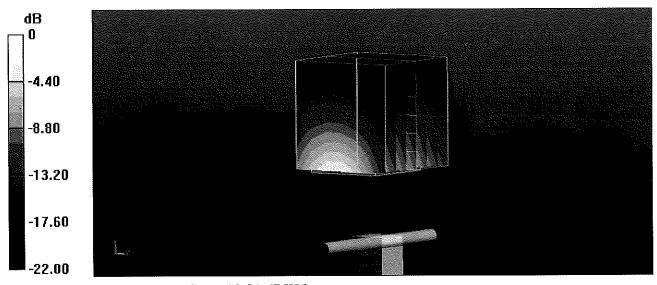
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 105.2 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 25.6 W/kg

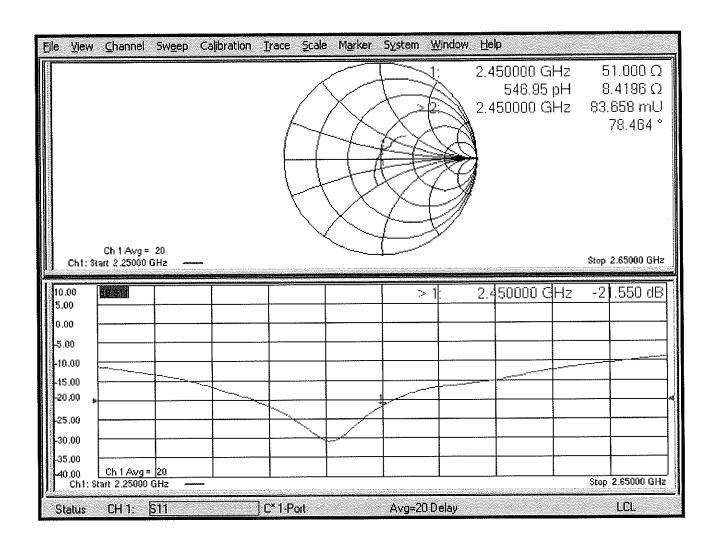
SAR(1 g) = 13 W/kg; SAR(10 g) = 6.09 W/kg

Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 20.0 W/kg = 13.01 dBW/kg

Impedance Measurement Plot for Body TSL



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





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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client

PC Test

Certificate No: D2600V2-1064_Jun19

CALIBRATION CERTIFICATE

Object

D2600V2 - SN:1064

Calibration procedure(s)

QA CAL-05.v11

Calibration Procedure for SAR Validation Sources between 0.7-3 GHz

Calibration date:

June 14, 2019

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 NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-19 (No. 217-02895) | Apr-20 |
| Reference Probe EX3DV4 | SN: 7349 | 29-May-19 (No. EX3-7349_May19) | May-20 |
| DAE4 | SN: 601 | 30-Apr-19 (No. DAE4-601_Apr19) | Apr-20 |
| Secondary Standards | ID# | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB39512475 | 30-Oct-14 (in house check Feb-19) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-18) | In house check: Oct-20 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |
| | Name | Function | Signature |
| Calibrated by: | Michael Weber | Laboratory Technician | INLI |
| | | | |
| Approved by: | Katja Pokovic | Technical Manager | Elle |
| | | | |

Issued: June 20, 2019

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Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

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Glossary:

TSL

tissue simulating liquid

ConvF

sensitivity in TSL / NORM x,y,z

N/A not ap

not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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 | V52.10.2 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy , $dz = 5 mm$ | |
| Frequency | 2600 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 39.0 | 1.96 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 37.3 ± 6 % | 2.03 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 | 14.9 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 58.1 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.59 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 26.0 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 | 52.5 | 2.16 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 50.5 ± 6 % | 2.22 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 | 14.2 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 55.6 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 6.33 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 25.0 W/kg ± 16.5 % (k=2) |

Certificate No: D2600V2-1064_Jun19 Page 3 of 8

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 49.8 Ω - 6.9 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.2 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 46.6 Ω - 4.4 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 24.9 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 1.151 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 |
|-----------------|-------|

Certificate No: D2600V2-1064_Jun19 Page 4 of 8

DASY5 Validation Report for Head TSL

Date: 14.06.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1064

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; $\sigma = 2.03 \text{ S/m}$; $\varepsilon_r = 37.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: EX3DV4 - SN7349; ConvF(7.69, 7.69, 7.69) @ 2600 MHz; Calibrated: 29.05.2019

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2019

Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

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

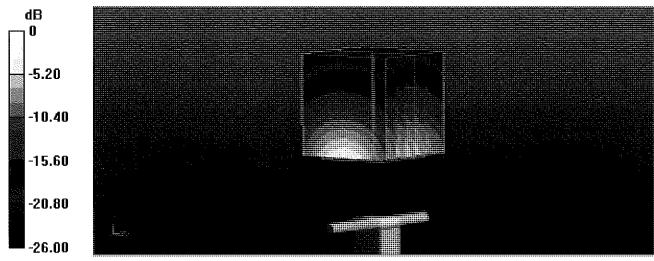
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 120.9 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 30.2 W/kg

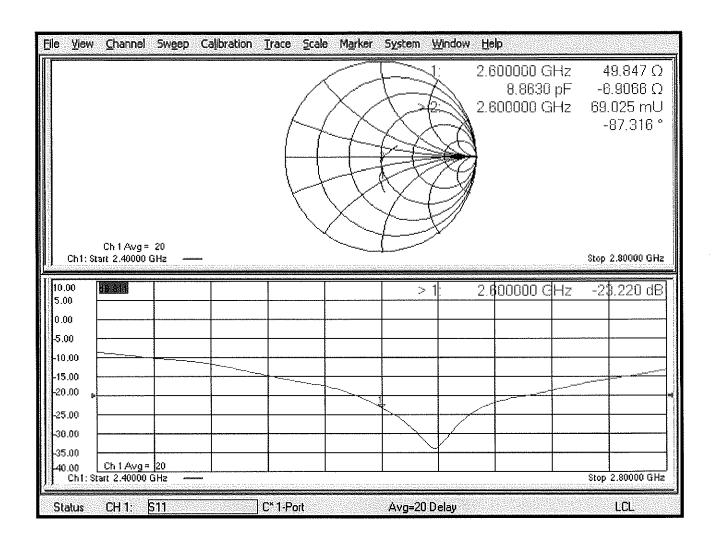
SAR(1 g) = 14.9 W/kg; SAR(10 g) = 6.59 W/kg

Maximum value of SAR (measured) = 25.1 W/kg



0 dB = 25.1 W/kg = 14.00 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 14.06.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1064

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; $\sigma = 2.22 \text{ S/m}$; $\varepsilon_r = 50.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(7.8, 7.8, 7.8) @ 2600 MHz; Calibrated: 29.05.2019

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2019

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

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

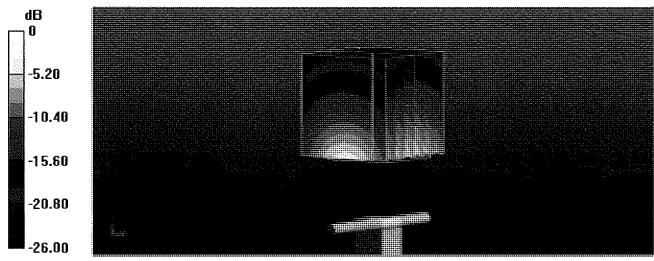
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.6 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 28.9 W/kg

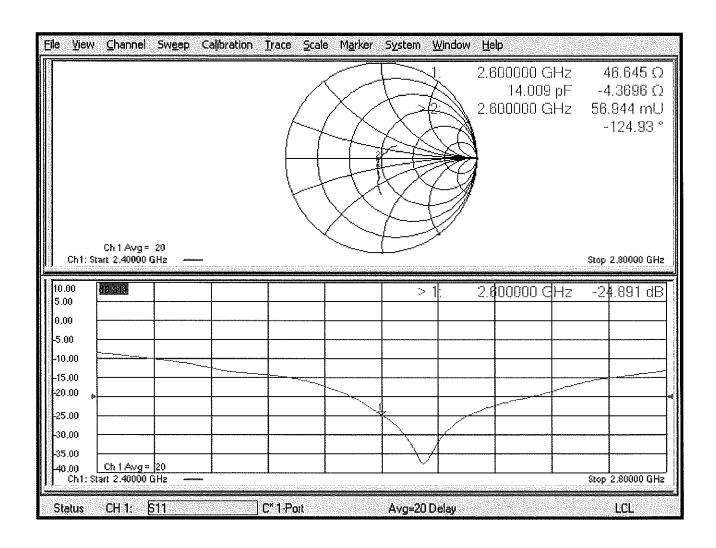
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.33 W/kg

Maximum value of SAR (measured) = 23.6 W/kg



0 dB = 23.6 W/kg = 13.73 dBW/kg

Impedance Measurement Plot for Body TSL



Calibration Laboratory of Schmid & Partner

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Accreditation No.: SCS 0108

Client

PC Test

Certificate No: D3700V2-1018_Jan18

CALIBRATION CERTIFICATE

Object

D3700V2 - SN:1018

Calibration procedure(s)

QA CAL-22.v2

Calibration procedure for dipole validation kits between 3-6 GHz

January 11, 2018

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.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards | ID# | Cal Date (Certificate No.) | Scheduled Calibration |
|-----------------------------|--------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 04-Apr-17 (No. 217-02521/02522) | Apr-18 |
| Power sensor NRP-Z91 | SN: 103244 | 04-Apr-17 (No. 217-02521) | Apr-18 |
| Power sensor NRP-Z91 | SN: 103245 | 04-Apr-17 (No. 217-02522) | Apr-18 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 07-Apr-17 (No. 217-02528) | Apr-18 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 07-Apr-17 (No. 217-02529) | Apr-18 |
| Reference Probe EX3DV4 | SN: 3503 | 30-Dec-17 (No. EX3-3503_Dec17) | Dec-18 |
| DAE4 | SN: 601 | 26-Oct-17 (No. DAE4-601_Oct17) | Oct-18 |
| Secondary Standards | ID# | Check Date (in house) | Scheduled Check |
| Power meter EPM-442A | SN: GB37480704 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-16) | In house check: Oct-18 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-16) | In house check: Oct-18 |
| Network Analyzer HP 8753E | SN: US37390585 | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |
| | Name | Function | Signature |
| Calibrated by: | Michael Weber | Laboratory Technician | |
| | | muunimi umba ka lisa sa k | M. EX |
| Approved by: | Katja Pokovic | Technical Manager | 11/11/ |
| | | | CX Co |
| | | | • |

Issued: January 16, 2018

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Certificate No: D3700V2-1018_Jan18

Page 1 of 8

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Glossarv:

TSL

tissue simulating liquid

ConvF

sensitivity in TSL / NORM x,y,z not applicable or not measured

N/A

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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 | V52.10.0 |
|------------------------------|------------------------------|----------------------------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy = 4 mm, dz = 1.4 mm | Graded Ratio = 1.4 (Z direction) |
| Frequency | 3700 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 37.7 | 3.12 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 38.3 ± 6 % | 3.07 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 | 100 mW input power | 6.54 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 65.8 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.41 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 24.2 W/kg ± 19.5 % (k=2) |

Body TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Body TSL parameters | 22.0 °C | 51.0 | 3.55 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 49.7 ± 6 % | 3.53 mho/m ± 6 % |
| Body TSL temperature change during test | < 0.5 °C | HAR. | |

SAR result with Body TSL

| SAR averaged over 1 cm ³ (1 g) of Body TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 6.46 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 64.3 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.32 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 23.1 W/kg ± 19.5 % (k=2) |

Certificate No: D3700V2-1018_Jan18 Page 3 of 8

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 53.0 Ω - 8.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.4 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 51.5 Ω - 6.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.9 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 1.144 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 18, 2015 |

Certificate No: D3700V2-1018_Jan18

DASY5 Validation Report for Head TSL

Date: 11.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN:1018

Communication System: UID 0 - CW; Frequency: 3700 MHz

Medium parameters used: f = 3700 MHz; $\sigma = 3.07 \text{ S/m}$; $\varepsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN3503; ConvF(7.5, 7.5, 7.5); Calibrated: 30.12.2017;

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 26.10.2017

• Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

• DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm/Zoom Scan, dist=1.4mm

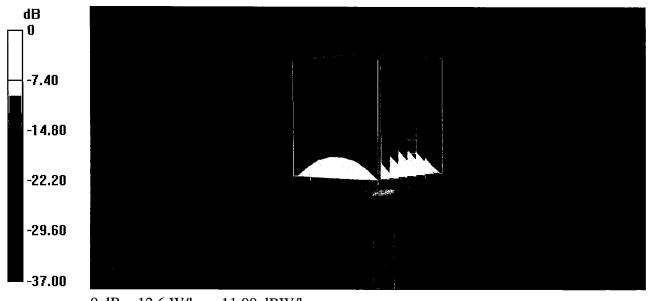
(8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.40 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 18.5 W/kg

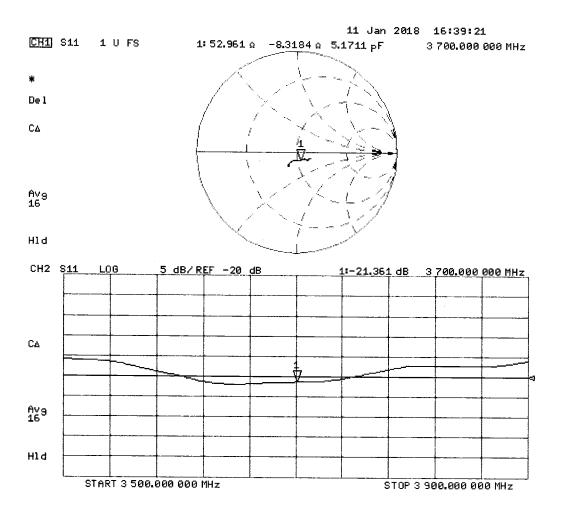
SAR(1 g) = 6.54 W/kg; SAR(10 g) = 2.41 W/kg

Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 10.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN:1018

Communication System: UID 0 - CW; Frequency: 3700 MHz

Medium parameters used: f = 3700 MHz; $\sigma = 3.53$ S/m; $\varepsilon_r = 49.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN3503; ConvF(7.28, 7.28, 7.28); Calibrated: 30.12.2017;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 26.10.2017

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=100 mW, d=10mm/Zoom Scan , dist=1.4mm

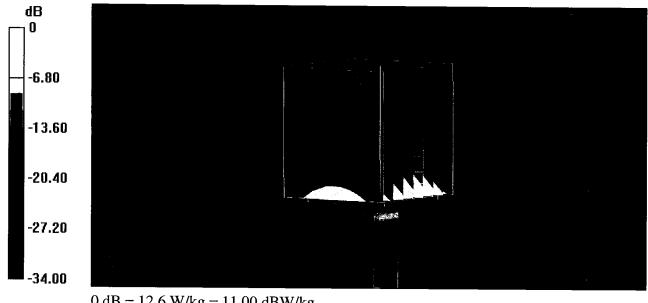
(8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.16 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 18.4 W/kg

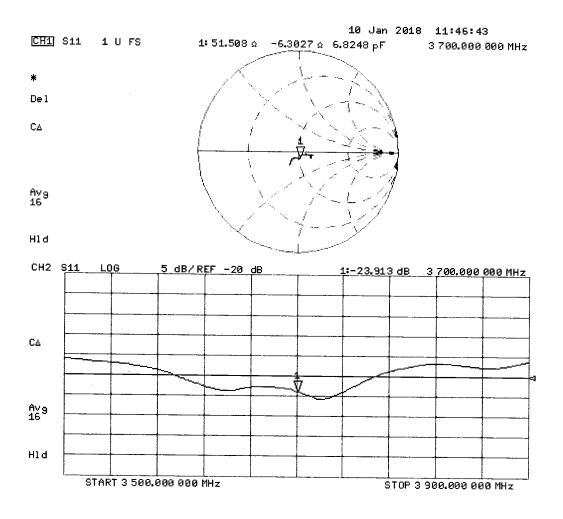
SAR(1 g) = 6.46 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

Impedance Measurement Plot for Body TSL



PCTEST ENGINEERING LABORATORY, INC.



7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.pctest.com



Certification of Calibration

Object D3700V2 – SN: 1018

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: 1/11/2019

Description: SAR Validation Dipole at 3500 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|-----------|---|------------|--------------|------------|---------------|
| Agilent | 8753ES | S-Parameter Network Analyzer | 2/8/2018 | Annual | 2/8/2019 | US39170122 |
| Agilent | N5182A | MXG Vector Signal Generator | 4/18/2018 | Annual | 4/18/2019 | MY47420800 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 433971 |
| Anritsu | MA2411B | Pulse Power Sensor | 3/2/2018 | Annual | 3/2/2019 | 1207364 |
| Anritsu | MA2411B | Pulse Power Sensor | 3/2/2018 | Annual | 3/2/2019 | 1339018 |
| Anritsu | ML2495A | Power Meter | 10/21/2018 | Annual | 10/21/2019 | 941001 |
| Control Company | 4040 | Therm./Clock/Humidity Monitor | 3/31/2017 | Biennial | 3/31/2019 | 170232394 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 5/2/2017 | Biennial | 5/2/2019 | 170330156 |
| Keysight | 772D | Dual Directional Coupler | CBT | N/A | CBT | MY52180215 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 6/4/2018 | Annual | 6/4/2019 | MY53401181 |
| MiniCircuits | VLF-6000+ | Low Pass Filter | CBT | N/A | CBT | N/A |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Pasternack | PE2209-10 | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| Seekonk | NC-100 | Torque Wrench | 7/11/2018 | Annual | 7/11/2019 | N/A |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 10/3/2018 | Annual | 10/3/2019 | 1558 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | | Annual | 6/18/2019 | 1334 |
| SPEAG | DAK-3.5 | Dielectric Assessment Kit | 9/11/2018 | Annual | 9/11/2019 | 1091 |
| SPEAG | EX3DV4 | SAR Probe | 2/14/2018 | Annual | 2/14/2019 | 3914 |
| SPEAG | EX3DV4 | SAR Probe | 8/24/2018 | Annual | 8/24/2019 | 3949 |

Measurement Uncertainty = ±23% (k=2)

| | Name | Function | Signature | | | |
|----------------|-------------------|-----------------------------|-------------------|--|--|--|
| Calibrated By: | Brodie Halbfoster | Test Engineer | BRODIE HALBFOSTER | | | |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 20K | | | |

| Object: | Date Issued: | Page 1 of 4 |
|--------------------|--------------|-------------|
| D3700V2 – SN: 1018 | 01/11/2019 | rage 1014 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

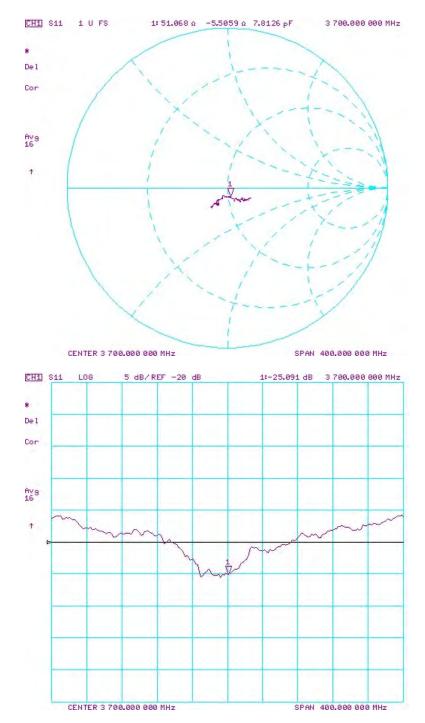
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Head (1g) W/kg @ 20.0 dBm | Measured Head SAR (1g) W/kg @ 20.0 dBm | (0/) | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | (40-) M(4 © | Deviation 10g (%) | Certificate Impedance Head (Ohm) Real | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|--|---|---------------------|---|--|----------------------|--|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 1/11/2018 | 1/11/2019 | 1.144 | 6.58 | 6.22 | -5.47% | 2.42 | 2.27 | -6.20% | 53 | 51.1 | 1.9 | -8.3 | -5.5 | 2.8 | -21.4 | -25.1 | -17.20% | PASS |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Body (1g) W/kg @ 20.0 dBm | Measured Body SAR (1g) W/kg @ 20.0 dBm | Deviation 1g (%) | Certificate SAR Target Body (10g) W/kg @ 20.0 dBm | Measured Body SAR (10g) W/kg @ 20.0 dBm | Deviation 10g (%) | | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 1/11/2018 | 1/11/2019 | 1.144 | 6.43 | 6.08 | -5.44% | 2.31 | 2.21 | -4.33% | 51.5 | 54.2 | 2.7 | -6.3 | -2.3 | 4 | -23.9 | -26.9 | -12.40% | PASS |

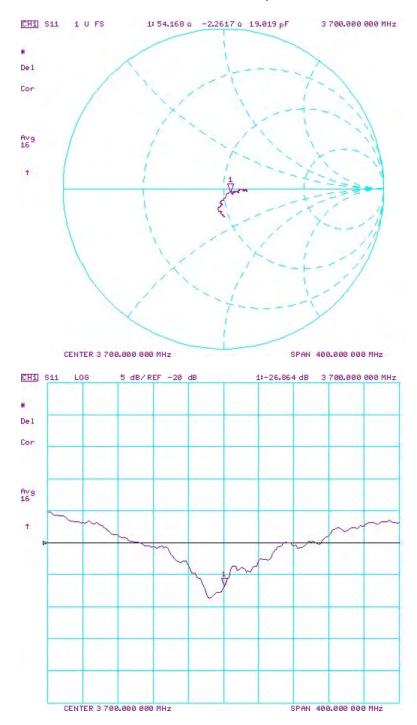
| Object: | Date Issued: | Page 2 of 4 |
|--------------------|--------------|-------------|
| D3700V2 - SN: 1018 | 01/11/2019 | Fage 2 01 4 |

Impedance & Return-Loss Measurement Plot for Head TSL



| Object: | Date Issued: | Page 3 of 4 |
|--------------------|--------------|-------------|
| D3700V2 - SN: 1018 | 01/11/2019 | |

Impedance & Return-Loss Measurement Plot for Body TSL



Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
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S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client

PC Test

Certificate No: D5GHzV2-1191_Sep19

CALIBRATION CERTIFICATE

Object D5GHzV2 - SN:1191

Calibration procedure(s) QA CAL-22.v4

Calibration Procedure for SAR Validation Sources between 3-6 GHz

09/26/2019

Calibration date:

Primary Standards

September 17, 2019

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)

ID#

| · minur j oturiuu. 20 | 1.5 " | our pare (corrinduto ric.) | Corrodated Calibration |
|---------------------------------|--------------------|-----------------------------------|-----------------------------------|
| Power meter NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-19 (No. 217-02895) | Apr-20 |
| Reference Probe EX3DV4 | SN: 3503 | 25-Mar-19 (No. EX3-3503_Mar19) | Mar-20 |
| DAE4 | SN: 601 | 30-Apr-19 (No. DAE4-601_Apr19) | Apr-20 |
| | | | |
| Secondary Standards | ID# | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB39512475 | 30-Oct-14 (in house check Feb-19) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-18) | In house check: Oct-20 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |
| | Name | Function | Signature |
| Calibrated by: | Manu Seltz | Laboratory Technician | |
| | | | |
| Approved by | Valla Balcada | | |
| Approved by: | Katja Pokovic | Technical Manager | MUX. |
| | | | ran Martin and plant and a second |

Cal Date (Certificate No.)

Issued: September 18, 2019

Scheduled Calibration

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

C Service suisse d'étalonnage Servizio svizzero di taratura

Swiss Calibration Service

Accreditation No.: SCS 0108

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

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 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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 | V52.10.2 |
|------------------------------|--|----------------------------------|
| 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 5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz 5800 MHz ± 1 MHz | |

Head TSL parameters at 5250 MHz The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 35.9 | 4.71 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 35.1 ± 6 % | 4.53 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | | |

SAR result with Head TSL at 5250 MHz

| SAR averaged over 1 cm³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 8.13 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 80.8 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.32 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.0 W/kg ± 19.5 % (k=2) |

Certificate No: D5GHzV2-1191_Sep19

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 | 34.6 ± 6 % | 4.88 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | W 44 10 M | |

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 | 8.33 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 82.7 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.36 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.4 W/kg ± 19.5 % (k=2) |

Head TSL parameters at 5750 MHz The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 35.4 | 5.22 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 34.4 ± 6 % | 5.03 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | | |

SAR result with Head TSL at 5750 MHz

| SAR averaged over 1 cm³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 8.08 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 80,2 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.29 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 22.7 W/kg ± 19.5 % (k=2) |

Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

| To following parameters and executations were appro- | 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 | 46.9 ± 6 % | 5.44 mho/m ± 6 % |
| Body TSL temperature change during test | < 0.5 °C | | |

SAR result with Body TSL at 5200 MHz

| SAR averaged over 1 cm³ (1 g) of Body TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 7.55 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 74.9 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.11 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 20.9 W/kg ± 19.5 % (k=2) |

Body TSL parameters at 5250 MHz

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Body TSL parameters | 22.0 °C | 48.9 | 5.36 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 5250 MHz

Certificate No: D5GHzV2-1191_Sep19

| SAR averaged over 1 cm ³ (1 g) of Body TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 7.76 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 77.0 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.16 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 21.4 W/kg ± 19.5 % (k=2) |

Page 5 of 19

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

| no lonowing parameters and care and | 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 | 46.2 ± 6 % | 5.98 mho/m ± 6 % |
| Body TSL temperature change during test | < 0.5 °C | 44 FF FF | |

SAR result with Body TSL at 5600 MHz

| SAR averaged over 1 cm³ (1 g) of Body TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 7.93 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 78.6 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.22 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 21.9 W/kg ± 19.5 % (k=2) |

Body TSL parameters at 5750 MHz

The following parameters and calculations were applied.

| no tonoming parameters and exceedings of | Temperature | Permittivity | Conductivity |
|--|-----------------|--------------|------------------|
| Nominal Body TSL parameters | 22.0 °C | 48.3 | 5.94 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 46.0 ± 6 % | 6.19 mho/m ± 6 % |
| Body TSL temperature change during test | < 0.5 °C | | |

SAR result with Body TSL at 5750 MHz

Certificate No: D5GHzV2-1191_Sep19

| SAR averaged over 1 cm ³ (1 g) of Body TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 7.75 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 76.9 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.15 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 21.3 W/kg ± 19.5 % (k=2) |

Page 6 of 19

Body TSL parameters at 5800 MHz The following parameters and calculations were applied.

| , in the second | 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 | 45.9 ± 6 % | 6.26 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 | 7.66 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 76.0 W/kg ± 19.9 % (k=2) |

| SAR averaged over 10 cm³ (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) |

Certificate No: D5GHzV2-1191_Sep19

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

| Impedance, transformed to feed point | 53.5 Ω - 6.2 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.2 dB |

Antenna Parameters with Head TSL at 5600 MHz

| Impedance, transformed to feed point | 56.4 Ω - 4.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 22,8 dB |

Antenna Parameters with Head TSL at 5750 MHz

| Impedance, transformed to feed point | 59.1 Ω + 1.9 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.4 dB |

Certificate No: D5GHzV2-1191_Sep19 Page 8 of 19

Antenna Parameters with Body TSL at 5200 MHz

| Impedance, transformed to feed point | 50.9 Ω - 8.6 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.3 dB |

Antenna Parameters with Body TSL at 5250 MHz

| Impedance, transformed to feed point | 53.2 Ω - 4.1 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 26.0 dB |

Antenna Parameters with Body TSL at 5600 MHz

| Impedance, transformed to feed point | 58.1 Ω - 4.2 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.4 dB |

Antenna Parameters with Body TSL at 5750 MHz

| Impedance, transformed to feed point | 60.3 Ω + 2.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 20.4 dB |

Antenna Parameters with Body TSL at 5800 MHz

| Impedance, transformed to feed point | 57.5 Ω + 2.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 22.7 dB |

General Antenna Parameters and Design

| Flootrical Dalay (one direction) | | |
|------------------------------------|----------------------------------|----------|
| Liectifical Delay (offe direction) | Electrical Delay (one direction) | 1.202 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 |
|-----------------|-------|
| | |

Certificate No: D5GHzV2-1191_Sep19 Page 9 of 19

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions (f=5200 MHz)

DASY system configuration, as far as not given on page 1 and 3.

| Ī | Phantom | SAM Head Phantom | For usage with cSAR3DV2-R/L |
|---|---------|------------------|-----------------------------|
| | | | |

SAR result with SAM Head (Top)

| 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 | 80.4 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.34 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.4 W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Mouth)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 8.37 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 83.8 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.36 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.6 W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Neck)

| 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 | 80.4 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|-------------------------|
| SAR measured | 100 mW input power | 2.36 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.6W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Ear)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 5.11 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 51.1 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 1.78 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 17.8 W/kg ± 19.9 % (k=2) |

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Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions (f=5800 MHz)

DASY system configuration, as far as not given on page 1 and 3.

| _ | 3 - 1 | | |
|---|---------|------------------|-----------------------------|
| | Phantom | SAM Head Phantom | For usage with cSAR3DV2-R/L |

SAR result with SAM Head (Top)

| SAR averaged over 1 cm³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 8.18 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 81.7 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 2.33 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 23.3 W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Mouth)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 8.56 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 85.5 W/kg ± 20.3 % (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 | 23.6 W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Neck)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 7.91 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 78.9 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm ³ (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 | 22.5 W/kg ± 19.9 % (k=2) |

SAR result with SAM Head (Ear)

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 5.60 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 55.9 W/kg ± 20.3 % (k=2) |

| SAR averaged over 10 cm³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 100 mW input power | 1.92 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 19.1 W/kg ± 19.9 % (k=2) |

Certificate No: D5GHzV2-1191_Sep19

DASY5 Validation Report for Head TSL

Date: 13.09.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1191

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz

Medium parameters used: f = 5250 MHz; $\sigma = 4.53$ S/m; $\epsilon_r = 35.1$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5600 MHz; $\sigma = 4.88$ S/m; $\epsilon_r = 34.6$; $\rho = 1000$ kg/m³,

Medium parameters used: f = 5750 MHz; $\sigma = 5.03 \text{ S/m}$; $\varepsilon_r = 34.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.4, 5.4, 5.4) @ 5250 MHz, ConvF(4.95, 4.95, 4.95) @ 5600 MHz, ConvF(4.98, 4.98, 4.98) @ 5750 MHz; Calibrated: 25.03.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 76.95 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 18.2 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 = 76.89 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 8.33 W/kg; SAR(10 g) = 2.36 W/kg

Maximum value of SAR (measured) = 19.2 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan,

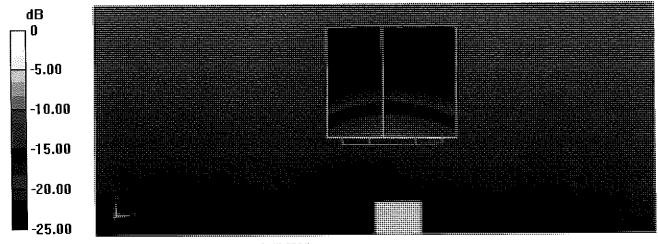
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.20 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 31.6 W/kg

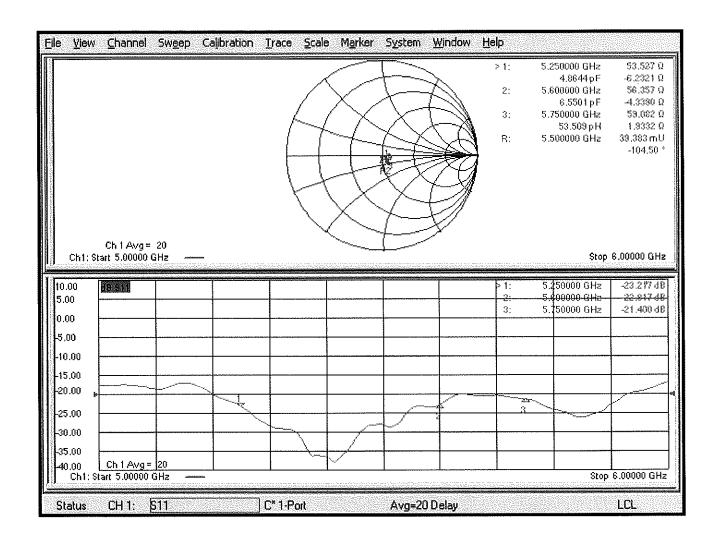
SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 18.9 W/kg



0 dB = 18.9 W/kg = 12.76 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 16.09.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1191

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5250 MHz, Frequency: 5600

MHz, Frequency: 5750 MHz, Frequency: 5800 MHz

Medium parameters used: f = 5200 MHz; $\sigma = 5.44$ S/m; $\varepsilon_r = 46.9$; $\rho = 1000$ kg/m³,

Medium parameters used: f = 5250 MHz; $\sigma = 5.51 \text{ S/m}$; $\varepsilon_r = 46.9$; $\rho = 1000 \text{ kg/m}^3$

Medium parameters used: f = 5600 MHz; $\sigma = 5.98$ S/m; $\varepsilon_r = 46.2$; $\rho = 1000$ kg/m³,

Medium parameters used: f = 5750 MHz; $\sigma = 6.19 \text{ S/m}$; $\varepsilon_r = 46$; $\rho = 1000 \text{ kg/m}^3$,

Medium parameters used: f = 5800 MHz; $\sigma = 6.26 \text{ S/m}$; $\varepsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.14, 5.14, 5.14) @ 5200 MHz, ConvF(5.26, 5.26, 5.26) @ 5250 MHz, ConvF(4.74, 4.74, 4.74) @ 5600 MHz, ConvF(4.62, 4.62) @ 5750 MHz, ConvF(4.62, 4.62) @ 5800 MHz; Calibrated: 25.03.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

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 = 68.78 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 28.7 W/kg

SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.11 W/kg

Maximum value of SAR (measured) = 17.3 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.09 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 30.3 W/kg

SAR(1 g) = 7.76 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 18.1 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 = 68.19 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 34.3 W/kg

SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 19.0 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.80 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 35.1 W/kg

SAR(1 g) = 7.75 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 18.9 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan,

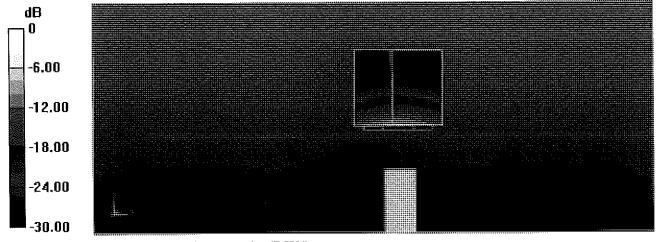
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 67.13 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 33.8 W/kg

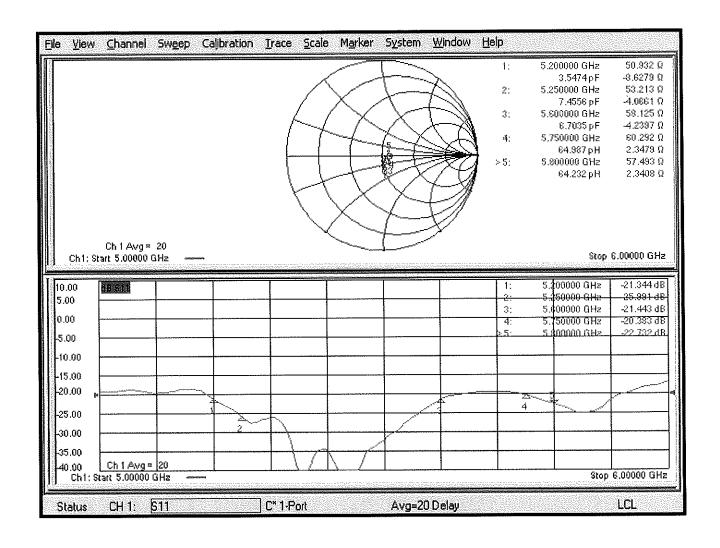
SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.12 W/kg

Maximum value of SAR (measured) = 18.5 W/kg



0 dB = 18.5 W/kg = 12.67 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 17.09.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1191

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5800 MHz Medium parameters used: f = 5200 MHz; σ = 4.55 S/m; ϵ_r = 36.2; ρ = 1000 kg/m³ , Medium parameters used: f = 5800 MHz; σ = 5.28 S/m; ϵ_r = 34.9; ρ = 1000 kg/m³

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.64, 5.64, 5.64) @ 5200 MHz, ConvF(4.96, 4.96, 4.96) @ 5800 MHz; Calibrated: 25.03.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- · Phantom: SAM Head
- DASY52 52.10.2(1504); SEMCAD X 14.6.12(7470)

SAM/Head/Top - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 74.84 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 27.5 W/kg

SAR(1 g) = 8.04 W/kg; SAR(10 g) = 2.34 W/kg

Maximum value of SAR (measured) = 18.5 W/kg

SAM/Head/Top - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 70.45 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 32.3 W/kg

SAR(1 g) = 8.18 W/kg; SAR(10 g) = 2.33 W/kg

Maximum value of SAR (measured) = 20.2 W/kg

SAM/Head/Mouth - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 76.86 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 29.3 W/kg

SAR(1 g) = 8.37 W/kg; SAR(10 g) = 2.36 W/kg

Maximum value of SAR (measured) = 19.8 W/kg

SAM/Head/Mouth - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

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dz=1.4mm

Reference Value = 71.46 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 34.0 W/kg

SAR(1 g) = 8.56 W/kg; SAR(10 g) = 2.37 W/kg

Maximum value of SAR (measured) = 21.3 W/kg

Certificate No: D5GHzV2-1191_Sep19

SAM/Head/Neck - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 74.71 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 28.8 W/kg

SAR(1 g) = 8.04 W/kg; SAR(10 g) = 2.36 W/kg

Maximum value of SAR (measured) = 19.2 W/kg

SAM/Head/Neck - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 71.62 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 32.1 W/kg

SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.26 W/kg

Maximum value of SAR (measured) = 20.2 W/kg

SAM/Head/Ear - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 57.89 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 5.11 W/kg; SAR(10 g) = 1.78 W/kg

Maximum value of SAR (measured) = 11.4 W/kg

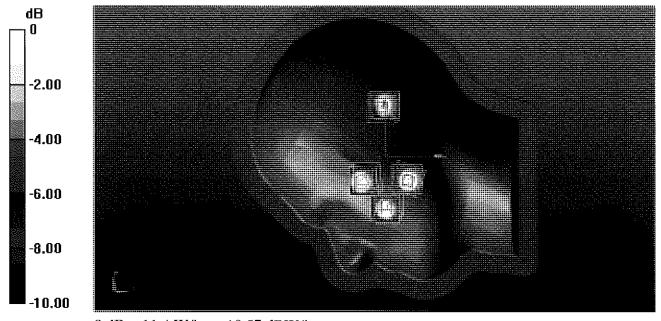
SAM/Head/Ear - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 58.22 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 21.0 W/kg

SAR(1 g) = 5.6 W/kg; SAR(10 g) = 1.92 W/kg

Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





C

Schweizerischer Kalibrierdienst Service sulsse d'étalonnage 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 0108

Client

Certificate No: D1900V2-5d080_Oct18

| CALIBRATION C | | | |
|-------------------------------------|---------------------------|---|----------------------------------|
| Dbject | D1900V2 - SN:50 | 1080 | |
| Calibration procedure(s) | QA CAL-05 v10 | | |
| | Calibration proce | dure for dipole validation kits al | DOVE 700 WITZ |
| | | | BN |
| Calibration date: | October 23, 2018 | | BN 10-30-2018 BN 10-30-2018 |
| | | | BNV |
| | • | onal standards, which realize the physical | unita of measurements (51). 10 - |
| he measurements and the uncert | aintles with confidence p | robability are given on the following pages | and are part of the certificate. |
| All calibrations have been conducte | ed in the closed laborato | y facility; environment temperature (22 \pm 3 | s)°C and humidity < 70%. |
| Calibration Equipment used (M&TE | aritical for calibration | | |
| Salibration Editibulant read (Motte | conicarior campianory | | |
| Primary Standards | ID# | Cal Date (Certificate No.) | Scheduled Calibration |
| Power meter NRP | SN: 104778 | 04-Apr-18 (No. 217-02672/02673) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103244 | 04-Apr-18 (No. 217-02672) | Apr-19 |
| Power sensor NRP-Z91 | S N: 103245 | 04-Apr-18 (No. 217-02673) | Apr-19 |
| Reference 20 dB Attenuator | SN: 5058 (20k) | 04-Apr-18 (No. 217-02682) | Apr-19 |
| ype-N mismatch combination | SN: 5047.2 / 06327 | 04-Apr-18 (No. 217-02683) | Apr-19 |
| Reference Probe EX3DV4 | SN: 7349 | 30-Dec-17 (No. EX3-7349_Dec17) | Dec-18 · |
| DAE4 | SN: 601 | 04-Oct-18 (No. DAE4-601_Oct18) | Oct-19 |
| Secondary Standards | ID# | Check Date (in house) | Scheduled Check |
| Power meter EPM-442A | SN: GB37480704 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: US37292783 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A | SN: MY41092317 | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| RF generator R&S SMT-06 | SN: 100972 | 15-Jun-15 (in house check Oct-18) | in house check: Oct-20 |
| Network Analyzer Agilent E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |
| | Name | Function | Signature |
| Calibrated by: | Jeton Kastrati | Laboratory Technician | te la |
| Approved by: | Katja Pokovic | Technical Manager | |
| | | | Issued: October 23, 2018 |

Certificate No: D1900V2-5d080_Oct18

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

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

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 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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%.

Certificate No: D1900V2-5d080_Oct18 Page 2 of 8

Measurement Conditions

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

| DASY Version | DASY5 | V52.10.2 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy, dz = 5 mm | |
| Frequency | 1900 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 40.0 | 1.40 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 40.3 ± 6 % | 1.40 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | do to to | |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 9.93 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 39.8 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.18 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 20.7 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 | 53.3 | 1.52 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 52.9 ± 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 | 9.62 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 39.2 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.09 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 20.6 W/kg ± 16.5 % (k=2) |

Certificate No: D1900V2-5d080_Oct18

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 52.5 Ω + 7.9 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.8 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | 48.1 Ω + 8.1 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 21.5 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 1.193 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 28, 2006 |

Certificate No: D1900V2-5d080_Oct18

DASY5 Validation Report for Head TSL

Date: 23.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d080

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.4 \text{ S/m}$; $\varepsilon_r = 40.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.18, 8.18, 8.18) @ 1900 MHz; Calibrated: 30.12.2017

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 04.10.2018

• Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

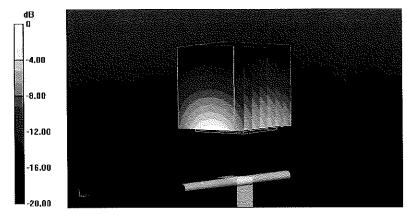
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.0 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 18.7 W/kg

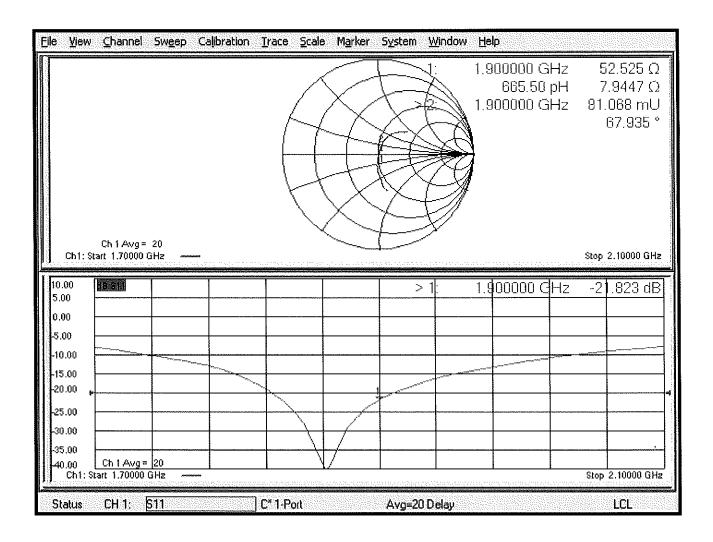
SAR(1 g) = 9.93 W/kg; SAR(10 g) = 5.18 W/kg

Maximum value of SAR (measured) = 15.6 W/kg



0 dB = 15.6 W/kg = 11.93 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 23.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d080

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.47 \text{ S/m}$; $\varepsilon_r = 52.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.15, 8.15, 8.15) @ 1900 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 04.10.2018

Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

• DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

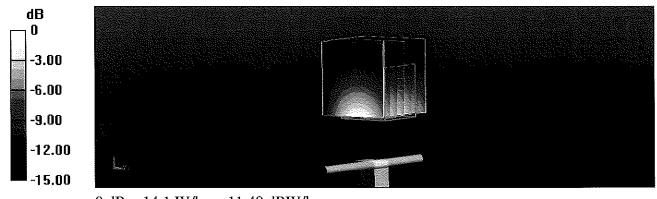
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.86 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 17.3 W/kg

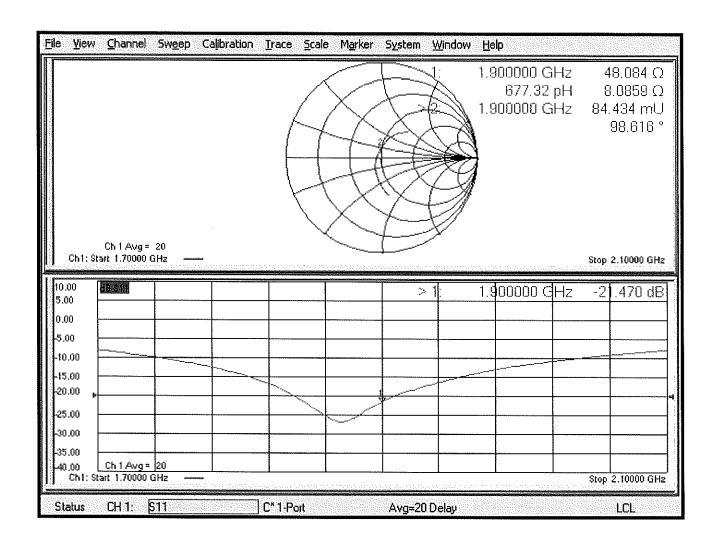
SAR(1 g) = 9.62 W/kg; SAR(10 g) = 5.09 W/kg

Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

Impedance Measurement Plot for Body TSL



PCTEST ENGINEERING LABORATORY, INC.



7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.pctest.com



Certification of Calibration

Object D1900V2 – SN:5d080

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extended Calibration date: October 18, 2019

Description: SAR Validation Dipole at 1900 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|---------------|---|------------|--------------|------------|---------------|
| Control Company | 4040 | Therm./Clock/Humidity Monitor | 6/29/2019 | Biennial | 6/29/2021 | 192291470 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 8/2/2018 | Biennial | 8/2/2020 | 181334684 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 433971 |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 7/2/2019 | Annual | 7/2/2020 | MY53401181 |
| Rohde & Schwarz | ZNLE6 | Vector Network Analyzer | 10/11/2019 | Annual | 10/11/2020 | 101307 |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| SPEAG | DAKS-3.5 | Portable Dielectric Assessment Kit | 8/13/2019 | Annual | 8/13/2020 | 1041 |
| Anritsu | MA2411B | Pulse Power Sensor | 8/14/2019 | Annual | 8/14/2020 | 1315051 |
| Anritsu | MA2411B | Pulse Power Sensor | 8/8/2019 | Annual | 8/8/2020 | 1339008 |
| Anritsu | ML2495A | Power Meter | 11/20/2018 | Annual | 11/20/2019 | 1039008 |
| Agilent | N5182A | MXG Vector Signal Generator | 8/19/2019 | Annual | 8/19/2020 | MY47420837 |
| Seekonk | NC-100 | Torque Wrench | 5/9/2018 | Biennial | 5/9/2020 | 22217 |
| Mini-Circuits | NLP-2950+ | Low Pass Filter DC to 2700 MHz | CBT | N/A | CBT | N/A |
| MiniCircuits | ZHDC-16-63-S+ | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| MiniCircuits | VLF-6000+ | Low Pass Filter | CBT | N/A | CBT | N/A |
| SPEAG | EX3DV4 | SAR Probe | 2/19/2019 | Annual | 2/19/2020 | 3914 |
| SPEAG | EX3DV4 | SAR Probe | 5/16/2019 | Annual | 5/16/2020 | 7406 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 5/8/2019 | Annual | 5/8/2020 | 859 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 2/14/2019 | Annual | 2/14/2020 | 1272 |

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path.

Measurement Uncertainty = ±23% (k=2)

| | Name | Function | Signature |
|----------------|-------------------|-----------------------------|-------------------|
| Calibrated By: | Brodie Halbfoster | Team Lead Engineer | BRODIE HALBFOSTER |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 20K |

| Object: | Date Issued: | Page 1 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d080 | 10/18/2019 | Page 1 of 4 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

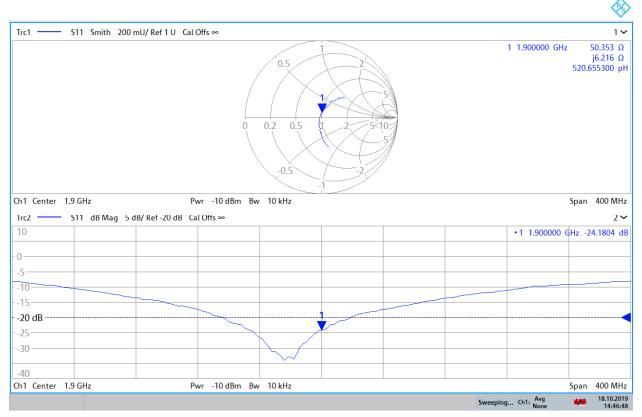
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | | Measured Head SAR (1g) W/kg @ 20.0 dBm | (0/) | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | (40-) M(4 G) | Deviation 10g (%) | | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|------|---|-------|---|---------------|----------------------|------|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 10/23/2018 | 10/18/2019 | 1.193 | 3.98 | 4.16 | 4.52% | 2.07 | 2.13 | 2.90% | 52.5 | 50.4 | 2.1 | 7.9 | 6.2 | 1.7 | -21.8 | -24.2 | -10.90% | PASS |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | | Measured Body SAR (1g) W/kg @ 20.0 dBm | (0/) | | (40-) M(4 (-) | Deviation 10g (%) | | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 10/23/2018 | 10/18/2019 | 1.193 | 3.92 | 4.21 | 7.40% | 2.06 | 2.16 | 4.85% | 48.1 | 46.5 | 1.6 | 8.1 | 6.6 | 1.5 | -21.5 | -22.2 | -3.40% | PASS |

| Object: | Date Issued: | Page 2 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d080 | 10/18/2019 | raye 2 01 4 |

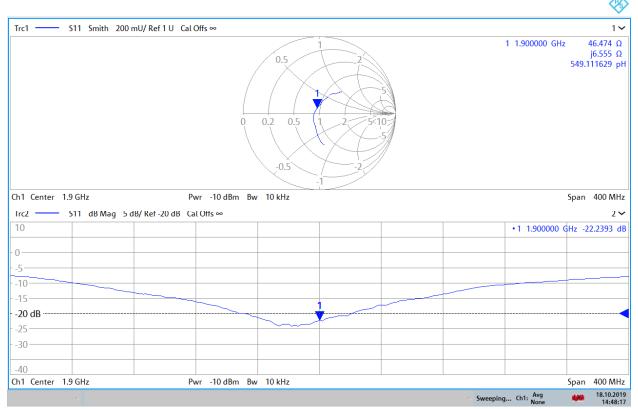
Impedance & Return-Loss Measurement Plot for Head TSL



14:46:49 18.10.2019

| Object: | Date Issued: | Page 3 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d080 | 10/18/2019 | rage 3 01 4 |

Impedance & Return-Loss Measurement Plot for Body TSL



14:48:18 18.10.2019

| Object: | Date Issued: | Page 4 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d080 | 10/18/2019 | Page 4 of 4 |

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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Schweizerischer Kalibrierdienst Service suisse d'étalonnage 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 0108

Client

PC Test

Certificate No: D1900V2-5d149_Oct18

| Object | D1900V2-SN:50 | 1149 | |
|--|---|--|--|
| | and the trade material expension readings | | |
| Calibration procedure(s) | QA CAL-05.v10 | dura for dipola validation bits abo | wo 700 MB→ |
| | Gailbrailon proce | dure for dipole validation kits abo | IVE 700 MITZ |
| | | | $\rho_{ m N}V$ |
| | Total Control of the | | BNV 10-30-2018 10-20-20 |
| Calibration date: | October 23, 2018 | 3 | 10-30- |
| | | | BNY |
| The state of the s | | | 10-20-1 |
| | • | ional standards, which realize the physical uni | • • |
| he measurements and the uncert | tainties with confidence p | robability are given on the following pages an | d are part of the certificate. |
| All actibrations have been analyst | | | O I b I-da- 2700/ |
| ui caidiations have been conque | ed in the closed laborato | ry facility: environment temperature (22 ± 3)°C | Jana numidity < 70%. |
| Colibration Equipment used (MRT) | E critical for calibration) | | |
| Jauniauon Equipinen used (Mai) | | | |
| Januarion Equipment used (Math | cided for calibrationy | | |
| , , | ID# | Cal Date (Certificate No.) | Scheduled Calibration |
| Primary Standards | 1 | Cal Date (Certificate No.) 04-Apr-18 (No. 217-02672/02673) | Scheduled Calibration Apr-19 |
| Primary Standards Power meter NRP | ID# | | |
| Primary Standards Power meter NRP Power sensor NRP-Z91 | ID# SN: 104778 | 04-Apr-18 (No. 217-02672/02673) | Apr-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 | ID # SN: 104778 SN: 103244 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) | Apr-19 Apr-19 |
| Calibration Equipment used (M&TI Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination | ID # SN: 104778 SN: 103244 SN: 103245 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) | Apr-19 Apr-19 Apr-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) | Apr-19 Apr-19 Apr-19 Apr-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter EPM-442A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Recondary Standards Power meter EPM-442A Power sensor HP 8481A Recomer sensor HP 8481A Recomer sensor HP 8481A Recomer sensor HP 8481A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-20 In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Recondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Recondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer Agilent E8358A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 Name | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-19 |
| Primary Standards Power meter NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Recondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer Agilent E8358A | ID # SN: 104778 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349 SN: 601 ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 SN: US41080477 Name | 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX3-7349_Dec17) 04-Oct-18 (No. DAE4-601_Oct18) Check Date (in house) 07-Oct-15 (in house check Oct-18) 07-Oct-15 (in house check Oct-18) 15-Jun-15 (in house check Oct-18) 31-Mar-14 (in house check Oct-18) | Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Oct-19 Scheduled Check In house check: Oct-20 In house check: Oct-19 |

Certificate No: D1900V2-5d149_Oct18

Page 1 of 8

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

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

Glossary:

TSL

tissue simulating liquid

ConvF N/A sensitivity in TSL / NORM x,y,z

not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) 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 | V52.10.2 |
|------------------------------|------------------------|-------------|
| Extrapolation | Advanced Extrapolation | |
| Phantom | Modular Flat Phantom | |
| Distance Dipole Center - TSL | 10 mm | with Spacer |
| Zoom Scan Resolution | dx, dy , $dz = 5 mm$ | |
| Frequency | 1900 MHz ± 1 MHz | |

Head TSL parameters

The following parameters and calculations were applied.

| | Temperature | Permittivity | Conductivity |
|---|-----------------|--------------|------------------|
| Nominal Head TSL parameters | 22.0 °C | 40.0 | 1.40 mho/m |
| Measured Head TSL parameters | (22.0 ± 0.2) °C | 40.3 ± 6 % | 1.40 mho/m ± 6 % |
| Head TSL temperature change during test | < 0.5 °C | | MALE |

SAR result with Head TSL

| SAR averaged over 1 cm ³ (1 g) of Head TSL | Condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 9.80 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 39.3 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Head TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.11 W/kg |
| SAR for nominal Head TSL parameters | normalized to 1W | 20.5 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 | 53.3 | 1.52 mho/m |
| Measured Body TSL parameters | (22.0 ± 0.2) °C | 52.9 ± 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 | 9.68 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 39.4 W/kg ± 17.0 % (k=2) |

| SAR averaged over 10 cm ³ (10 g) of Body TSL | condition | |
|---|--------------------|--------------------------|
| SAR measured | 250 mW input power | 5.11 W/kg |
| SAR for nominal Body TSL parameters | normalized to 1W | 20.7 W/kg ± 16.5 % (k=2) |

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

| Impedance, transformed to feed point | 52.9 Ω + 6.3 jΩ |
|--------------------------------------|-----------------|
| Return Loss | - 23.4 dB |

Antenna Parameters with Body TSL

| Impedance, transformed to feed point | $48.5 \Omega + 8.2 jΩ$ |
|--------------------------------------|------------------------|
| Return Loss | - 21.5 dB |

General Antenna Parameters and Design

| Electrical Delay (one direction) | 1.193 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 | March 11, 2011 |

Certificate No: D1900V2-5d149_Oct18

DASY5 Validation Report for Head TSL

Date: 23.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d149

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.4 \text{ S/m}$; $\varepsilon_r = 40.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.18, 8.18, 8.18) @ 1900 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 04.10.2018

Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

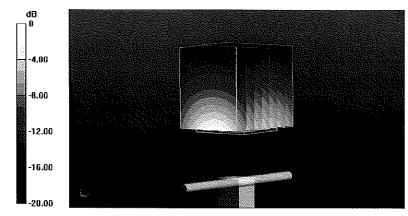
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 110.0 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 18.5 W/kg

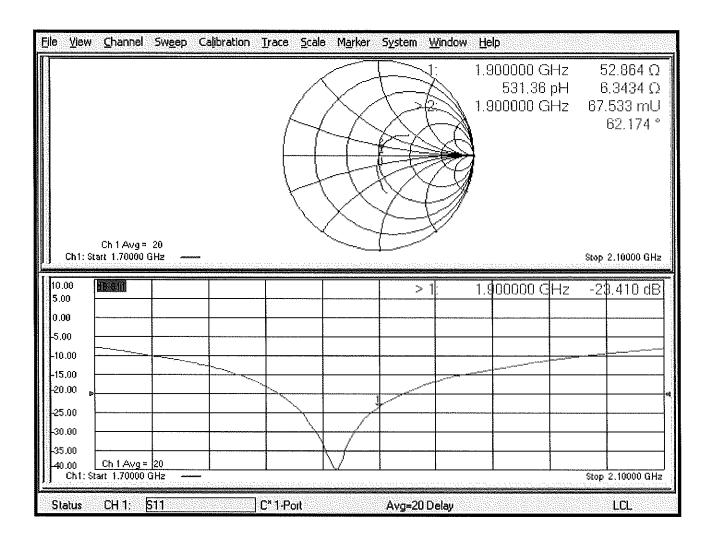
SAR(1 g) = 9.8 W/kg; SAR(10 g) = 5.11 W/kg

Maximum value of SAR (measured) = 15.4 W/kg



0 dB = 15.4 W/kg = 11.88 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 23,10,2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d149

Communication System: UID 0 - CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; $\sigma = 1.47 \text{ S/m}$; $\varepsilon_r = 52.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

Probe: EX3DV4 - SN7349; ConvF(8.15, 8.15, 8.15) @ 1900 MHz; Calibrated: 30.12.2017

• Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 04.10.2018

• Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

• DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

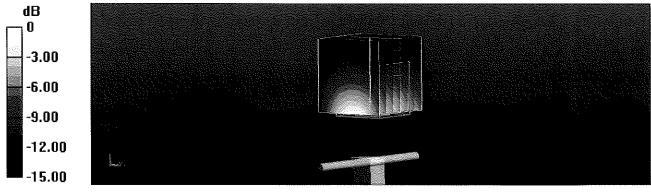
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.1 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 17.5 W/kg

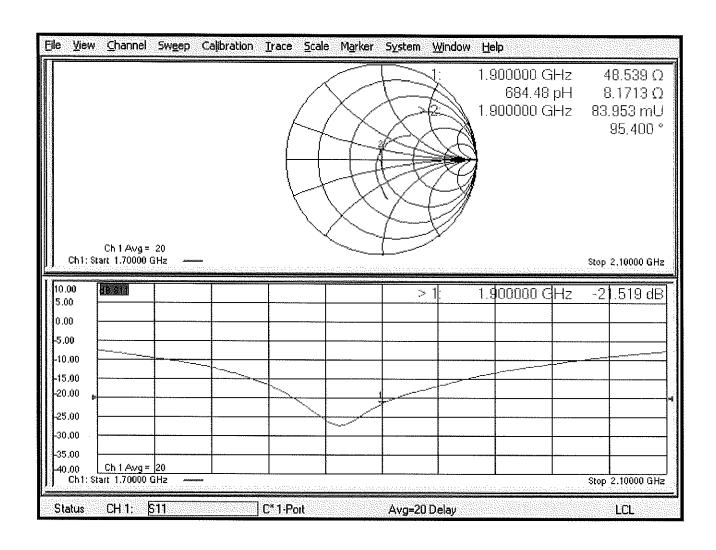
SAR(1 g) = 9.68 W/kg; SAR(10 g) = 5.11 W/kg

Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

Impedance Measurement Plot for Body TSL



PCTEST ENGINEERING LABORATORY, INC.



7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.pctest.com



Certification of Calibration

Object D1900V2 – SN:5d149

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extended Calibration date: October 18, 2019

Description: SAR Validation Dipole at 1900 MHz.

Calibration Equipment used:

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|---------------|---|------------|--------------|------------|---------------|
| Control Company | 4040 | Therm./Clock/Humidity Monitor | 6/29/2019 | Biennial | 6/29/2021 | 192291470 |
| Control Company | 4352 | Ultra Long Stem Thermometer | 8/2/2018 | Biennial | 8/2/2020 | 181334684 |
| Amplifier Research | 15S1G6 | Amplifier | CBT | N/A | CBT | 433971 |
| Narda | 4772-3 | Attenuator (3dB) | CBT | N/A | CBT | 9406 |
| Keysight Technologies | 85033E | Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm) | 7/2/2019 | Annual | 7/2/2020 | MY53401181 |
| Rohde & Schwarz | ZNLE6 | Vector Network Analyzer | 10/11/2019 | Annual | 10/11/2020 | 101307 |
| Mini-Circuits | BW-N20W5+ | DC to 18 GHz Precision Fixed 20 dB Attenuator | CBT | N/A | CBT | N/A |
| SPEAG | DAKS-3.5 | Portable Dielectric Assessment Kit | 8/13/2019 | Annual | 8/13/2020 | 1041 |
| Anritsu | MA2411B | Pulse Power Sensor | 8/14/2019 | Annual | 8/14/2020 | 1315051 |
| Anritsu | MA2411B | Pulse Power Sensor | 8/8/2019 | Annual | 8/8/2020 | 1339008 |
| Anritsu | ML2495A | Power Meter | 11/20/2018 | Annual | 11/20/2019 | 1039008 |
| Agilent | N5182A | MXG Vector Signal Generator | 8/19/2019 | Annual | 8/19/2020 | MY47420837 |
| Seekonk | NC-100 | Torque Wrench | 5/9/2018 | Biennial | 5/9/2020 | 22217 |
| Mini-Circuits | NLP-2950+ | Low Pass Filter DC to 2700 MHz | CBT | N/A | CBT | N/A |
| MiniCircuits | ZHDC-16-63-S+ | Bidirectional Coupler | CBT | N/A | CBT | N/A |
| MiniCircuits | VLF-6000+ | Low Pass Filter | CBT | N/A | CBT | N/A |
| SPEAG | EX3DV4 | SAR Probe | 2/19/2019 | Annual | 2/19/2020 | 3914 |
| SPEAG | EX3DV4 | SAR Probe | 5/16/2019 | Annual | 5/16/2020 | 7406 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 5/8/2019 | Annual | 5/8/2020 | 859 |
| SPEAG | DAE4 | Dasy Data Acquisition Electronics | 2/14/2019 | Annual | 2/14/2020 | 1272 |

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path.

Measurement Uncertainty = ±23% (k=2)

| | Name | Function | Signature |
|----------------|-------------------|-----------------------------|-------------------|
| Calibrated By: | Brodie Halbfoster | Team Lead Engineer | BRODIE HALBFOSTER |
| Approved By: | Kaitlin O'Keefe | Senior Technical Manager | 304 |

| Object: | Date Issued: | Page 1 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d149 | 10/18/2019 | Page 1 of 4 |

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

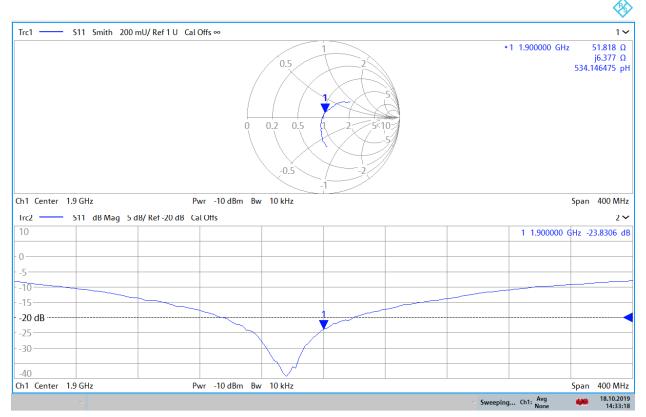
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Head (1g) W/kg @ 20.0 dBm | Head SAR (1g) | | Certificate SAR Target Head (10g) W/kg @ 20.0 dBm | (10a) W/ka @ | Deviation 10g (%) | Certificate Impedance Head (Ohm) Real | Measured Impedance Head (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Head (Ohm) Imaginary | Measured Impedance Head (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Head (dB) | Measured Return Loss Head (dB) | Deviation (%) | PASS/FAIL |
|---------------------|----------------|---|--|---|---------------------|---|--------------|----------------------|--|---|--------------------------|---|--|----------------------------------|---|--------------------------------------|---------------|-----------|
| 10/23/2018 | 10/18/2019 | 1.193 | 3.93 | 4.24 | 7.89% | 2.05 | 2.18 | 6.34% | 52.9 | 51.8 | 1.1 | 6.3 | 6.4 | 0.1 | -23.4 | -23.8 | -1.80% | Pass |
| Calibration Date | Extension Date | Certificate Electrical Delay (ns) | Certificate SAR Target Body (1g) W/kg @ 20.0 dBm | Measured Body SAR (1g) W/kg @ 20.0 dBm | Deviation 1g (%) | Certificate SAR Target Body (10g) W/kg @ 20.0 dBm | (40-) M(4 © | Deviation 10g (%) | Certificate Impedance Body (Ohm) Real | Measured Impedance Body (Ohm) Real | Difference (Ohm) Real | Certificate Impedance Body (Ohm) Imaginary | Measured Impedance Body (Ohm) Imaginary | Difference (Ohm) Imaginary | Certificate Return Loss Body (dB) | Measured Return Loss Body (dB) | Deviation (%) | PASS/FAIL |
| 10/23/2018 | 10/18/2019 | 1.193 | 3.94 | 4.2 | 6.60% | 2.07 | 2.15 | 3.86% | 48.5 | 48.4 | 0.1 | 8.2 | 7.6 | 0.6 | -21.5 | -22.1 | -2.60% | PASS |

| Object: | Date Issued: | Page 2 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d149 | 10/18/2019 | Fage 2 01 4 |

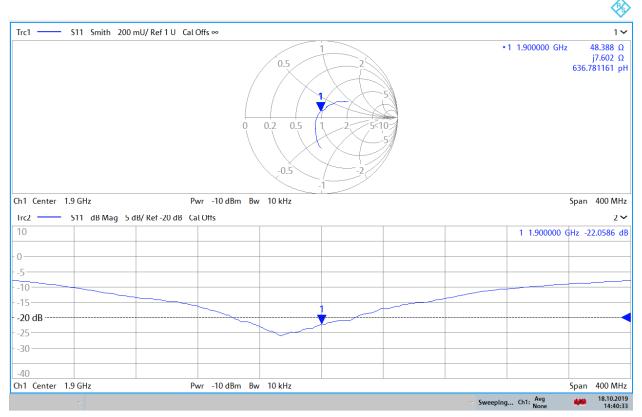
Impedance & Return-Loss Measurement Plot for Head TSL



14:33:19 18.10.2019

| Object: | Date Issued: | Page 3 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d149 | 10/18/2019 | Page 3 of 4 |

Impedance & Return-Loss Measurement Plot for Body TSL



14:40:34 18.10.2019

| Object: | Date Issued: | Page 4 of 4 |
|---------------------|--------------|-------------|
| D1900V2 - SN: 5d149 | 10/18/2019 | Page 4 of 4 |

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





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

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client

PC Test

Certificate No: EX3-7410_Jul19

CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7410

Calibration procedure(s)

QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7

Calibration procedure for dosimetric E-field probes

BNV

07/3/12010

Calibration date:

July 16, 2019

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 NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: S5277 (20x) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| DAE4 | SN: 660 | 19-Dec-18 (No. DAE4-660_Dec18) | Dec-19 |
| Reference Probe ES3DV2 | SN: 3013 | 31-Dec-18 (No. ES3-3013_Dec18) | Dec-19 |
| Secondary Standards | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-Apr-16 (in house check Jun-18) | In house check; Jun-20 |
| Power sensor E4412A | SN: MY41498087 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: 000110210 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check; Oct-19 |

Calibrated by:

Deton Kastrati

Laboratory Technician

Approved by:

Katja Pokovic

Technical Manager

Issued: July 16, 2019

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

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

Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A, B, C, D crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle

information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is
 implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included
 in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No: EX3-7410 Jul19

EX3DV4 - SN:7410

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|--|----------|----------|----------|-----------|
| Norm (μV/(V/m) ²) ^A | 0.41 | 0.47 | 0.43 | ± 10.1 % |
| DCP (mV) ^B | 95.0 | 98.5 | 98.3 | |

Calibration Results for Modulation Response

| UID | Communication System Name | | A dB | B dBõV | С | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|--------|-----------------------------|---|---------|-----------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | X | 0.00 | 0.00 | 1.00 | 0.00 | 143.3 | ± 3.3 % | ± 4.7 % |
| | | Y | 0.00 | 0.00 | 1.00 | | 136.3 | /• | " ' ' ' |
| | | Z | 0.00 | 0.00 | 1.00 | | 146.3 | | |
| 10352- | Pulse Waveform (200Hz, 10%) | X | 7.20 | 77.00 | 15.83 | 10.00 | 60.0 | ± 3.7 % | ± 9.6 % |
| AAA | | Y | 15.00 | 89.41 | 20.45 | | 60.0 | | |
| | | Z | 15.00 | 86.58 | 19,43 | | 60.0 | | |
| 10353- | Pulse Waveform (200Hz, 20%) | Х | 15.00 | 85.70 | 17.13 | 6.99 | 80.0 | ± 2.7 % | ± 9.6 % |
| AAA | · · | Y | 15.00 | 94.26 | 21.82 | 1 | 80.0 | · | |
| | | Z | 15.00 | 87.46 | 18.36 | 1 | 80.0 | | |
| 10354- | Pulse Waveform (200Hz, 40%) | X | 15.00 | 84.98 | 15.02 | 3.98 | 95.0 | ± 1.4 % | ± 9.6 % |
| AAA | | Y | 15.00 | 105.63 | 25.93 | 1 | 95.0 | | |
| | | Z | 15.00 | 86.91 | 16.30 | 1 | 95.0 | | |
| 10355- | Pulse Waveform (200Hz, 60%) | X | 0.58 | 63.48 | 6.70 | 2.22 | 120.0 | ± 1.4 % | ± 9.6 % |
| AAA | , , , , , | Y | 15.00 | 128.91 | 35.05 | 1 | 120.0 | | |
| | | Z | 1.67 | 69.27 | 9.07 | | 120.0 | | |
| 10387- | QPSK Waveform, 1 MHz | X | 0.58 | 60.52 | 7.75 | 0.00 | 150.0 | ± 2.7 % | ±9.6 % |
| AAA | | Y | 1.10 | 67.31 | 12.60 | | 150.0 | | |
| | | Z | 0.65 | 60.71 | 8.42 | | 150.0 | | |
| 10388- | QPSK Waveform, 10 MHz | Х | 2.25 | 68.70 | 16.13 | 0.00 | 150.0 | ± 1.1 % | ±9.6% |
| AAA | | Y | 2.69 | 71.62 | 17.77 | | 150.0 | | |
| | | Z | 2.10 | 66.95 | 14.95 | | 150.0 | | |
| 10396- | 64-QAM Waveform, 100 kHz | X | 2.85 | 69.56 | 18.52 | 3.01 | 150.0 | ± 0.7 % | ± 9.6 % |
| AAA | | Υ | 3.27 | 72.43 | 19.82 | | 150.0 | | |
| | | Z | 2.96 | 69.30 | 18.13 | | 150.0 | | |
| 10399- | 64-QAM Waveform, 40 MHz | X | 3.51 | 67.28 | 15.99 | 0.00 | 150.0 | ± 2.2 % | ± 9.6 % |
| AAA | | Υ | 3.73 | 68.43 | 16.68 | | 150.0 | | |
| | | Z | 3.45 | 66.65 | 15.48 | | 150.0 | | |
| 10414- | WLAN CCDF, 64-QAM, 40MHz | Х | 4.86 | 65.74 | 15.76 | 0.00 | 150.0 | ± 4.2 % | ± 9.6 % |
| AAA | | Y | 5.02 | 66.29 | 16.07 | | 150.0 | | |
| | | Z | 4.91 | 65.47 | 15.50 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

B Numerical linearization parameter: uncertainty not required.

E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

EX3DV4- SN:7410

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Sensor Model Parameters

| | C1 fF | C2 fF | a V⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V-2 | T5 V ⁻¹ | T6 |
|---|----------|----------|----------|--------------------------|--------------------------|----------|-----------|-----------------------|------|
| X | 44.0 | 341.99 | 38.28 | 7.82 | 0.67 | 5.04 | 0.00 | 0.55 | 1.01 |
| Υ | 48.3 | 362.63 | 36.17 | 12.06 | 0.12 | 5.10 | 0.87 | 0.38 | 1.01 |
| Z | 52.1 | 408.62 | 38.63 | 10.30 | 0.68 | 5.08 | 0.00 | 0.64 | 1.01 |

Other Probe Parameters

| Sensor Arrangement | Triangular |
|---|------------|
| Connector Angle (°) | 0.7 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|----------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 41.9 | 0.89 | 9.95 | 9.95 | 9.95 | 0.69 | 0.80 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.88 | 9.88 | 9.88 | 0.51 | 0.80 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.46 | 8.46 | 8.46 | 0.33 | 0.86 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.11 | 8.11 | 8.11 | 0.35 | 0.86 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 7.91 | 7.91 | 7.91 | 0.34 | 0.90 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.47 | 7.47 | 7.47 | 0.37 | 0.90 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.33 | 7.33 | 7.33 | 0.39 | 0.90 | ± 12.0 % |
| 5250 | 35.9 | 4.71 | 5.46 | 5.46 | 5.46 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 4.85 | 4.85 | 4.85 | 0.40 | 1.80 | ± 13.1 % |
| 5750 | 35.4 | 5.22 | 5.05 | 5.05 | 5.05 | 0.40 | 1.80 | ± 13.1 % |

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

GAlpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Calibration Parameter Determined in Body Tissue Simulating Media

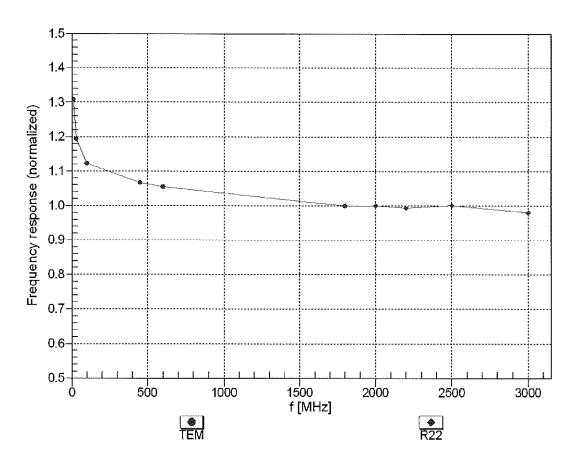
| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ⁶ (mm) | Unc (k=2) |
|----------------------|---------------------------------------|----------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 55.5 | 0.96 | 10.01 | 10.01 | 10.01 | 0.48 | 0.84 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 9.79 | 9.79 | 9.79 | 0.48 | 0.80 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8.08 | 8.08 | 8.08 | 0.38 | 0.86 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.78 | 7.78 | 7.78 | 0.42 | 0.86 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.68 | 7.68 | 7.68 | 0.43 | 0.90 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.44 | 7.44 | 7.44 | 0.33 | 0.90 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.43 | 7.43 | 7.43 | 0.33 | 0.80 | ± 12.0 % |
| 5250 | 48.9 | 5.36 | 4.95 | 4.95 | 4.95 | 0.50 | 1.90 | ± 13.1 % |
| 5600 | 48.5 | 5.77 | 4.42 | 4.42 | 4.42 | 0.50 | 1.90 | ± 13.1 % |
| 5750 | 48.3 | 5.94 | 4.60 | 4.60 | 4.60 | 0.50 | 1.90 | ± 13.1 % |

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of the Convertainty for indicated target tissue parameters.

Galpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

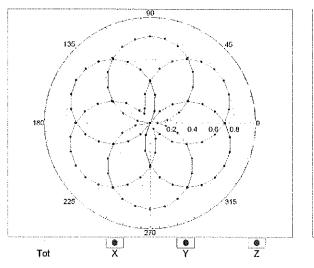


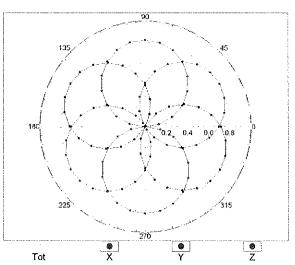
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

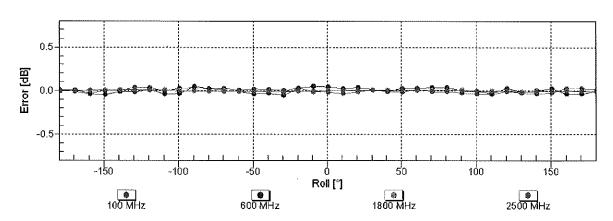
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

f=600 MHz,TEM

f=1800 MHz,R22

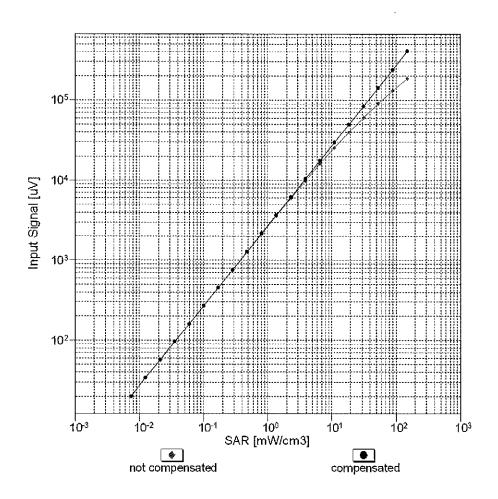


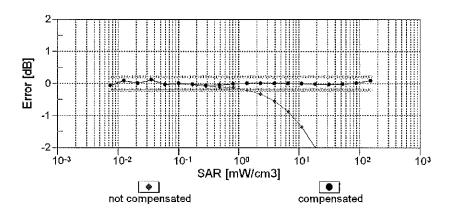




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

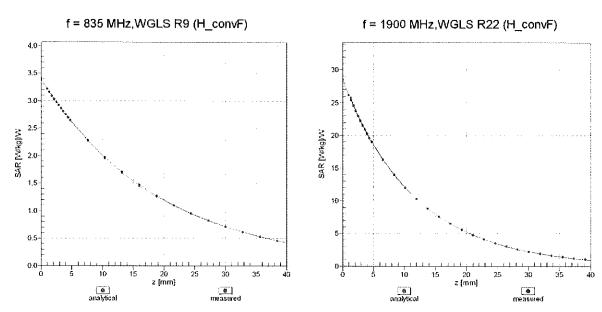
Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)



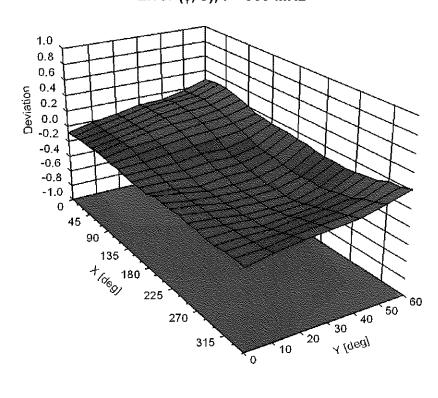


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (φ, θ), f = 900 MHz



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Appendix: Modulation Calibration Parameters

| UID | Rev | Communication System Name | Group | PAR (dB) | Unc ^t (k=2) |
|-------|-----|---|-----------|-------------|---------------------------|
| 0 | | CW | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ± 9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ± 9.6 % |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ±9.6% |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ± 9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ±9.6% |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ± 9.6 % |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ± 9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ± 9.6 % |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ± 9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | GSM | 7.78 | ± 9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth | 1.87 | ± 9.6 % |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 | ±9.6% |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 7.74 | ± 9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) | Bluetooth | 4.53 | ± 9.6 % |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth | 3.83 | ± 9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ±9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | 4.77 | ± 9.6 % |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ± 9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ±9.6 % |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ±9.6 % |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ±9.6% |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSDPA) | WCDMA | 3.98 | ± 9.6 % |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ± 9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ± 9.6 % |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | ± 9.6 % |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | ± 9.6 % |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | ± 9.6 % |

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| T 10 10 0 | T = | | | | |
|-----------|-----|--|-------------------|-------|---------|
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 5.75 | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 | ± 9.6 % |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | | | ± 9.6 % |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 61 Mbps, 64-QAM) | WLAN | 8.46 | ± 9.6 % |
| 10117 | CAC | IEEE 002.1111 (FT Greenileid, 135 Mipps, 64-QAM) | WLAN | 8.15 | ± 9.6 % |
| | | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN | 8.07 | ± 9.6 % |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | WLAN | 8.59 | ± 9.6 % |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | ± 9.6 % |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | ± 9.6 % |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | ± 9.6 % |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | ± 9.6 % |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LIC-FDD | | ±9.6% |
| 10149 | CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | ±9.6 % |
| 10149 | CAE | LITE EDD (SO EDMA 500/ BD 00 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| | | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | ± 9.6 % |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | ± 9.6 % |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.05 | ±9.6% |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-FDD | 5.75 | ± 9.6 % |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 5.79 | ± 9.6 % |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.56 | ± 9.6 % |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-FDD | | |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | | 5.82 | ± 9.6 % |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 15 WITZ, 04-QAW) | LTE-FDD | 6.58 | ± 9.6 % |
| | | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.46 | ± 9.6 % |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | ± 9.6 % |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.79 | ± 9.6 % |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | -:-: | | |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 6.52 | ±9.6 % |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 5.73 | ± 9.6 % |
| 10179 | CAG | | LTE-FDD | 6.52 | ± 9.6 % |
| 10179 | | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | ± 9.6 % |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | ~~~~ | |
| 10193 | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | | 6.50 | ± 9.6 % |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 8.9 Mbps, 16-QAM) | WLAN | 8.09 | ± 9.6 % |
| 10194 | | IEEE 902.1111 (ITT Greenfield, 59 Miops, To-QAM) | WLAN | 8.12 | ± 9.6 % |
| | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.21 | ± 9.6 % |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.10 | ± 9.6 % |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | ± 9.6 % |
| | | | | | |

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| [40000 | | IEEE 002 44n /LIT Miyod 42 2 Mhno 46 OAM) | MAIL A NI | 042 | +06% |
|----------------|------------|--|--------------------|---------------|---|
| 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN WLAN | 8.13 8.27 | ± 9.6 % ± 9.6 % |
| 10221 | | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.06 | ± 9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.48 | ± 9.6 % |
| 10223 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.08 | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | WCDMA | 5.97 | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+) | | 9.49 | |
| 10226 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | | ± 9.6 % |
| 10227 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD LTE-TDD | 10.26 9.22 | ± 9.6 % ± 9.6 % |
| 10228 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.48 | ± 9.6 % |
| 10229 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10230 | CAC | | LTE-TDD | 9.19 | ± 9.6 % |
| 10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.48 | ± 9.6 % |
| 10232 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10233 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 9.21 | ± 9.6 % |
| 10234 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.48 | ± 9.6 % |
| 10235 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | | | *************************************** |
| 10236 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TOD | 10.25 | ±9.6% |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD LTE-TDD | 9.21 9.82 | ± 9.6 % ± 9.6 % |
| 10241 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.82 | ± 9.6 % |
| 10242 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 9.86 | ±9.6 % |
| 10243 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 10.06 | ± 9.6 % |
| 10244 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | | 10.06 | ± 9.6 % |
| 10245 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-TOD | 9.30 | |
| 10246 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-TOD | 9.30 | ±9.6% |
| 10247 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 10.09 | ± 9.6 % ± 9.6 % |
| 10248 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD LTE-TDD | 9.29 | ±9.6 % |
| 10249 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TOD | 9.81 | ± 9.6 % |
| 10250 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 10.17 | ± 9.6 % |
| 10251 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 9.24 | ± 9.6 % |
| 10252 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.90 | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.14 | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 9.20 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | ± 9.6 % |
| 10256 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 10-QAM) | LTE-TDD | 10.08 | ± 9.6 % |
| 10257 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 04-QAM) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | ± 9.6 % |
| 10258 | CAA | | LTE-TDD | 9.98 | ± 9.6 % |
| 10259 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10260 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TOD | 9.24 | ± 9.6 % |
| 10261 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | ± 9.6 % |
| 10262 | | | LTE-TDD | 10.16 | ± 9.6 % |
| 10263 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | ± 9.6 % |
| 10264 | CAF | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QFSR) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 | ±9.6 % |
| 10265 | CAF CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 10-QAM) | LTE-TDD | 10.07 | ± 9.6 % |
| 10266 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.13 | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 04-QAM) | LTE-TDD | 9.58 | ± 9.6 % |
| 10270 | CAP | UMTS-FDD (SC-FDNA, 100% RB, 10 MHz, QF3R) | WCDMA | 4.87 | ±9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | ± 9.6 % |
| 10273 | CAA | PHS (QPSK) | PHS | 11.81 | ± 9.6 % |
| 10277 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | ± 9.6 % |
| 10279 | AAB | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO33, Full Rate | CDMA2000 | 3.46 | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | ± 9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | CDMA2000 | 12.49 | ± 9.6 % |
| 10293 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.81 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | ± 9.6 % |
| 10233 | 1,000 | W. F. DD OO DITH OO / O D D TH E. TO OO WIT | | | |

| 10200 | LAAD | LTE EDD (OG EDMA FON ED OLGU OA OA) | 1 | | 4 |
|--|---|--|--|--|--|
| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10301 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WIMAX | 12.03 | ± 9.6 % |
| 10302 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL | WiMAX | 12.57 | ± 9.6 % |
| 10303 | A A A | symbols) | | | |
| | AAA | IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 12.52 | ± 9.6 % |
| 10304 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | WIMAX | 11.86 | ± 9.6 % |
| 10305 | AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 | WiMAX | 15.24 | ± 9.6 % |
| 10306 | Α Α Α | symbols) | | | |
| 10300 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 | WiMAX | 14.67 | ± 9.6 % |
| 10307 | AAA | symbols) | | | |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 | WiMAX | 14.49 | ± 9.6 % |
| 40200 | | symbols) | | | |
| 10308 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WiMAX | 14.46 | ± 9.6 % |
| 10309 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 | WiMAX | 14.58 | ±9.6% |
| 10310 | Α Λ Λ | symbols) | | | |
| 10310 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 | WiMAX | 14.57 | ± 9.6 % |
| 10311 | AAD | symbols) | <u> </u> | | |
| | · j · · · · · · · · · · · · · · · · · · | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | ± 9.6 % |
| 10313 | AAA | IDEN 1:3 | IDEN | 10.51 | ± 9.6 % |
| 10314 | AAA | IDEN 1:6 | IDEN | 13.48 | ±9.6 % |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) | WLAN | 1.71 | ± 9.6 % |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10352 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | ± 9.6 % |
| 10353 | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | ± 9.6 % |
| 10354 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | ± 9.6 % |
| 10355 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | ±9.6% |
| 10356 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | ± 9.6 % |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 | ± 9.6 % |
| 10388 | AAA | QPSK Waveform, 10 MHz | Generic | 5.22 | ± 9.6 % |
| 10396 | AAA | 64-QAM Waveform, 100 kHz | Generic | 6.27 | ± 9.6 % |
| 10399 | AAA | 64-QAM Waveform, 40 MHz | Generic | 6.27 | ± 9.6 % |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10401 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| 10402 | AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0) | CDMA2000 | 3.76 | ± 9.6 % |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A) | CDMA2000 | 3.77 | ± 9.6 % |
| 10406 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 | 5.22 | ± 9.6 % |
| 10410 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9, Subframe Conf=4) | 272 100 | 1.02 | 2 0.0 70 |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) | WLAN | 1.54 | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.14 | |
| | | Long preambule) | VYLAIN | 0.14 | ± 9.6 % |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.19 | ± 9.6 % |
| | | Short preambule) | AATUM | 0.15 | ± 9.0 % |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | ± 9.6 % |
| 10423 | AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | ± 9.6 % |
| | | | VV L/\(\(\dagger\) | 0.47 | |
| | | IEEE 802 11n (HT Greenfield, 72.2 Mbps, 64-QAM) | MALANI | 0.40 | |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, RPSK) | WLAN | 8.40 | ±9.6 % |
| 10424 10425 | AAB AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | WLAN | 8.41 | ± 9.6 % |
| 10424 10425 10426 | AAB AAB AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN WLAN | 8.41 8.45 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 | AAB AAB AAB AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN WLAN WLAN | 8.41 8.45 8.41 | ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 | AAB AAB AAB AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD | 8.41 8.45 8.41 8.28 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 | AAB AAB AAB AAB AAD | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 | AAB AAB AAB AAB AAD AAD | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 | AAB AAB AAB AAD AAD AAC AAC | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 | AAB AAB AAB AAD AAD AAC AAC AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) | WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 | AAB AAB AAB AAD AAD AAC AAC | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAC AAC AAC AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAD AAC AAC AAA AAF | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAC AAC AAA AAA AAF AAD AAD | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 7.56 7.53 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAD AAC AAC AAA AAF | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ± 9.6 % ± 9.6 % |

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| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.59 | ± 9.6 % |
|-------|--|---|----------|----------|----------|
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ± 9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2.3.4.7.8.9) | | | |
| 10462 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.30 | ±9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10463 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.56 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10464 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2.3.4.7.8.9) | | | |
| 10465 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10466 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ±9.6% |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10467 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL | LTE-TDD | 7.82 | ±9.6% |
| | | Subframe=2,3,4,7,8,9) | | | <u> </u> |
| 10468 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10469 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.56 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | 7.00 | 1 |
| 10470 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10471 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | 1 MM TDD | 0.53 | . 0.00/ |
| 10472 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | LTE TOD | 7.82 | 1069/ |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | LTC TOO | 8.32 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL | LTE-TDD | 0.32 | 1 9.0 % |
| 40475 | 0.05 | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 10475 | AAE | | | 0.57 | 3.0 70 |
| 10477 | AAF | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| 10477 | AAF | Subframe=2,3,4,7,8,9) | | 0.02 | 2 0.0 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 10470 | ^^' | Subframe=2,3,4,7,8,9) | | 0.07 |] |
| 10479 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10473 | 777 | Subframe=2,3,4,7,8,9) | | ''' ' | |
| 10480 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.18 | ± 9.6 % |
| 10400 | ' ' ' ' | Subframe=2,3,4,7,8,9) | | | |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.45 | ± 9.6 % |
| .5,51 | "" | Subframe=2.3.4.7.8.9) | | 1 | |
| 10482 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL | LTE-TDD | 7.71 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10483 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.39 | ± 9.6 % |
| | - | Subframe=2.3.4.7.8.9) | | | |
| 10484 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.47 | ± 9.6 % |
| | 1 | Subframe=2,3,4,7,8,9) | | | |
| 10485 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL | LTE-TDD | 7.59 | ±9.6 % |
| | L | Subframe=2,3,4,7,8,9) | | | |
| 10486 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.38 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10487 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.60 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10488 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL | LTE-TDD | 7.70 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10489 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.31 | ± 9.6 % |
| | | Subframe=2.3.4.7.8.9) | | <u> </u> | 1 |
| 10490 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10491 | 1 | Subframe=2,3,4,7,8,9) | | | |

| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.41 | ± 9.6 % |
|-------------------------|------------|---|-----------|--------------|--------------------|
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.37 | ± 9.6 % |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10497 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.40 | ± 9.6 % |
| 10499 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10501 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.44 | ± 9.6 % |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.72 | ± 9.6 % |
| 10504 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.31 | ±9.6 % |
| 10505 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10507 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.36 | ± 9.6 % |
| 10508 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.99 | ± 9.6 % |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.49 | ± 9.6 % |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.51 | ± 9.6 % |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.42 | ± 9.6 % |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ± 9.6 % |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | WLAN | 1,58 | ± 9.6 % |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) | WLAN | 1.57 | ± 9.6 % |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10518 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | WLAN | 8.39 | ±9.6 % |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.12 | ± 9.6 % |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 7.97 | ± 9.6 % |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) | WLAN | 8.45 | ±9.6 % |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.08 | ± 9.6 % |
| 10524 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.21 | ± 9.6 % |
| | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10528 | | LIEFE DOD 44 MEE: (OOM) LANGO 4 OO 1 LL LL | | | |
| 10529 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10529 10531 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | WLAN WLAN | 8.36 8.43 | ± 9.6 % ± 9.6 % |
| 10529 10531 10532 | AAB AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | | | ± 9.6 % |
| 10529 10531 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.43 | |

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| 10535 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
|----------------|-------|---|--------------|------|------------------|
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.32 | ±9.6% |
| 10537 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.44 | ± 9.6 % |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.54 | ±9.6 % |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.39 | ±9.6 % |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10544 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.47 | ± 9.6 % |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10546 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | WLAN | 8,49 | ± 9.6 % |
| 10548 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.42 | ±9.6 % |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.45 | ±9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.48 | ±9.6% |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.47 | ± 9.6 % |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10563 | | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| | AAC | IEEE 802.11ac WiFi (180MHz, MC39, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10564 | AAA | | VVLAIN | 0.23 | 2 9.0 % |
| 40565 | A A A | cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty | WLAN | 8.45 | ± 9.6 % |
| 10565 | AAA | , | VV EATIV | 0.45 | 1 3.0 /6 |
| 40500 | 0.0.0 | cycle) | WLAN | 8,13 | ±9.6 % |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty | WLAN | 0.13 | 19.076 |
| 40507 | | cycle) | 144 451 | | ± 9.6 % |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty | WLAN | 8.00 | ± 9.6 % |
| 40500 | | cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty | WLAN | 8.37 | ±9.6 % |
| 10568 | AAA | • | VVLAIN | 0.37 | 1 9.0 /6 |
| 40500 | | cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty | WLAN | 8.10 | ± 9.6 % |
| 10569 | AAA | , , , , , , | VVL/AIN | 0.10 | 1 5.0 % |
| 40570 | | cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty | WLAN | 8.30 | ± 9.6 % |
| 10570 | AAA | | VVLAIN | 0.30 | I 9.0 76 |
| 40574 | 1000 | cycle) | WLAN | 1.99 | ±9.6 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | | 1.99 | |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | WLAN | | ± 9.6 % |
| 10573 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty | WLAN | 8.59 | ± 9.6 % |
| | 1 | cycle) | 100 001 | | 10000 |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty | WLAN | 8.60 | ± 9.6 % |
| <u></u> | | cycle) | 1400 440 | | 1000 |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty | WLAN | 8.70 | ±9.6% |
| | | cycle) | | | |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty | WLAN | 8.49 | ± 9.6 % |
| | | cycle) | | | |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty | WLAN | 8.36 | ± 9.6 % |
| | | cycle) | | | 1.0000 |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty | WLAN | 8.76 | ± 9.6 % |
| | | cycle) | | | 1.555 |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty | WLAN | 8.35 | ± 9.6 % |
| | | cycle) | | | |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty | WLAN | 8.67 | ± 9.6 % |
| | | cycle) | | | |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10585 | AAB | | | | |
| 10585 10586 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle) | WLAN WLAN | 8,49 | ±9.6 % ±9.6 % |

| 40500 | 1 A A D | LEED COO AA A MUSIC COO ACCUSED AS AN | | | |
|-------|---------|---|---------------|-------|----------|
| 10588 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10589 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 | ±9.6 % |
| 10590 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10591 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10592 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10593 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | WLAN | 8.64 | |
| 10594 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | | | ± 9.6 % |
| 10595 | AAB | FEEE 002.1111 (111 Mixed, 20MHz, MCCC, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| | · | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10596 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % |
| 10597 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10598 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10599 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10600 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10601 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10602 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | WLAN | - | |
| 10603 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | | 8.94 | ± 9.6 % |
| 10604 | | IFFE 902.44 (UT Mixed, 40MHz, MOS4, 90pc duty cycle) | WLAN | 9.03 | ± 9.6 % |
| | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10605 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | WLAN | 8.97 | ± 9.6 % |
| 10606 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10608 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10609 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10610 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10611 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | WLAN | | |
| 10612 | AAB | IEEE 802 1130 WIE (20MHz, MOOF, 30pc duty Cycle) | | 8.70 | ±9.6 % |
| 10612 | | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ±9.6 % |
| | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10614 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.59 | ±9.6% |
| 10615 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10616 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10617 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10618 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10619 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | WLAN | | |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | | 8.86 | ± 9.6 % |
| 10620 | | IEEE 802.11 ac WIFT (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| | AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10622 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.68 | ± 9.6 % |
| 10623 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10624 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10625 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10626 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10627 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10628 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle) | WLAN | | |
| 10629 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle) | | 8.71 | ± 9.6 % |
| 10630 | AAB | TEEE 002.1 Tac WIFT (00MHz, NICSS, 90pc duty cycle) | WLAN | 8.85 | ±9.6 % |
| | | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10631 | AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.81 | ±9.6% |
| 10632 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10633 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10634 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10635 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | WLAN | | |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | | 8.83 | ± 9.6 % |
| 10638 | | | WLAN | 8.79 | ± 9.6 % |
| | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ± 9.6 % |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle) | WLAN | 8.98 | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle) | | | |
| 10645 | AAC | IEEE 802.11ac WiF1 (160MHz, MCS9, 90pc duty cycle) | WLAN | 9.05 | ± 9.6 % |
| 10646 | AAF | TE TOD (SC EDMA 4 DD E MIL ODOK 11 O 17 | WLAN | 9.11 | ± 9.6 % |
| | | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| 10647 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| 10648 | AAA | CDMA2000 (1x Advanced) | CDMA2000 | 3.45 | ±9.6% |
| 10652 | AAD | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | ± 9.6 % |
| 10653 | AAD | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.42 | ± 9.6 % |
| 10654 | AAD | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.96 | ± 9.6 % |
| | | | 1 - : m 1 U U | U.UU | ± 0.0 /0 |

EX3DV4- SN:7410 July 16, 2019

| 40055 | | LTE TDD (OFDMA COMULT F TM 2.4 Clinging 449/) | LTE-TDD | 7.21 | ± 9.6 % |
|----------------|------------|---|--------------|--------------|--------------------|
| 10655 10658 | AAE AAA | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) Pulse Waveform (200Hz, 10%) | Test | 10.00 | ± 9.6 % |
| 10659 | AAA | Pulse Waveform (200Hz, 70%) Pulse Waveform (200Hz, 20%) | Test | 6.99 | ± 9.6 % |
| 10660 | AAA | Pulse Waveform (200Hz, 40%) | Test | 3.98 | ± 9.6 % |
| 10661 | AAA | Pulse Waveform (200Hz, 60%) | Test | 2.22 | ± 9.6 % |
| 10662 | AAA | Pulse Waveform (200Hz, 80%) | Test | 0.97 | ± 9.6 % |
| 10670 | AAA | Bluetooth Low Energy | Bluetooth | 2.19 | ±9.6 % |
| 10670 | AAA | IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle) | WLAN | 9.09 | ± 9.6 % |
| 10671 | AAA | IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10672 | AAA | IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10673 | AAA | IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10675 | AAA | IEEE 802.11ax (20MHz, MCS3, 30pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10676 | AAA | IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10677 | AAA | IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10678 | AAA | IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10679 | AAA | IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10680 | AAA | IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10681 | AAA | IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle) | WLAN | 8.62 | ± 9.6 % |
| 10682 | AAA | IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10683 | AAA | IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10684 | AAA | IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.26 | ± 9.6 % |
| 10685 | AAA | IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.33 | ±9.6 % |
| 10686 | AAA | IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle) | WLAN | 8.28 | ± 9.6 % |
| 10687 | AAA | IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10688 | AAA | IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10689 | AAA | IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10690 | AAA | IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10691 | AAA | IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.25 | ±9.6% |
| 10692 | AAA | IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10694 | AAA | IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle) | WLAN | 8.57 | ±9.6% |
| 10695 | AAA | IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle) | WLAN | 8.78 | ±9.6 % |
| 10696 | AAA | IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.91 | ± 9.6 % |
| 10697 | AAA | IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10698 | AAA | IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10699 | AAA | IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10701 | AAA | IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.86 | ±9.6 % |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10703 | AAA | IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10704 | AAA | IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10705 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10706 | AAA | IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle) | WLAN | 8.66 | ± 9.6 % |
| 10707 | AAA | IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle) | WLAN | 8.32 | ± 9.6 % |
| 10708 | AAA | IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10709 | AAA | IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10710 | AAA | IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.29 | ±96% |
| 10711 | AAA | IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10712 | AAA | IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10713 | AAA | IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10714 | AAA | IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.26 | ± 9.6 % |
| 10715 | AAA | IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10716 | AAA | IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.30 | ± 9.6 % |
| 10717 | AAA | IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10718 | AAA | IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle) | WLAN | 8.24 | ± 9.6 % |
| 10719 | AAA | IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10720 | AAA | IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10721 | AAA | IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle) | WLAN WLAN | 8.76 | ± 9.6 % |
| 10722 | AAA | IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) | WLAN | 8.55 8.70 | ± 9.6 % ± 9.6 % |
| 10723 10724 | AAA | IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10724 | AAA | IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10725 | AAA | IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10727 | AAA | IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.66 | ± 9.6 % |
| 10121 | [4444 | ו ובעב טטב. דומא (סטואוו וב, ואוססט, סטוים מענץ טייסוים) | I ALTERIAL | 1 0.00 | _ = 0.0 /0 |

| | | 1 | | | |
|-------|-----|--|------|------|---------|
| 10728 | AAA | IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10729 | AAA | IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10730 | AAA | IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10731 | AAA | IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10732 | AAA | IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10733 | AAA | IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.40 | ±9.6% |
| 10734 | AAA | IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10735 | AAA | IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10736 | AAA | IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10737 | AAA | IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10738 | AAA | IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle) | WLAN | 8,42 | ± 9.6 % |
| 10739 | AAA | IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10740 | AAA | IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10741 | AAA | IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle) | WLAN | 8.40 | ± 9.6 % |
| 10742 | AAA | IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) | WLAN | 8.43 | ± 9.6 % |
| 10743 | AAA | IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10744 | AAA | IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) | WLAN | 9.16 | ± 9.6 % |
| 10745 | AAA | IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.93 | ± 9.6 % |
| 10746 | AAA | IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) | WLAN | 9.11 | ± 9.6 % |
| 10747 | AAA | IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) | WLAN | 9.04 | ± 9.6 % |
| 10748 | AAA | IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) | WLAN | 8.93 | ± 9.6 % |
| 10749 | AAA | IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10750 | AAA | IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.79 | ±9.6% |
| 10751 | AAA | IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10752 | AAA | IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10753 | AAA | IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) | WLAN | 9.00 | ±9.6% |
| 10754 | AAA | IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10755 | AAA | IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10756 | AAA | IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10757 | AAA | IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10758 | AAA | IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10759 | AAA | IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10760 | AAA | IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10761 | AAA | IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10762 | AAA | IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10763 | AAA | IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10764 | AAA | IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10765 | AAA | IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10766 | AAA | IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle) | WLAN | 8.51 | ± 9.6 % |

^E Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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

Accreditation No.: SCS 0108

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

Client

PC Test

Certificate No: EX3-7308_Aug19

CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7308

Calibration procedure(s)

QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes

Calibration date:

August 16, 2019

20-20-201

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 | 1D | Cal Date (Certificate No.) | Scheduled Calibration |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: S5277 (20x) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| DAE4 | SN: 660 | 19-Dec-18 (No. DAE4-660_Dec18) | Dec-19 |
| Reference Probe ES3DV2 | SN: 3013 | 31-Dec-18 (No. ES3-3013_Dec18) | Dec-19 |
| Secondary Standards | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: MY41498087 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: 000110210 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

Name Function Signature
Calibrated by: Claudio Leubler Laboratory Technician

Approved by: Katja Pokovic Technical Manager

Issued: August 17, 2019

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
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Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF

crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters

A, B, C, D Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle

Certificate No: EX3-7308_Aug19

information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

August 16, 2019 EX3DV4 - SN:7308

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|-------------------------------|----------|----------|----------|-----------|
| Norm (μV/(V/m)²) ^A | 0.49 | 0.59 | 0.44 | ± 10.1 % |
| DCP (mV) ^B | 100.2 | 95.2 | 99.6 | |

Calibration Results for Modulation Response

| UID | Communication System Name | | A dB | B dBõV | С | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|-------------|-----------------------------|---|---------|-----------|-------|---------|----------|-------------|----------------------------------|
| 0 0 | CW | X | 0.00 | 0.00 | 1.00 | 0.00 | 163.2 | ± 2.7 % | ± 4.7 % |
| | | Y | 0.00 | 0.00 | 1.00 | | 158.0 | | |
| | | Z | 0.00 | 0.00 | 1.00 | | 156.0 | | |
| 10352- | Pulse Waveform (200Hz, 10%) | X | 15.00 | 87.65 | 19.50 | 10.00 | 60.0 | ± 3.0 % | ± 9.6 % |
| AAA | | Y | 15.00 | 87.63 | 19.80 | | 60.0 | | |
| | | Z | 15.00 | 85.44 | 18.12 | | 60.0 | | |
| 10353- | Pulse Waveform (200Hz, 20%) | X | 15.00 | 90.96 | 19.99 | 6.99 | 80.0 | ± 1.9 % | ± 9.6 % |
| AAA | | Y | 15.00 | 90.06 | 19.63 | | 80.0 | | |
| | | Z | 15.00 | 87.16 | 17.63 | | 80.0 | | |
| 10354- | Pulse Waveform (200Hz, 40%) | X | 15.00 | 98.78 | 22.36 | 3.98 | 95.0 | ± 1.4 % | ± 9.6 % |
| AAA | | Υ | 15.00 | 93.68 | 19.62 | | 95.0 | | |
| | | Z | 15.00 | 93.44 | 19.14 | | 95.0 | | |
| 10355- Puls | Pulse Waveform (200Hz, 60%) | X | 15.00 | 116.73 | 29.23 | 2.22 | 120.0 | ± 1.7 % | ± 9.6 % |
| AAA | | Y | 15.00 | 91.04 | 16.59 | | 120.0 | ļ | |
| | | Z | 15.00 | 110.36 | 25.36 | | 120.0 | | |
| 10387- | QPSK Waveform, 1 MHz | Х | 1.31 | 69.49 | 13.82 | 0.00 | 150.0 | ± 3.0 % | ± 9.6 % |
| AAA | | Υ | 1.10 | 67.48 | 12.38 | | 150.0 | | |
| | | Z | 0.62 | 61.98 | 8.52 | | 150.0 | | |
| 10388- | QPSK Waveform, 10 MHz | X | 2.80 | 72.34 | 18.09 | 0.00 | 150.0 | ± 1.8 % | ± 9.6 % |
| AAA | | Υ | 2.95 | 73.48 | 18.66 | | 150.0 | | |
| | | Z | 2.53 | 71.44 | 17.69 | | 150.0 | | |
| 10396- | 64-QAM Waveform, 100 kHz | X | 3.37 | 73.39 | 20.27 | 3.01 | 150.0 | ± 1.2 % | ± 9.6 % |
| AAA | | Y | 3.51 | 74.17 | 21.30 | | 150.0 | 1 | |
| | | Z | 3.52 | 75.75 | 21.34 | | 150.0 | | |
| 10399- | 64-QAM Waveform, 40 MHz | X | 3.69 | 68.31 | 16.63 | 0.00 | 150.0 | ± 1.8 % | ± 9.6 % |
| AAA | | Y | 3.81 | 68.87 | 17.06 | | 150.0 | | |
| | | Z | 3.62 | 68.32 | 16.59 | | 150.0 | | |
| 10414- | WLAN CCDF, 64-QAM, 40MHz | X | 4.93 | 65.97 | 15.89 | 0.00 | 150.0 | ± 3.9 % | ± 9.6 % |
| AAA | | Y | 5.11 | 66.50 | 16.37 | | 150.0 | 1 | |
| | | Z | 4.86 | 66.27 | 16.01 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Sensor Model Parameters

| | C1 fF | C2 fF | α V⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V ¹ | T6 |
|---|----------|----------|----------|--------------------------|--------------------------|----------|-----------------------|----------------------|------|
| Х | 49.8 | 370.85 | 35.61 | 10.75 | 0.21 | 5.08 | 0.98 | 0.32 | 1.01 |
| Y | 51.6 | 405.23 | 39.25 | 10.28 | 0.51 | 5.10 | 0.00 | 0.57 | 1.01 |
| Z | 38.4 | 284.05 | 35.17 | 7.94 | 0.25 | 5.05 | 2.00 | 0.06 | 1.01 |

Other Probe Parameters

| Sensor Arrangement | Triangular |
|---|------------|
| Connector Angle (°) | 106.3 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^c | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|-------------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 41.9 | 0.89 | 10.20 | 10.20 | 10.20 | 0.50 | 0.80 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.87 | 9.87 | 9.87 | 0.47 | 0.86 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.50 | 8.50 | 8.50 | 0,31 | 0.85 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.17 | 8.17 | 8.17 | 0.28 | 0.85 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 7.74 | 7.74 | 7.74 | 0.26 | 0.97 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7,38 | 7.38 | 7.38 | 0.35 | 0.87 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.18 | 7.18 | 7.18 | 0.31 | 0.94 | ± 12.0 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

⁶ MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target fissue parameters.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Body Tissue Simulating Media

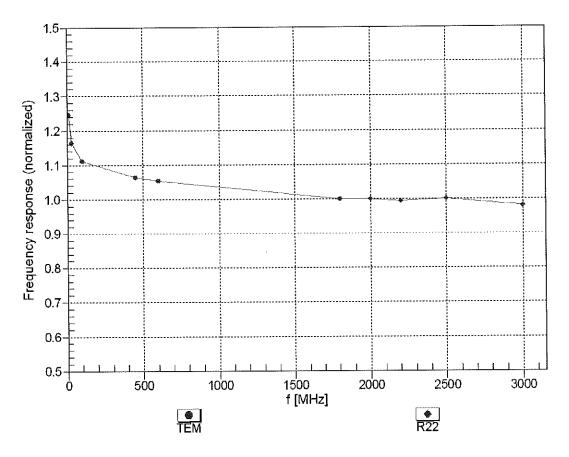
| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|------------------------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 55.5 | 0.96 | 10.59 | 10.59 | 10.59 | 0.35 | 1.01 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 10.43 | 10.43 | 10.43 | 0.50 | 0.85 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8.25 | 8.25 | 8.25 | 0.37 | 0.85 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.87 | 7.87 | 7.87 | 0.36 | 0.85 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.75 | 7.75 | 7.75 | 0.40 | 0.87 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.46 | 7.46 | 7.46 | 0.36 | 0.88 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.37 | 7.37 | 7.37 | 0.30 | 0.95 | ± 12.0 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^a Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

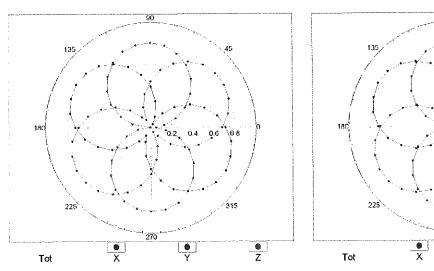


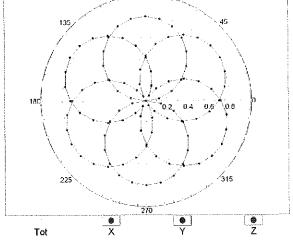
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

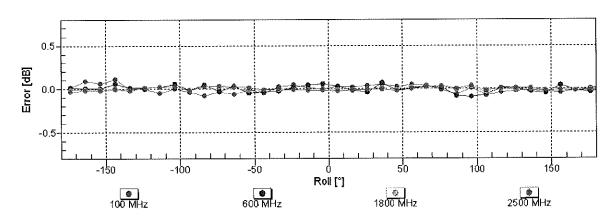
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$



f=1800 MHz,R22

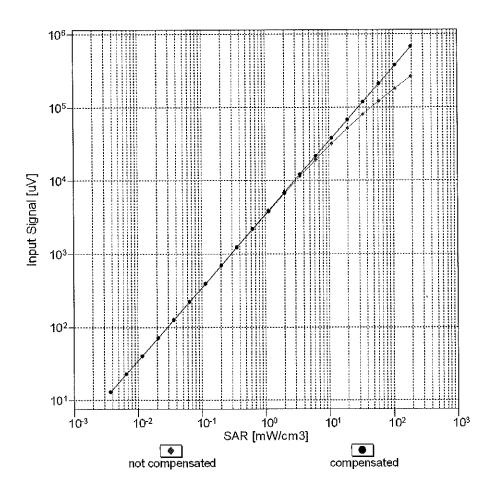


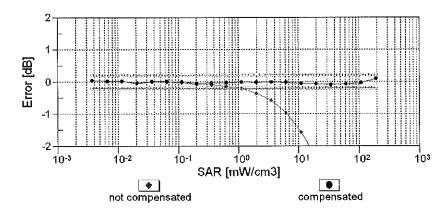




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)

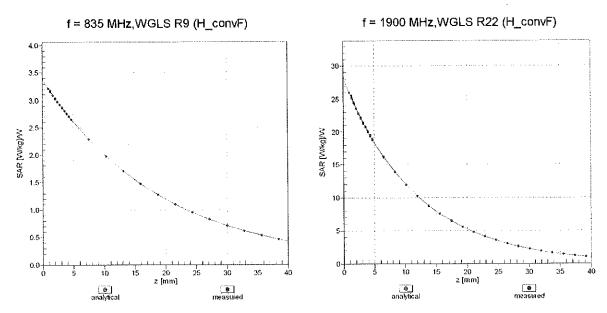




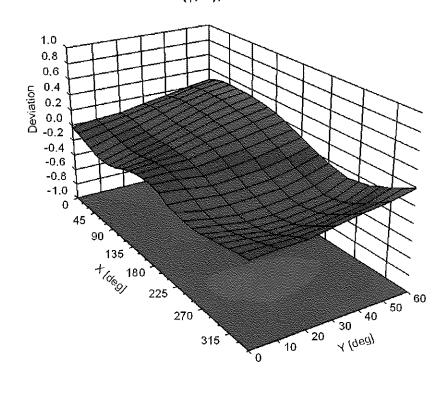
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ , ϑ), f = 900 MHz



Appendix: Modulation Calibration Parameters

| UID | Rev | Communication System Name | Group | PAR | Unc |
|-------------|-----|---|-----------|-------------|---------|
| | | | • | (dB) | (k=2) |
| 0 | | CW | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ± 9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ±9.6% |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ±9.6% |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ±9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ±9.6 % |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ±9.6% |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ±9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ±9.6% |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ±9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ±9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | GSM | 7.78 | ±9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ±9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth | 1.87 | ±9.6% |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 | ±9.6% |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 7.74 | ±9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) | Bluetooth | 4.53 | ±9.6 % |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth | 3.83 | ±9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ± 9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | 4.77 | ±9.6 % |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ±9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ±9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM. 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ± 9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 16 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ±9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSDPA) | WCDMA | 3.98 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ± 9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ± 9.6 % |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | ± 9.6 % |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 10-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10102 | CAG | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 04-QAM) | LTE-FDD | 9.29 | ± 9.6 % |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.29 | ± 9.6 % |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TOD | 10,01 | |
| | | | | | ±9.6% |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | ± 9.6 % |

| 10110 CAG LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-CAM) | | | | | | |
|--|---|-------------|---|--|-------|---------|
| 10111 | 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10112 | 10110 | CAG | | | 5.75 | ± 9.6 % |
| 10112 CAG LTE-FDD (SC-FDMA, 109% RB, 10 MHz, 64-OAM) LTE-FDD 6.602 ±9.6 % 10114 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.46 ±9.6 % 10116 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.46 ±9.6 % 10116 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.46 ±9.6 % 10116 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.47 ±9.6 % 10117 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.47 ±9.6 % 10118 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.47 ±9.6 % 10118 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.59 ±9.6 % 10119 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.59 ±9.6 % 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) UTE-FDD 6.49 ±9.6 % 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) LTE-FDD 6.53 ±9.6 % 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE-FDD 6.53 ±9.6 % 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 6-OAM) LTE-FDD 6.55 ±9.6 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 6-OAM) LTE-FDD 6.55 ±9.6 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 6-OAM) LTE-FDD 6.55 ±9.6 % 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 6-OAM) LTE-FDD 6.56 ±9.6 % 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 6-OAM) LTE-FDD 6.65 ±9.6 % 10147 CAF LTE-FDD (SC-FDMA, 500% RB, 14 MHz, 6-OAM) LTE-FDD 6.64 ±9.6 % 10147 CAF LTE-FDD (SC-FDMA, 500% RB, 12 MHz, 6-OAM) LTE-FDD 6.41 ±9.6 % 10147 CAF LTE-FDD (SC-FDMA, 500% RB, 20 MHz, 6-OAM) LTE-FDD 6.42 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 500% RB, 20 MHz, 6-OAM) LTE-FDD 6.64 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 500% RB, 20 MHz, 6-OAM) LTE-FDD 6.62 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 500% RB, 20 MHz, 6-OAM) LTE-FDD 6.62 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 500% RB, 20 MHz, 6-OAM) LTE-FDD 6.62 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 500% RB | 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | |
| 10113 | 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 | ± 9.6 % |
| 10116 CAC | 10113 | CAG | | LTE-FDD | 6.62 | ±9.6% |
| 10111 | 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | ±9.6% |
| 10111 | 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | WLAN | 8.46 | ± 9.6 % |
| 10118 CAC | | CAC | | WLAN | 8.15 | ±9.6% |
| 10119 CAC IEEE 802.11n (HT Mixed, 315 Mbps, 16-CAM) | 10117 | CAC | | WLAN | 8.07 | |
| 10119 CAC IEEE 802 11n (HT Mixed, 135 Mbps, 64-CAM) | | | | | | |
| 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | | | | | | |
| 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | | | | | | |
| 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-FDD 6.35 ±9.8 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE-FDD 6.35 ±9.8 % 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 26-OAM) LTE-FDD 6.85 ±9.8 % 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 6.72 ±9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 6.41 ±9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 6.41 ±9.8 % 10149 CAE LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 6.42 ±9.8 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 2.0 MHz, 16-OAM) LTE-FDD 6.42 ±9.8 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-FDD 6.42 ±9.8 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-FDD 6.60 ±9.6 % 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-TDD 9.22 ±9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-TDD 9.22 ±9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-TDD 9.22 ±9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 2.0 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10150 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10150 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.59 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 16 MHz, QPSK) LTE-FD | | | | | | |
| 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE-FDD 6.35 ±9.6 % | | | | | | |
| 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD 6.65 ±9.6 % 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 6.41 ±9.6 % 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.72 ±9.6 % 10149 CAE LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.42 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.62 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.60 ±9.6 % 10151 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ±9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ±9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ±9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 10.05 ±9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 10.05 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.79 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.79 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.79 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.79 ±9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 5.79 ±9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 6.43 ±9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 6.52 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.52 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 18R, 15 MHz, QPSK) LTE-F | | | | | | |
| 10146 CAF LTE-FDD (SC-FDMA, 100%, RB, 1.4 MHz, QPSK) LTE-FDD 5.76 ±9.8 % 10148 CAF LTE-FDD (SC-FDMA, 100%, RB, 1.4 MHz, (8-QAM) LTE-FDD 6.41 ±9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100%, RB, 1.4 MHz, 64-QAM) LTE-FDD 6.72 ±9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100%, RB, 2.0 MHz, 16-QAM) LTE-FDD 6.72 ±9.8 % 10150 CAE LTE-FDD (SC-FDMA, 50%, RB, 2.0 MHz, 16-QAM) LTE-FDD 6.60 ±9.8 % 10151 CAG LTE-FDD (SC-FDMA, 50%, RB, 2.0 MHz, 16-QAM) LTE-FDD 9.22 ±9.8 % 10152 CAG LTE-TDD (SC-FDMA, 50%, RB, 2.0 MHz, 16-QAM) LTE-TDD 9.22 ±9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50%, RB, 2.0 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50%, RB, 2.0 MHz, QPSK) LTE-TDD 10.05 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-FDD 5.79 ±9.9 % 10157 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 16-QAM) LTE-FDD 6.43 ±9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 16-QAM) LTE-FDD 6.56 ±9.8 % 10158 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ±9.8 % 10158 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ±9.8 % 10158 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QPSK) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QPSK) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QPSK) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QPSK) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QPSK) LTE-FDD 6.56 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 18B, 20 MHz, QPSK) LTE-FDD 6.52 ±9.8 % 10160 CAE LTE-FDD (SC-FDMA, 18B, 20 MHz, QPSK) LTE-FDD 6.52 ±9.8 % 10160 CAE LTE-FDD (SC- | | | | | | |
| 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-FDD (S.72 Hz, 19.6 %) 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD (S.72 Hz, 19.6 %) 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD (S.72 Hz, 19.6 %) 10151 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD (S.6 6.0 ± 9.6 %) 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD (S.6 50 ± 9.6 %) 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.28 ± 9.6 % 10153 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 10.05 ± 9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 10.05 ± 9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 10.05 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 10.05 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 10-QAM) LTE-FDD 6.49 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 10-QAM) LTE-FDD 6.49 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.79 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 16- | | 4 | | | | |
| 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) | | | LTE-FDD (SC-FDMA 100% RB 1.4 MHz 16-OAM) | | | |
| 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 £9.6 % 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 £9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.28 £9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.29 £9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 10.05 £9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 10.05 £9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 £9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 5.75 £9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 5.79 £9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 £9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 10-QAM) LTE-FDD 5.79 £9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 10-QAM) LTE-FDD 6.62 £9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.63 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.63 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 170, 80% RB, 14 MHz, QPSK) LTE-FDD 6.62 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 170, 80% RB, 14 MHz, QPSK) LTE-FDD 6.52 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 170, 80% RB, 14 MHz, QPSK) LTE-FDD 6.52 £9.6 % 10160 CAE LTE-FDD (SC-FDMA, 170, 80% | | | | | | |
| 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, GA-CAM) | | | | | | |
| 10151 CAG LITE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LITE-TDD 9.28 ±9.6 % 10152 CAG LITE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LITE-TDD 10.05 ±9.6 % 10154 CAG LITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LITE-TDD 5.75 ±9.6 % 10154 CAG LITE-FDD (SC-FDMA, 50% RB, 10 MHz, 10-OAM) LITE-FDD 5.75 ±9.6 % 10155 CAG LITE-FDD (SC-FDMA, 50% RB, 10 MHz, 10-OAM) LITE-FDD 5.75 ±9.6 % 10156 CAG LITE-FDD (SC-FDMA, 50% RB, 10 MHz, 10-OAM) LITE-FDD 5.79 ±9.6 % 10157 CAG LITE-FDD (SC-FDMA, 50% RB, 50 MHz, 10-OAM) LITE-FDD 5.79 ±9.6 % 10158 CAG LITE-FDD (SC-FDMA, 50% RB, 50 MHz, 16-OAM) LITE-FDD 6.49 ±9.6 % 10159 CAG LITE-FDD (SC-FDMA, 50% RB, 50 MHz, 16-OAM) LITE-FDD 6.62 ±9.6 % 10159 CAG LITE-FDD (SC-FDMA, 50% RB, 50 MHz, 16-OAM) LITE-FDD 6.62 ±9.6 % 10160 CAE LITE-FDD (SC-FDMA, 50% RB, 50 MHz, 64-OAM) LITE-FDD 5.80 ±9.6 % 101610 CAE LITE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LITE-FDD 5.80 ±9.6 % 10162 CAE LITE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LITE-FDD 6.43 ±9.6 % 10166 CAE LITE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LITE-FDD 6.54 ±9.6 % 10166 CAE LITE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-OAM) LITE-FDD 5.46 ±9.6 % 10167 CAF LITE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-OAM) LITE-FDD 5.46 ±9.6 % 10169 CAE LITE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-OAM) LITE-FDD 5.46 ±9.6 % 10167 CAF LITE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-OAM) LITE-FDD 5.73 ±9.6 % 10169 CAE LITE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-OAM) LITE-FDD 5.73 ±9.6 % 10170 CAE LITE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-OAM) LITE-FDD 5.73 ±9.6 % 10171 CAG LITE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-OAM) LITE-FDD 5.72 ±9.6 % 10174 CAG LITE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-OAM) LITE-FDD 5.73 ±9.6 % 10176 CAG LITE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-OAM) LITE-FDD 5.72 ±9.6 % 10176 CAG LITE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-OAM) LITE-FDD 5.72 | | | | | | |
| 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 9.92 ± 9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 5.75 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 5.79 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 5.79 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, 20 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, 20 MHz, 20 MM) LTE-FDD 6.49 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, 20 MM) LTE-FDD 6.62 ± 9.6 % 10160 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 20 MM) LTE-FDD 6.52 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 20 MM) LTE-FDD 6.82 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.54 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-QAM) LTE-FDD 6.58 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.54 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.21 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.70 ± 9.6 % 10169 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.70 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.72 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.72 ± 9.6 % 10171 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.72 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 1 | | | | | | |
| 10153 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-CAM) LTE-FDD 5.75 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 10-CAM) LTE-FDD 5.75 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 10-CAM) LTE-FDD 5.79 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 10-CAM) LTE-FDD 6.43 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-FDD 6.49 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-CAM) LTE-FDD 6.54 ± 9.6 % 10166 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-CAM) LTE-FDD 6.58 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.54 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10169 CAE LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10169 CAE LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10174 CAE LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10174 CAE LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.70 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 18 R, 20 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 18 R, 50 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 18 R, 50 MHz, 64-CAM) LTE-FDD 6.50 ± 9.6 % 10176 CAG LTE-FDD (SC-FDM | | | | | | |
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| 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ±9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 5.82 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ±9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ±9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ±9.6 % 10166 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ±9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 5.46 ±9.6 % 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.21 ±9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.79 ±9.6 % 10169 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.79 ±9.6 % 10169 CAE LTE-FDD (SC-FDMA, 18, 20 MHz, QPSK) LTE-FDD 6.79 ±9.6 % 10170 CAE LTE-FDD (SC-FDMA, 18, 20 MHz, QPSK) LTE-FDD 6.79 ±9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-FDD 6.52 ±9.6 % 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-FDD 6.94 ±9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-TDD 9.48 ±9.6 % 10175 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-TDD 9.48 ±9.6 % 10175 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-TDD 9.48 ±9.6 % 10175 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-TDD 9.48 ±9.6 % 10175 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-TDD 9.48 ±9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, GPSK) LTE-FDD 6.52 ±9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, GPSK) LTE-FDD 6.52 ±9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, GPSK) LTE-FDD 6.52 ±9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, GPSK) LTE-FDD 6.50 ±9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, GPSK) LTE-FDD 6.50 ±9.6 % 10180 CAG | | | | | | |
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| 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 5.46 ± 9.6 % 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.21 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.79 ± 9.6 % 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.24 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 5.72 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 1 MHz, 64- | | | | | | |
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| 10171 AAE | 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 10.25 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 5.72 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 3 MHz, G4-QAM) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 3 MHz, G4-QAM) LTE-FDD 5.73 ± 9.6 % 10189 CAC LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10189 CAC LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC LEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) LTE-FDD 6.50 ± 9.6 % 10194 CAC LEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10196 CAC LEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10196 CAC LEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC LEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 | 10170 | CAE | | LTE-FDD | 6.52 | |
| 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 10.25 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 14 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 14 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 14 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, BPSK) ULAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 65 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, G4-QAM) WLAN 8.27 ± 9.6 % 10 | 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 10.25 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.27 ± 9.6 % | 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 10.25 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD | 10173 | CAG | | LTE-TDD | 9.48 | ±9.6% |
| 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.11 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QAM) WLAN 8.27 | *************************************** | CAG | | LTE-TDD | 10.25 | ± 9.6 % |
| 10176 | | | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, GPSK) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, GPSK) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, GPSK) LTE-FDD < | | | | | | |
| 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, GPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, GPSK) LTE-FDD 6.50 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD | | | | | | |
| 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN< | | | | | | |
| 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN | | | | | | |
| 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | | | | | | |
| 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) W | | | | | | |
| 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLA | | | | | | |
| 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN | | | | | · | |
| 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN< | | | | | - | |
| 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10193 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10194 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10197 CAC IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 % | | | | | | |
| | | | | | | |
| 10219 CAC IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) WLAN 8.03 ± 9.6 % | | | | | | |
| | 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | I WLAN | 8.03 | # y.v % |

| 40000 | 1010 | LIER DOG AL AUTHUR LA CORRECTION | | | , |
|---------|--|---|----------|-------|---------|
| 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN | 8.13 | ±9.6 % |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.27 | ±9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.06 | ± 9.6 % |
| 10223 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | WLAN | | |
| 10225 | | | | 8.08 | ± 9.6 % |
| | CAB | UMTS-FDD (HSPA+) | WCDMA | 5.97 | ± 9.6 % |
| 10226 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.49 | ± 9.6 % |
| 10227 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.26 | ± 9.6 % |
| 10228 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.22 | ± 9.6 % |
| 10229 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10230 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | | | |
| | | | LTE-TDD | 10.25 | ± 9.6 % |
| 10231 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | ± 9.6 % |
| 10232 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10233 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10234 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10235 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10236 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | | | |
| | | | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.82 | ± 9.6 % |
| 10242 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-TDD | | |
| | | | | 9.86 | ± 9.6 % |
| 10243 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.46 | ± 9.6 % |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | ±9.6% |
| 10245 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10246 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.91 | ± 9.6 % |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | ± 9.6 % |
| 10249 | CAG | | | | |
| | | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.81 | ± 9.6 % |
| 10251 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.17 | ± 9.6 % |
| 10252 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 9.90 | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | | | |
| ******* | , | | LTE-TDD | 9.20 | ± 9.6 % |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | ± 9.6 % |
| 10257 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | ± 9.6 % |
| 10258 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | ± 9.6 % |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.98 | ± 9.6 % |
| 10260 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10261 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| | ·—— | | | | |
| 10262 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | ± 9.6 % |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.16 | ± 9.6 % |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | ± 9.6 % |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 | ± 9.6 % |
| 10266 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.07 | ± 9.6 % |
| 10267 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | | 10.06 | |
| | | | LTE-TDD | | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.13 | ± 9.6 % |
| 10270 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-TDD | 9.58 | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | WCDMA | 4.87 | ± 9.6 % |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | ± 9.6 % |
| 10277 | CAA | PHS (QPSK) | PHS | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | ± 9.6 % |
| 10279 | CAA | | | | |
| | | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate | CDMA2000 | 3.46 | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | ± 9.6 % |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | ±9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | CDMA2000 | 12.49 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | | | |
| | | | LTE-FDD | 5.81 | ± 9.6 % |
| 10298 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | ± 9.6 % |
| | | | | | |

| 40000 | A A D | LTE EDD (OO EDMA 500/ DD 0 MHz 64 OAM) | LTE-FDD | 6.60 | ± 9.6 % |
|----------------|------------|---|--------------------|--------------|--------------------|
| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WiMAX | 12.03 | ± 9.6 % |
| 10301 10302 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL | WIMAX | 12.57 | ±9.6 % |
| 10302 | AAAA | symbols) | VVIIVII OC | 12.01 | _ 0.0 /0 |
| 10303 | AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WIMAX | 12.52 | ± 9.6 % |
| 10304 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 11.86 | ± 9.6 % |
| 10305 | AAA | IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 | WiMAX | 15.24 | ± 9.6 % |
| .0000 | , | symbols) | | | |
| 10306 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 | WiMAX | 14.67 | ± 9.6 % |
| | , | symbols) | | | |
| 10307 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 | WiMAX | 14.49 | ± 9.6 % |
| | | symbols) | | | |
| 10308 | AAA | IÉEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WiMAX | 14.46 | ±96% |
| 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 | WiMAX | 14.58 | ±9.6% |
| | | symbols) | | | |
| 10310 | AAA | IÉEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 | WiMAX | 14.57 | ± 9.6 % |
| | | symbols) | | 0.00 | |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | ±9.6% |
| 10313 | AAA | IDEN 1:3 | IDEN | 10.51 | ± 9.6 % |
| 10314 | AAA | IDEN 1:6 | IDEN | 13.48 | ± 9.6 % |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) | WLAN | 1.71 | ± 9.6 % |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10352 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | ±9.6% |
| 10353 | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | ± 9.6 % |
| 10354 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | ±9.6% |
| 10355 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | ± 9.6 % |
| 10356 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | ±9.6% |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10388 | AAA | QPSK Waveform, 10 MHz | Generic Generic | 6.27 | ± 9.6 % |
| 10396 | AAA | 64-QAM Waveform, 100 kHz | Generic | 6.27 | ± 9.6 % |
| 10399 | AAA | 64-QAM Waveform, 40 MHz IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10400 | AAD AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| 10401 10402 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0) | CDMA2000 | 3.76 | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0) | CDMA2000 | 3.77 | ±9.6 % |
| 10404 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 | 5.22 | ± 9.6 % |
| 10410 | AAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| 10410 | / / / / | Subframe=2,3,4,7,8,9, Subframe Conf=4) | | | ļ |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) | WLAN | 1.54 | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.14 | ± 9.6 % |
| | | Long preambule) | | | |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.19 | ± 9.6 % |
| | | Short preambule) | ļ | 0.55 | 1.000 |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | ± 9.6 % |
| 10423 | AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | ± 9.6 % |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | WLAN | 8.40 | ± 9.6 % |
| 10425 | AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | WLAN | 8.41 | ± 9.6 % |
| 10426 | AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN | 8.45 | ± 9.6 % |
| 10427 | AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN | 8.41 | ± 9.6 % |
| 10430 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | LTE-FDD | 8.28 | ± 9.6 % |
| 10431 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | LTE-FDD | 8.38 | ± 9.6 % ± 9.6 % |
| 10432 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | LTE-FDD | 8.34 8.34 | ± 9.6 % |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | LTE-FDD WCDMA | | ± 9.6 % |
| 10434 | AAA | W-CDMA (BS Test Model 1, 64 DPCH) | LTE-TDD | 8.60 7.82 | ± 9.6 % |
| 10435 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL | LIE-IDD | 1.02 | ± 3.0 % |
| 40447 | | Subframe=2,3,4,7,8,9) | LTE-FDD | 7.56 | ± 9.6 % |
| 10447 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.53 | ± 9.6 % |
| 10448 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%) | LTE-FDD | 7.51 | ± 9.6 % |
| 10449 10450 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%) | LTE-FDD | 7.48 | ± 9.6 % |
| 1 10450 | AAC | LIE-FOD (OFDIVIA, 20 WHZ, E-1W 3.1, Clipping 44 //) | 1 -1-1 | 1.10 | |

| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.59 | ± 9.6 % |
|-------|-----|--|----------|------|---------|
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ±9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10462 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.30 | ± 9.6 % |
| 10463 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.56 | ± 9.6 % |
| 10464 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10467 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10469 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.56 | ± 9.6 % |
| 10470 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ±9.6 % |
| 10471 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL. Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10472 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ±9.6 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10479 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10480 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.18 | ±9.6 % |
| 10481 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ±9.6 % |
| 10482 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.71 | ± 9.6 % |
| 10483 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.39 | ± 9.6 % |
| 10484 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.47 | ± 9.6 % |
| 10485 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL. Subframe=2,3,4,7,8,9) | LTE-TDD | 7.59 | ±9.6 % |
| 10486 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.38 | ± 9.6 % |
| 10487 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.60 | ± 9.6 % |
| 10488 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.70 | ± 9.6 % |
| 10489 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.31 | ± 9.6 % |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |

| Subframe=2,3,4,7,8,9 | | | | | | |
|---|-------|-----|--|---------|------|------------|
| 10493 AAE | 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2.3.4.7,8.9) | LTE-TDD | 8.41 | ± 9.6 % |
| 10494 AAF | 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.55 | ± 9.6 % |
| 10495 | 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10496 | 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL | LTE-TDD | 8.37 | ± 9.6 % |
| 10497 | 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| 10498 | 10497 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.67 | ± 9.6 % |
| 10499 | 10498 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.40 | ± 9.6 % |
| 10500 | 10499 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.68 | ± 9.6 % |
| 10501 | 10500 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL | LTE-TDD | 7.67 | ± 9.6 % |
| 10502 | 10501 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.44 | ± 9.6 % |
| 10503 | 10502 | AAC | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL. | LTE-TDD | 8.52 | ± 9.6 % |
| 10504 | 10503 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL | LTE-TDD | 7.72 | ± 9.6 % |
| 10505 | 10504 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.31 | ± 9.6 % |
| 10506 | 10505 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| TE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | 10506 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10508 | 10507 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.36 | ± 9.6 % |
| 10509 | 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.55 | ± 9.6 % |
| 10510 | 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL | LTE-TDD | 7.99 | ± 9.6 % |
| 10511 | 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL | LTE-TDD | 8.49 | ± 9.6 % |
| 10512 | 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.51 | ± 9.6 % |
| 10513 | 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10514 | 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL | LTE-TDD | 8.42 | ± 9.6 % |
| 10515 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) WLAN 1.58 ± 9.6 % 10516 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) WLAN 1.57 ± 9.6 % 10517 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) WLAN 1.58 ± 9.6 % 10518 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) WLAN 8.23 ± 9.6 % 10519 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.39 ± 9.6 % 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10524 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.27 < | 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.45 | ± 9.6 % |
| 10516 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) WLAN 1.57 ± 9.6 % 10517 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) WLAN 1.58 ± 9.6 % 10518 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) WLAN 8.23 ± 9.6 % 10519 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.39 ± 9.6 % 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 | 10515 | ΔΔΔ | Subtrame=2,3,4,7,8,9) IEEE 802 11h WiFi 2 4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10517 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) WLAN 1.58 ± 9.6 % 10518 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) WLAN 8.23 ± 9.6 % 10519 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.39 ± 9.6 % 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.21 ± 9.6 % | | | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) | WLAN | 1.57 | |
| 10518 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) WLAN 8.23 ± 9.6 % 10519 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.39 ± 9.6 % 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % | | | IEEE 802.11b WIFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | | | |
| 10519 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.39 ± 9.6 % 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % | | | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10520 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) WLAN 8.12 ± 9.6 % 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % | | | IEEE 802,11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | | 8.39 | ± 9.6 % |
| 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) WLAN 7.97 ± 9.6 % 10522 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % < | | | IEEE 802 11a/h WiEi 5 GHz (OEDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.12 | ± 9.6 % |
| 10521 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.45 ± 9.6 % 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802 11a/h WiFi 5 GHz (OEDM, 24 Mbps, 99pc duty cycle) | | | |
| 10523 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) WLAN 8.08 ± 9.6 % 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802 11a/h WiEi 5 GHz (OEDM 36 Mbns 99nc duty cycle) | | | |
| 10524 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.27 ± 9.6 % 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802 41a/b Wife 5 CHz (OFDM A8 Mbne QQnc duty cycle) | | | |
| 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10526 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 002.11a/h WIE16 GHz (OEDM 54 Mbps, dope duty cycle) | | | |
| 10525 AAB IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) WLAN 8.42 ± 9.6 % 10527 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE OUZ. 1 Id/11 WIFT O GITZ (OF DIV), O4 WIDPS, 33PC GUTY CYCLE) | | | |
| 10520 AAB IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) WLAN 8.21 ± 9.6 % 10528 AAB IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802.TT8C WIFT (ZUMITZ, MOSO, 990C duty cycle) | | | |
| 10527 74.5 IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802.11ac vviii (20MHz, MCS1, 99pc duty cycle) | | | |
| 10529 AAB IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) WLAN 8.36 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | | | | |
| 10525 74.5 IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | | | | |
| 10531 AAB IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) WLAN 8.29 ± 9.6 % 10533 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | | | | |
| 10532 AAB IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) WLAN 8.38 ± 9.6 % | | | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | | | |
| 10000 AAD 1122 002:11d0 tril 1 (20th 2:, 1000) 0,000 | | | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | | | |
| 10534 AAB IEEE 802,11ac WiFi (40MHz, MCS0, 99pc duty cycle) | | | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) | | | |
| | 10534 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle) | VVLAIV | 0.40 | 1 1 3.0 70 |

| 10525 | 1 4 4 15 | LIFE COO 44 INCT (40ML) MODA CO (1) | | | |
|----------------|----------|--|----------|----------|---------|
| 10535 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.32 | ± 9.6 % |
| | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.44 | ±9.6% |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.54 | ±9.6% |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.46 | ±9.6% |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10544 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.47 | ±9.6% |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10546 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.35 | ±9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10548 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.37 | ±9.6% |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.42 | ±9.6% |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.47 | ±9.6% |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.50 | ±9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.52 | ±9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty | WLAN | 8.25 | ± 9.6 % |
| | ' ' ' ' | cycle) | AA LYNA | 0.25 | 1 2.0 % |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty | WLAN | 8.45 | ± 9.6 % |
| .0000 | 1,000 | cycle) | VVLAIN | 0.45 | I 9.0 % |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty | WLAN | 8.13 | ± 9.6 % |
| 10000 | 7001 | cycle) | MADAIA | 0.13 | x 9.0 % |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty | WLAN | 8.00 | ± 9.6 % |
| 10007 | 7001 | cycle) | VVLAIN | 0,00 | 19.0% |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty | WLAN | 8.37 | ± 9.6 % |
| 10000 | 7001 | cycle) | VVLAIN | 0.37 | I 5.0 % |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty | WLAN | 0.40 | 1069/ |
| 10000 | 700 | cycle) | VVLAIN | 8.10 | ± 9.6 % |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty | WLAN | 8.30 | 106% |
| 10070 | ~~~ | cycle) | VVLAIN | 8.30 | ± 9.6 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | WLAN | 1.99 | 1061/ |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | | | ± 9.6 % |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAA | | WLAN | 1.98 | ± 9.6 % |
| | | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty | WLAN | 8.59 | ± 9.6 % |
| 10570 | A A A | cycle) | 140 411 | — | 1 |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty | WLAN | 8.60 | ± 9.6 % |
| 40577 | ΛΛΛ | cycle) | 1077 437 | | |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty | WLAN | 8.70 | ± 9.6 % |
| 40570 | | cycle) | 1.1.7. | | |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty | WLAN | 8.49 | ± 9.6 % |
| 40570 | | cycle) | | | |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty | WLAN | 8.36 | ± 9.6 % |
| | | cycle) | | | |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty | WLAN | 8.76 | ± 9.6 % |
| | | cycle) | | | |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty | WLAN | 8.35 | ±9.6 % |
| | | cycle) | | | |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty | WLAN | 8.67 | ±9.6 % |
| | | cycle) | | | |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | WLAN | 8.59 | ±9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| 10585 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ±9.6 % |
| 10586 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10587 | AAB | IEEE 802.11a/h WiFl 5 GHz (OFDM, 24 Mbps, 90pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| | • | | | | |

| .,. | | | | 0.70 | 1000 |
|-------|-----|--|--------------------|--------------|--------------------|
| 10588 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10589 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 8.67 | ±9.6 % ±9.6 % |
| 10590 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10591 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10592 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10593 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | WLAN | | ± 9.6 % |
| 10594 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10595 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | WLAN | 8.74 | |
| 10596 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % ± 9.6 % |
| 10597 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | WLAN | 8,72 | |
| 10598 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | WLAN | 8.50 | ± 9.6 % ± 9.6 % |
| 10599 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | WLAN | 8.79 | |
| 10600 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 8.82 | ± 9.6 % ± 9.6 % |
| 10601 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | WLAN | | ±9.6 % |
| 10602 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | WLAN | 8.94 | |
| 10603 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | WLAN | 9.03 | ±9.6% |
| 10604 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10605 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | WLAN | 8.97 | ± 9.6 % |
| 10606 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10608 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10609 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10610 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10611 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10612 | AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10613 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10614 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.59 | ± 9.6 % |
| 10615 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10616 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10617 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10618 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10619 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.86 | ±9.6 % |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10621 | AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10622 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.68 | ± 9.6 % |
| 10623 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ±9.6 % |
| 10624 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10625 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.96 | ±9.6% |
| 10626 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10627 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10628 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle) | WLAN | 8.71 | ±9.6 % |
| 10629 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ±9.6 % |
| 10630 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10631 | AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10632 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ±9.6 % |
| 10633 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10634 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10635 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ± 9.6 % |
| 10640 | AAC | IEEE 802,11ac WiFi (160MHz, MCS4, 90pc duty cycle) | WLAN | 8.98 | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle) | WLAN | 9.05 | ± 9.6 % |
| 10645 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle) | WLAN | 9.11 | ± 9.6 % |
| 10646 | AAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| 10647 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| | AAA | CDMA2000 (1x Advanced) | CDMA2000 | 3.45 | ± 9.6 % |
| | | | I TE TOO | 1 0 04 | ± 9.6 % |
| 10648 | | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | |
| | AAE | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD LTE-TDD | 7.42 6.96 | ± 9.6 % ± 9.6 % |

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| 10655 | AAE | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.21 | ±9.6 % |
|-------|-----|--|---------------|--------------|--------------------|
| 10658 | AAA | Pulse Waveform (200Hz, 10%) | Test | 10.00 | ±9.6 % |
| 10659 | AAA | Pulse Waveform (200Hz, 20%) | Test | 6.99 | |
| 10660 | AAA | Pulse Waveform (200Hz, 40%) | Test | 3.98 | ±9.6% |
| 10661 | AAA | Pulse Waveform (200Hz, 60%) | Test | 2.22 | ± 9.6 % ± 9.6 % |
| 10662 | AAA | Pulse Waveform (200Hz, 80%) | Test | | ±9.6 % |
| 10670 | AAA | Bluetooth Low Energy | Bluetooth | 0.97 2.19 | ±9.6 % |
| 10671 | AAA | IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle) | WLAN | 9.09 | ±9.6 % |
| 10672 | AAA | IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10673 | AAA | IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10674 | AAA | IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.74 | ±9.6 % |
| 10675 | AAA | IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10676 | AAA | IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10677 | AAA | IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.73 | |
| 10678 | AAA | IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10679 | AAA | IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10680 | AAA | IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle) | WLAN | 8.80 | |
| 10681 | AAA | IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle) | WLAN | 8.62 | ± 9.6 % ± 9.6 % |
| 10682 | AAA | IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle) | WLAN | | |
| 10682 | AAA | IEEE 802.11ax (20MHz, MCS), 99pc duty cycle) | WLAN | 8.83 8.42 | ±9.6 % ±9.6 % |
| 10684 | AAA | IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.26 | |
| 10685 | AAA | IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.33 | ±9.6% |
| 10686 | AAA | IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.28 | ± 9.6 % ± 9.6 % |
| 10687 | AAA | IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.45 | ±9.6 % |
| 10688 | AAA | IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.45 | |
| 10689 | AAA | IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) | WLAN | | ± 9.6 % ± 9.6 % |
| 10690 | AAA | IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.55 | |
| 10690 | AAA | IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle) | WLAN | 8.29 | ±9.6% |
| 10691 | AAA | IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.25 8.29 | ±9.6% |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) | WLAN | | ±9.6% |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) | WLAN | 8.25 8.57 | ±9.6% |
| 10695 | AAA | IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle) | WLAN | 8.57 | ±9.6% |
| 10695 | AAA | IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % ± 9.6 % |
| 10697 | AAA | IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.61 | |
| 10698 | AAA | IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.89 | ±9.6% |
| 10699 | AAA | IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.82 | ±9.6% |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % ± 9.6 % |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.70 | |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % ± 9.6 % |
| 10704 | AAA | IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10705 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10706 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle) | WLAN | 8.66 | ±9.6 % |
| 10707 | AAA | IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle) | WLAN | 8.32 | ±9.6 % |
| 10707 | AAA | IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ±9.6 % |
| 10709 | AAA | IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10710 | AAA | IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10711 | AAA | IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10712 | AAA | IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle) | WLAN | 8.67 | ±9.6 % |
| 10712 | AAA | IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.33 | ±9.6 % |
| 10714 | AAA | IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.26 | ±9.6 % |
| 10715 | AAA | IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10716 | AAA | IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.30 | ± 9.6 % |
| 10717 | AAA | IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10718 | AAA | IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle) | WLAN | 8.24 | ± 9.6 % |
| 10719 | AAA | IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10719 | AAA | IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10720 | AAA | IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.76 | ±9.6 % |
| 10721 | AAA | IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10722 | AAA | IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) | WLAN | 8.70 | |
| 10723 | AAA | IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.90 | ±9.6% |
| 10724 | AAA | IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % ± 9.6 % |
| 10725 | AAA | IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.72 | ±9.6 % |
| 10726 | AAA | IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.66 | ±9.6 % |
| 10121 | 1 1 | THEE OOK, I TAN (OUTWITE, INIOOU, SUPE duty Cycle) | 1 4 4 1 1 1 4 | 1 0.00 | T 3.0 /0 |

| 10728 | AAA | IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
|----------------------------------|-------------------|--|---|----------------------|-------------------------------|
| 10729 | AAA | IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle) | WLAN | 8.64 | ±9.6 % |
| 10730 | AAA | IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10731 | AAA | IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.42 | ±9.6% |
| 10732 | AAA | IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10733 | AAA | IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.40 | ± 9.6 % |
| 10734 | AAA | IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10735 | AAA | IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10736 | AAA | IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10737 | AAA | IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10738 | AAA | IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10739 | AAA | IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10740 | AAA | IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10741 | AAA | IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle) | WLAN | 8.40 | ± 9.6 % |
| 10742 | AAA | IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) | WLAN | 8,43 | ±9.6 % |
| 10743 | AAA | IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10744 | AAA | IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) | WLAN | 9.16 | ± 9.6 % |
| 10745 | AAA | IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.93 | ± 9.6 % |
| 10746 | AAA | IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) | WLAN | 9.11 | ±9.6 % |
| 10747 | AAA | IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) | WLAN | 9.04 | ± 9.6 % |
| 10747 | AAA | IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) | WLAN | 8.93 | ± 9.6 % |
| 10740 | AAA | IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10750 | AAA | IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10751 | AAA | IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10751 | AAA | IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10753 | AAA | IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) | WLAN | 9.00 | ± 9.6 % |
| 10754 | AAA | IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10754 | AAA | IEEE 802.11ax (160MHz, MCS), 99pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10755 | AAA | IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.77 | ±9.6 % |
| 10757 | AAA | IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10757 | AAA | IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10759 | AAA | IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10759 | AAA | IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10760 | AAA | IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) | WLAN | 8,58 | ± 9.6 % |
| 10761 | AAA | IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10763 | AAA | IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10764 | AAA | IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10765 | AAA | IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10766 | AAA | IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle) | WLAN | 8.51 | ± 9.6 % |
| 10767 | AAA | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 | 7.99 | ± 9.6 % |
| 10/0/ | \ | OCTALL OF -OF DIVING FINDS OF MILES OF OILS TO INTES | TDD | | |
| 10760 | ΛΛΛ | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.01 | ± 9.6 % |
| 10768 | AAA | OG MIX (OF-OF DIVI, 1 ND, 10 MILE, OR ON, 10 MILE) | TDD | 3.01 | |
| 10769 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.01 | ± 9.6 % |
| 10709 | *** | OG NA (OF "OFDIN, TAD, 10 INITE, GFOR, 10 KIE) | TDD | 5.51 | 0.0 /0 |
| 10770 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.02 | ± 9.6 % |
| 10770 | AAA | טט את (טריטרטואו, ז תם, צט ואותב, ערטת, זט אווצ) | TDD | , 0, | |
| 10774 | 1 | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.02 | ± 9.6 % |
| 10771 | AAA | 30 NK (OP-OFDIN), 1 KB, 20 NITZ, QF3K, 10 KHZ) | TDD | 0.02 | 0.0 /0 |
| 40770 | ΛΛΛ | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.23 | ± 9.6 % |
| 10772 | AAA | 30 NK (UP-UPUN, 1 KD, 30 NITZ, QPSK, 10 KTZ) | TDD | 3,20 | |
| | 1 | FO ND (OD OFDIA 4 DD 40 MILE ODGIC 45 MILE) | 5G NR FR1 | 8.03 | ± 9.6 % |
| 40770 | A A A | | TOTAL COLUMN | 0.00 | 1 - 2.5 // |
| 10773 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz) | | | |
| | | | TDD | 8.02 | +96% |
| 10773 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 | 8,02 | ± 9.6 % |
| 10774 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD | | |
| | | | TDD 5G NR FR1 TDD 5G NR FR1 | 8.02 | ± 9.6 % ± 9.6 % |
| 10774 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10774 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 | | |
| 10774 10776 10778 | AAA AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD 5G NR FR1 TDD 5G NR FR1 TDD TDD TDD | 8.30 8.34 | ± 9.6 % |
| 10774 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10774 10776 10778 10780 | AAA AAA AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD | 8.30 8.34 8.38 | ± 9.6 % ± 9.6 % ± 9.6 % |
| 10774 10776 10778 | AAA AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 | 8.30 8.34 | ± 9.6 % |
| 10774 10776 10778 10780 | AAA AAA AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 TDD | 8.30 8.34 8.38 | ± 9.6 % ± 9.6 % ± 9.6 % |

| 10783 | AAA | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.31 | ± 9.6 % |
|-------|-----|--|------------------|------|----------|
| 10784 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.29 | ± 9.6 % |
| 10785 | AAA | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10786 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10787 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.44 | ± 9.6 % |
| 10788 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.39 | ± 9.6 % |
| 10789 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.37 | ± 9.6 % |
| 10790 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.39 | ± 9.6 % |
| 10791 | AAA | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 | 7.83 | ±9.6 % |
| 10792 | AAA | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.92 | ± 9.6 % |
| 10793 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.95 | ± 9.6 % |
| 10794 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.82 | ± 9.6 % |
| 10795 | AAA | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.84 | ± 9.6 % |
| 10796 | AAA | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.82 | ± 9.6 % |
| 10797 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.01 | ± 9.6 % |
| 10798 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 | 7.89 | ± 9.6 % |
| 10799 | AAA | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.93 | ± 9.6 % |
| 10801 | AAA | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.89 | ± 9.6 % |
| 10802 | AAA | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.87 | ± 9.6 % |
| 10803 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.93 | ± 9.6 % |
| 10805 | AAA | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10806 | AAA | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.37 | ± 9.6 % |
| 10809 | AAA | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10810 | AAA | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.34 | ± 9.6 % |
| 10812 | AAA | 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.35 | ± 9.6 % |
| 10817 | AAA | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.35 | ± 9.6 % |
| 10818 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10819 | AAA | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.33 | ± 9.6 % |
| 10820 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.30 | ± 9.6 % |
| 10821 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.41 | ± 9.6 % |
| 10822 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.41 | ± 9.6 % |
| 10823 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.36 | ± 9.6 % |
| 10824 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.39 | ± 9.6 % |
| | 1 | | TDD | | <u> </u> |

| 10825 | AAA | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
|-------|-----|---|------------------|------|---------|
| 10827 | AAA | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8,42 | ± 9.6 % |
| 10828 | AAA | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.43 | ± 9.6 % |
| 10829 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.40 | ± 9.6 % |
| 10830 | AAA | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.63 | ± 9.6 % |
| 10831 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.73 | ± 9.6 % |
| 10832 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.74 | ± 9.6 % |
| 10833 | AAA | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10834 | AAA | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.75 | ± 9.6 % |
| 10835 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.70 | ± 9.6 % |
| 10836 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.66 | ± 9.6 % |
| 10837 | AAA | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.68 | ± 9.6 % |
| 10839 | AAA | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.70 | ± 9.6 % |
| 10840 | AAA | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.67 | ± 9.6 % |
| 10841 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 | 7.71 | ± 9.6 % |
| 10843 | AAA | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.49 | ± 9.6 % |
| 10844 | AAA | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.34 | ± 9.6 % |
| 10846 | AAA | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.41 | ± 9.6 % |
| 10854 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.34 | ± 9.6 % |
| 10855 | AAA | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.36 | ±9.6 % |
| 10856 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10857 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10858 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.36 | ± 9.6 % |
| 10859 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.34 | ± 9.6 % |
| 10860 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ±9.6 % |
| 10861 | AAA | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.40 | ± 9.6 % |
| 10863 | AAA | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.41 | ± 9.6 % |
| 10864 | AAA | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.37 | ± 9.6 % |
| 10865 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 | 8.41 | ± 9.6 % |
| 10866 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 | 5.68 | ± 9.6 % |
| 10868 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 | 5.89 | ± 9.6 % |
| 10869 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 | 5.75 | ± 9.6 % |
| 10870 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 | 5.86 | ± 9.6 % |

| 10871 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
|-------|-----|--|------------------|------|---------|
| 10872 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 6.52 | ± 9.6 % |
| 10873 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.61 | ± 9.6 % |
| 10874 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.65 | ± 9.6 % |
| 10875 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 | 7.78 | ± 9.6 % |
| 10876 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 | 8.39 | ± 9.6 % |
| 10877 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 7.95 | ± 9.6 % |
| 10878 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 8.41 | ± 9.6 % |
| 10879 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 8.12 | ± 9.6 % |
| 10880 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 8.38 | ± 9.6 % |
| 10881 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 5.75 | ± 9.6 % |
| 10882 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 5.96 | ± 9.6 % |
| 10883 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 6.57 | ± 9.6 % |
| 10884 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 6.53 | ± 9.6 % |
| 10885 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.61 | ± 9.6 % |
| 10886 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.65 | ± 9.6 % |
| 10887 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 7.78 | ± 9.6 % |
| 10888 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 8.35 | ± 9.6 % |
| 10889 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 8.02 | ±9.6 % |
| 10890 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 8.40 | ± 9.6 % |
| 10891 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 8,13 | ± 9.6 % |
| 10892 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 8.41 | ± 9.6 % |

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client

PC Test

Certificate No: EX3-7551_Sep19

S

C

CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7551

Calibration procedure(s)

QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

BN 2019

Calibration date:

September 19, 2019

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)

Certificate No: EX3-7551_Sep19

| Primary Standards | ID | Cal Date (Certificate No.) | Scheduled Calibration |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: S5277 (20x) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| DAE4 | SN: 660 | 19-Dec-18 (No. DAE4-660_Dec18) | Dec-19 |
| Reference Probe ES3DV2 | SN: 3013 | 31-Dec-18 (No. ES3-3013_Dec18) | Dec-19 |
| Secondary Standards | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: MY41498087 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: 000110210 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

Name Function Signature

Calibrated by: Michael Weber Laboratory Technician

Approved by: Katja Pokovic Technical Manager

issued: September 19, 2019

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

Calibration Laboratory of

Certificate No: EX3-7551_Sep19

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

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Glossary:

TSL tissue simulating liquid
NORMx,y,z sensitivity in free space
ConvF sensitivity in TSL / NORMx,y,z
DCP diode compression point

CF crest factor (1/duty_cycle) of the RF signal A, B, C, D modulation dependent linearization parameters

Polarization ϕ ϕ rotation around probe axis

Polarization 9 9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., $\vartheta = 0$ is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

September 19, 2019 EX3DV4 - SN:7551

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7551

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|--|----------|----------|----------|-----------|
| Norm (μV/(V/m) ²) ^A | 0.57 | 0.54 | 0.56 | ± 10.1 % |
| DCP (mV) ⁸ | 104.3 | 99.1 | 95.6 | |

| UID | Communication System Name | | ponse A dB | B dBõV | С | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|--------|---------------------------------------|----|------------------|-----------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | +x | 0.00 | 0.00 | 1.00 | 0.00 | 181.1 | ± 3.0 % | ±4.7 % |
| • | | Y | 0.00 | 0.00 | 1.00 | | 174.4 | | |
| | | Z | 0.00 | 0.00 | 1.00 | | 174.0 | | |
| 10352- | Pulse Waveform (200Hz, 10%) | X | 15.00 | 89.60 | 21.65 | 10.00 | 60.0 | ± 3.9 % | ± 9.6 % |
| AAA | | Y | 15.00 | 87.33 | 19.66 | | 60.0 | | |
| | | Z | 15.00 | 88.48 | 20.15 | | 60.0 | | |
| 10353- | Pulse Waveform (200Hz, 20%) | X | 15.00 | 90.79 | 21.23 | 6.99 | 80.0 | ± 2.7 % | ± 9.6 % |
| AAA | , , , , | Y | 15.00 | 87.95 | 18.66 | | 80.0 | | |
| | | Z | 15.00 | 90.69 | 19.98 | | 80.0 | | |
| 10354- | Pulse Waveform (200Hz, 40%) | X | 15.00 | 94.66 | 21.81 | 3.98 | 95.0 | ± 1.2 % | ± 9.6 % |
| AAA | · · · · · · · · · · · · · · · · · · · | Y | 15.00 | 89.03 | 17.62 |] | 95.0 | | |
| | | Z | 15.00 | 94.85 | 20.37 | | 95.0 | | |
| 10355- | Pulse Waveform (200Hz, 60%) | Х | 15.00 | 102.60 | 24.35 | 2,22 | 120.0 | ± 1.1 % | ± 9.6 % |
| AAA | , , , , , , , , , , , , , , , , , , , | Y | 15.00 | 87.27 | 15.36 | | 120.0 | | |
| | | Z | 15.00 | 97.27 | 19.82 | | 120.0 |] | |
| 10387- | QPSK Waveform, 1 MHz | X | 1.24 | 68.72 | 13.42 | 0.00 | 150.0 | ± 3.2 % | ± 9.6 % |
| AAA | | Y | 0.54 | 60.00 | 7.02 | | 150.0 | Ì | |
| | | Z | 0.39 | 60.00 | 3.70 | | 150.0 | | |
| 10388- | QPSK Waveform, 10 MHz | X | 2.73 | 71.86 | 17.85 | 0.00 | 150.0 | ± 1.4 % | ± 9.6 % |
| AAA | | Y | 1.99 | 66.53 | 14.73 | | 150.0 | | |
| | | Z | 2.16 | 69.95 | 16.98 | | 150.0 | | |
| 10396- | 64-QAM Waveform, 100 kHz | X | 3.60 | 74.00 | 20.55 | 3.01 | 150.0 | ± 0.9 % | ± 9.6 % |
| AAA | | Υ | 2.73 | 68.63 | 17.73 | _ | 150.0 | | |
| | | Z | 2.22 | 67.94 | 18.36 | | 150.0 | | |
| 10399- | 64-QAM Waveform, 40 MHz | X | 3.66 | 68.17 | 16.52 | 0.00 | 150.0 | ± 2.1 % | ± 9.6 % |
| AAA | | Y | 3.37 | 66.52 | 15.34 |] | 150.0 | | |
| | | Z | 3.41 | 67.62 | 16.33 | | 150.0 | | |
| 10414- | WLAN CCDF, 64-QAM, 40MHz | Х | 4.90 | 65.94 | 15.82 | 0.00 | 150.0 | ± 4.2 % | ± 9.6 % |
| AAA | | Y | 4.76 | 65.46 | 15.39 | | 150.0 | <u> </u> | |
| | | Z | 4.60 | 66.09 | 16.03 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

B Numerical linearization parameter: uncertainty not required.

E the set of the field of th

E Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7551

Sensor Model Parameters

| | C1 fF | C2 fF | α V ⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V ⁻¹ | Т6 |
|---|----------|----------|----------------------|--------------------------|--------------------------|----------|-----------------------|-----------------------|------|
| X | 47.8 | 351.65 | 34.83 | 22.77 | 0.50 | 5.10 | 0.98 | 0.37 | 1.01 |
| Ŷ | 41.0 | 312.25 | 36.63 | 13.13 | 0.44 | 5.08 | 0.35 | 0.46 | 1.01 |
| ż | 25.5 | 199.44 | 38.63 | 11.25 | 0.42 | 5.10 | 0.00 | 0.26 | 1.01 |

Other Probe Parameters

| Sensor Arrangement | Triangular |
|---|------------|
| Connector Angle (°) | 120.2 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

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September 19, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7551

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|--------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 41.9 | 0.89 | 10.11 | 10.11 | 10.11 | 0.50 | 0.80 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.88 | 9.88 | 9.88 | 0.38 | 0.92 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.34 | 8.34 | 8.34 | 0.28 | 0.80 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.05 | 8.05 | 8.05 | 0.29 | 0.80 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 7.74 | 7.74 | 7.74 | 0.30 | 0.90 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.30 | 7.30 | 7.30 | 0.32 | 0.90 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.18 | 7.18 | 7.18 | 0.35 | 0.90 | ± 12.0 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency balld. Prequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to

measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of

the ConvF uncertainty for indicated target tissue parameters.

Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

September 19, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7551

Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) ^c | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|------------------------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 55.5 | 0.96 | 10.09 | 10.09 | 10.09 | 0.45 | 0.80 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 9.92 | 9.92 | 9.92 | 0.42 | 0.80 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8.13 | 8.13 | 8.13 | 0.37 | 0.87 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.69 | 7.69 | 7.69 | 0.41 | 0.80 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.63 | 7.63 | 7.63 | 0.40 | 0.90 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.41 | 7.41 | 7.41 | 0.36 | 0.90 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.34 | 7.34 | 7.34 | 0.28 | 0.96 | ± 12.0 % |

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

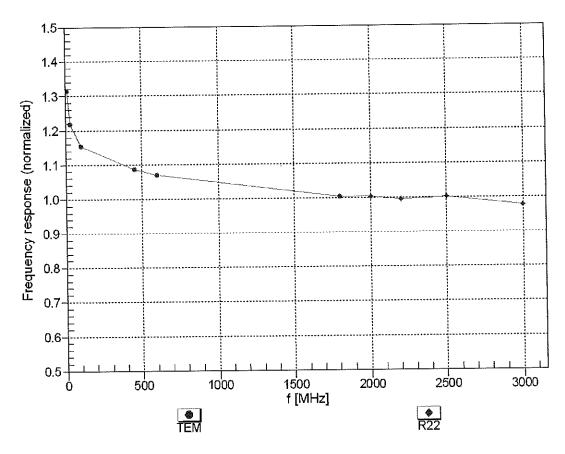
F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to

F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of the ConvE uncertainty for indicated target tissue parameters.

the ConvF uncertainty for indicated target tissue parameters.

Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

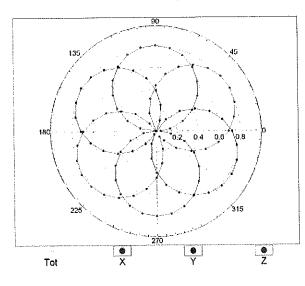


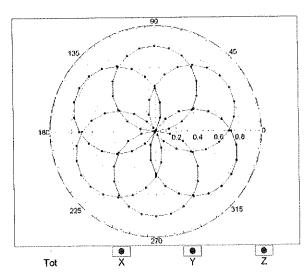
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

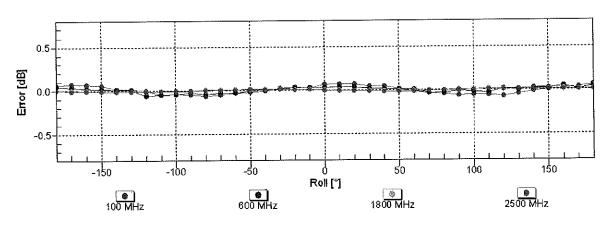
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

f=600 MHz,TEM

f=1800 MHz,R22

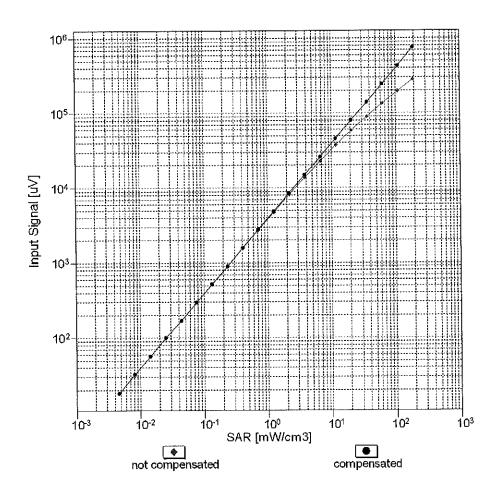


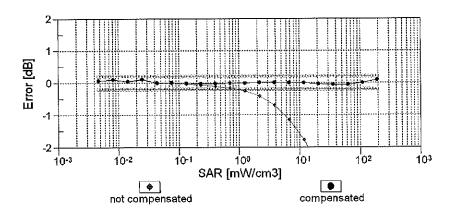




Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

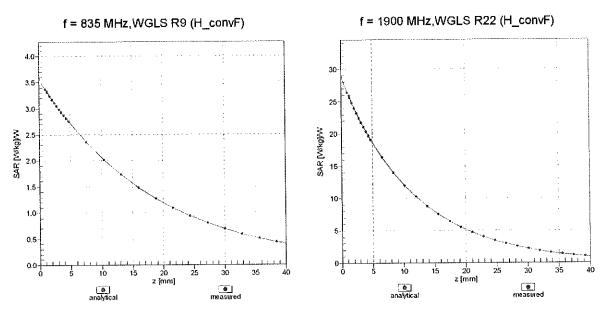
Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)



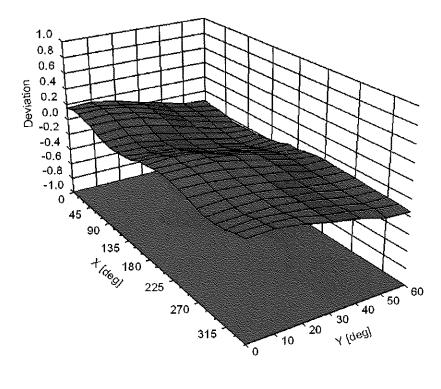


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (φ, θ), f = 900 MHz



EX3DV4- SN:7551

Appendix: Modulation Calibration Parameters

| UID | Rev | Communication System Name | Group | PAR (dB) | Unc ^E (k=2) |
|-------|-----|--|-----------|-------------|---------------------------|
| 0 | | CW | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ± 9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ±9.6% |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ± 9.6 % |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9,46 | ±9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ±9.6 % |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ±9.6 % |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ± 9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ±9.6 % |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ±9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | GSM | 7.78 | ± 9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth | 1.87 | ± 9.6 % |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 | ± 9.6 % |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 7.74 | ± 9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) | Bluetooth | 4.53 | ± 9.6 % |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth | 3.83 | ± 9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ±9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | 4.77 | ±9.6 % |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ±9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ±9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ±9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN. | 9.09 | ± 9.6 % |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ±9.6 % |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ±9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 10 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.77 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ±9.6 % |
| 10097 | CAB | UMTS-FDD (HSDPA) | WCDMA | 3.98 | ±9.6 % |
| 10097 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ±9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ±9.6 % |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | | | |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QFSK) | LTE-FDD | 5.67 | ±9.6% |
| 10101 | CAE | | LTE-FDD | 6.42 | ±9.6 % |
| 10102 | CAG | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 6.60 | ±9.6% |
| 10103 | CAG | | LTE-TDD | 9.29 | ±9.6 % |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | ±9.6 % |
| 10105 | | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | ±9.6% |
| 10100 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | ± 9.6 % |

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| 40400 | 040 | LTE EDD (OC EDNA 4000) ED 40 MU- 46 OAM | LTE-FDD | 6.43 | ± 9.6 % |
|----------------|-----|---|--------------|--------------|--------------------|
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 5.75 | ± 9.6 % |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 10-QAM) | LTE-FDD | 6.59 | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 WHZ, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10113 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | ±9.6 % |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | WLAN | 8.46 | ± 9.6 % |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN | 8.15 | ±9.6% |
| 10117 | CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN | 8.07 | ±9.6% |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | WLAN | 8.59 | ± 9.6 % |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | ± 9.6 % |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | ± 9.6 % |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | ± 9.6 % |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | ±9.6% |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | ± 9.6 % |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | ± 9.6 % |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | ± 9.6 % |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | ±9.6% |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | | 10.05 | ± 9.6 % |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-FDD | 5.75 | ±9.6% |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 5.79 | ± 9.6 % ± 9.6 % |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 6.49 | ± 9.6 % |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.56 | ± 9.6 % |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-FDD | 5.82 | ± 9.6 % |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QFSR) | LTE-FDD | 6.43 | ± 9.6 % |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 10-QAM) | LTE-FDD | 6.58 | ± 9.6 % |
| 10162 10166 | CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.46 | ± 9.6 % |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | ± 9.6 % |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.79 | ± 9.6 % |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | ±9.6 % |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-FDD | 6.52 | ±9.6% |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | ± 9.6 % |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % ± 9.6 % |
| 10193 | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | WLAN WLAN | 8.09 8.12 | ± 9.6 % |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN | 8.21 | ± 9.6 % |
| 10195 | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.10 | ± 9.6 % |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.13 | ± 9.6 % |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | ± 9.6 % |
| 10219 | CAC | TIELE GOZ. FITE (FITE WILKOU, F.Z. WIDPS, DE OR) | 1 77-111 | | |

| 10220 | 040 | JEEE 000 dd - (UT Min old 00 Min old 00 Min | | | r |
|-------|--------|---|----------|-------|--------------------|
| 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10222 | | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.06 | ± 9.6 % |
| | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | WLAN | 8.08 | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+) | WCDMA | 5.97 | ±9.6% |
| 10226 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.49 | ± 9.6 % |
| 10227 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.26 | ± 9.6 % |
| 10228 | CAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.22 | ± 9.6 % |
| 10229 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-TDD | 9.48 | ±9.6% |
| 10230 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10231 | CAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | ± 9.6 % |
| 10232 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 9.48 | ±9.6% |
| 10233 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10234 | CAG | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.21 | ±9.6 % |
| 10235 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10236 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAG | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD | 9.21 | ±9.6% |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.82 | ±9.6% |
| 10242 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 9.86 | ± 9.6 % |
| 10243 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.46 | ±9.6% |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10245 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-TDD | 10.06 | ±9.6 % |
| 10246 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-TDD | 9.30 | ±9.6 % |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.91 | ±9.6 % |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | ±9.6 % |
| 10249 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | ±9.6 % |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.81 | ± 9.6 % |
| 10251 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.17 | ± 9.6 % |
| 10252 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 9.90 | ±9.6% |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-TDD | 9.20 | ± 9.6 % |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | ± 9.6 % |
| 10257 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | ±9.6 % |
| 10258 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | ± 9.6 % |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.98 | ± 9.6 % |
| 10260 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TDD | 9.97 | ±9.6 % |
| 10261 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10262 | | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | ± 9.6 % |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.16 | ± 9.6 % |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | ±9.6 % |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 | ± 9.6 % |
| 10266 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.07 | ± 9.6 % |
| 10267 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.13 | ± 9.6 % |
| 10270 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-TDD | 9.58 | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | WCDMA | 4.87 | ± 9.6 % |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | ± 9.6 % |
| 10277 | CAA | PHS (QPSK) | PHS | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | ± 9.6 % |
| 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate | CDMA2000 | 3.46 | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | ± 9.6 % |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | ± 9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | CDMA2000 | 12.49 | |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.81 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QFSK) | LTE-FDD | 6.39 | ± 9.6 % ± 9.6 % |
| 10200 | , 0.32 | = 1 = 1 DD DD DD DD DD DD | FILTIUU | 0.58 | ± 3.0 70 |

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| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
|--|---|---|--|--|--|
| 10301 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WiMAX | 12.03 | ± 9.6 % |
| 10302 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL | WIMAX | 12.57 | ± 9.6 % |
| , | | symbols) | | | - Laboratoria |
| 10303 | AAA | IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 12.52 | ± 9.6 % |
| 10304 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | WIMAX | 11.86 | ± 9.6 % |
| 10305 | AAA | IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 | WiMAX | 15.24 | ± 9.6 % |
| | | symbols) | | | |
| 10306 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 | WiMAX | 14.67 | ±9.6% |
| | | symbols) | | | |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 | WiMAX | 14.49 | ±9.6% |
| | | symbols) | | | |
| 10308 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WiMAX | 14.46 | ±9.6% |
| 10309 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 | WIMAX | 14.58 | ±9.6% |
| | | symbols) | | | |
| 10310 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 | WiMAX | 14.57 | ±9.6% |
| | L | symbols) | 1 TE EDD | 0.00 | 1000 |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | ± 9.6 % |
| 10313 | AAA | IDEN 1:3 | IDEN | 10.51 | ± 9.6 % |
| 10314 | AAA | IDEN 1:6 | iDEN | 13.48 | ± 9.6 % |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) | WLAN | 1.71 | ± 9.6 % |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) | WLAN . | 8.36 | ± 9.6 % |
| 10352 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | ± 9.6 % |
| 10353 | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | ±9.6 % |
| 10354 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | ± 9.6 % |
| 10355 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | ± 9.6 % |
| 10356 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | ± 9.6 % |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 | ± 9.6 % |
| 10388 | AAA | QPSK Waveform, 10 MHz | Generic | 5.22 | ± 9.6 % |
| 10396 | AAA | 64-QAM Waveform, 100 kHz | Generic | 6.27 | ±9.6% |
| 10399 | AAA | 64-QAM Waveform, 40 MHz | Generic WLAN | 6.27 8.37 | ± 9.6 % ± 9.6 % |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| 10401 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10402 | AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) | CDMA2000 | 3.76 | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0) | CDMA2000 | 3.77 | ± 9.6 % |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A) CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 | 5.22 | ± 9.6 % |
| 10406 | AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ±9.6 % |
| 10410 | AAG | Subframe=2,3,4,7,8,9, Subframe Conf=4) | -, -, 00 | 7.02 | 20.070 |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | ± 9.6 % |
| 10414 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) | WLAN | 1.54 | ± 9.6 % |
| 10415 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.14 | ± 9.6 % |
| 10-10 | \ \tag{\tau_{\tau_{\tau_{\tau}}}} | Long preambule) | '' | | |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.19 | ± 9.6 % |
| 10710 | 1,0.0. | Short preambule) | " | | |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | ± 9.6 % |
| | | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | ± 9.6 % |
| 1 1(1423 | AAR | | | | |
| 10423 10424 | AAB | | WLAN | 8.40 | ± 9.6 % |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | WLAN WLAN | 8.40 8.41 | ± 9.6 % ± 9.6 % |
| 10424 10425 | AAB AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | | | |
| 10424 10425 10426 | AAB AAB AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN | 8.41 | ± 9.6 % |
| 10424 10425 10426 10427 | AAB AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN WLAN | 8.41 8.45 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10424 10425 10426 10427 10430 | AAB AAB AAB AAD | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | WLAN WLAN WLAN | 8.41 8.45 8.41 | ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 | AAB AAB AAB AAB AAD | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD | 8.41 8.45 8.41 8.28 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 | AAB AAB AAB AAD AAD AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 | AAB AAB AAB AAD AAD AAC AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 | AAB AAB AAB AAD AAD AAC AAC AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 | AAB AAB AAB AAD AAD AAC AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD UTE-FDD WCDMA | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAD AAC AAC AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ± 9.6 % ± 9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAD AAC AAC AAC AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD LTE-FDD LTE-TDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 | AAB AAB AAB AAD AAD AAC AAC AAC | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD | 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |

| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.59 | ± 9.6 % |
|-------|-----|--|----------|------|---------|
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ±9.6% |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10462 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.30 | ± 9.6 % |
| 10463 | AAB | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.56 | ± 9.6 % |
| 10464 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10467 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10469 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.56 | ± 9.6 % |
| 10470 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10471 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10472 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ±9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ±9.6 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ±9.6 % |
| 10479 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10480 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.18 | ±9.6 % |
| 10481 | AAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ±9.6 % |
| 10482 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.71 | ±9.6 % |
| 10483 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.39 | ± 9.6 % |
| 10484 | AAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.47 | ±9.6 % |
| 10485 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL. Subframe=2,3,4,7,8,9) | LTE-TDD | 7.59 | ± 9.6 % |
| 10486 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.38 | ± 9.6 % |
| 10487 | AAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.60 | ± 9.6 % |
| 10488 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.70 | ± 9.6 % |
| 10489 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.31 | ± 9.6 % |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |

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| 10100 | | LITE TOD (OO EDMA FOW DD 45 MHz 40 OAM III | LITE TOO | 0.44 | ± 9.6 % |
|-------|-----|---|----------|------|----------|
| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.41 | |
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.37 | ± 9.6 % |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10497 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.40 | ± 9.6 % |
| 10499 | AAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10501 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.44 | ± 9.6 % |
| 10502 | AAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.72 | ± 9.6 % |
| 10504 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.31 | ± 9.6 % |
| 10505 | AAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10507 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.36 | ± 9.6 % |
| 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.99 | ± 9.6 % |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.49 | ± 9.6 % |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.51 | ± 9.6 % |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ±9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.42 | ± 9.6 % |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ± 9.6 % |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) | WLAN | 1.57 | ± 9.6 % |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10518 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 %. |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.12 | ± 9.6 % |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 7.97 | ± 9.6 % |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.08 | ±9.6 % |
| 10524 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.21 | ±9.6 % |
| 10528 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10529 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10531 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.43 | ± 9.6 % |
| 10532 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10533 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10534 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |

| 10535 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
|----------------|------------|---|---------|------|----------|
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.32 | ± 9.6 % |
| 10537 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.44 | ± 9.6 % |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.39 | ±9.6% |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10544 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.47 | ± 9.6 % |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10546 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10548 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.48 | |
| 10555 | AAC | IEEE 802.11ac WiF (160MHz, MCS0, 99pc duty cycle) | | | ± 9.6 % |
| 10556 | AAC | IEEE 802.11ac WIFT (100MHz, MCS1, 99pc duty cycle) | WLAN | 8.47 | ± 9.6 % |
| 10557 | | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty | WLAN | 8.25 | ± 9.6 % |
| | | cycle) | | | |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty | WLAN | 8.45 | ± 9.6 % |
| | | cycle) | | | |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty | WLAN | 8.13 | ± 9.6 % |
| | | cycle) | 772211 | 0.10 | = 0.0 % |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty | WLAN | 8.00 | ± 9.6 % |
| | | cycle) | 1723 | 0.00 | 20.070 |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty | WLAN | 8.37 | ±9.6% |
| | ' ' ' ' | cycle) | ******* | 0.07 | 2 3.0 78 |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty | WLAN | 8.10 | ± 9.6 % |
| | | cycle) | VVLAN | 0.10 | ± 9.0 /6 |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty | WLAN | 8.30 | ± 9.6 % |
| 10070 | 1000 | cycle) | AATSAIA | 0.30 | I 9.0 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | WLAN | 4.00 | 1069 |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | | 1.99 | ± 9.6 % |
| 10572 | | IEEE 002.110 WIFI 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | WLAN | 1.99 | ± 9.6 % |
| | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty | WLAN | 8.59 | ± 9.6 % |
| 40570 | | cycle) | | | |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty | WLAN | 8.60 | ± 9.6 % |
| 40 | | cycle) | | | |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty | WLAN | 8.70 | ± 9.6 % |
| | ļ | cycle) | | | |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty | WLAN | 8.49 | ± 9.6 % |
| | | cycle) | | | l |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty | WLAN | 8.36 | ± 9.6 % |
| | | cycle) | | | |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty | WLAN | 8.76 | ± 9.6 % |
| | | cycle) | | '- | |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty | WLAN | 8.35 | ± 9.6 % |
| | | cycle) | | 3.00 | - 5.5 / |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty | WLAN | 8.67 | ± 9.6 % |
| | , | cycle) | *** | 3.07 | 20.070 |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | | | |
| | | | WLAN | 8.60 | ± 9.6 % |
| 10585 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10586 10587 | AAB AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| | AAR | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle) | WLAN | 8.36 | ±9.6% |

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| | | | | 0.70 | |
|-------------------------|-------------------|--|----------|--------------|--------------------|
| 10588 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ±9.6% |
| 10589 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10590 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10591 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10592 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10593 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10594 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10595 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10596 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % |
| 10597 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10598 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10599 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10600 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10601 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | WLAN | 8.82 | ±9.6% |
| 10602 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10603 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | WLAN | 9.03 | ± 9.6 % |
| 10604 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10605 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | WLAN | 8,97 | ± 9.6 % |
| 10606 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10608 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| | | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10610 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10611 | AAB | | WLAN | 8.77 | ± 9.6 % |
| 10612 | AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) IEEE 802,11ac WiFi (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10613 | AAB | | WLAN | 8.59 | ± 9.6 % |
| 10614 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | | 8.82 | ± 9.6 % |
| 10615 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10616 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | WLAN | | ± 9.6 % |
| 10617 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.81 | |
| 10618 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10619 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10621 | AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10622 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.68 | ± 9.6 % |
| 10623 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10624 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10625 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10626 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10627 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10628 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % |
| 10629 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle) | WLAN | 8,85 | ±9.6% |
| 10630 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10631 | AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10632 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10633 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10634 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10635 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ± 9.6 % |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle) | WLAN | 8.98 | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle) | WLAN | 9.05 | ± 9.6 % |
| 10645 | | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle) | WLAN | 9.11 | ± 9.6 % |
| 10645 | AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| | AAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| 10647 | AAF | CDMA2000 (1x Advanced) | CDMA2000 | 3.45 | ± 9.6 % |
| 10648 | AAA | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | ± 9.6 % |
| | / A A | | | | |
| 10652 | AAE | | | | |
| 10652 10653 10654 | AAE AAE AAD | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.42 6.96 | ± 9.6 % ± 9.6 % |

| 10655 AAE LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) LTE-TE 10658 AAA Pulse Waveform (200Hz, 10%) Test 10659 AAA Pulse Waveform (200Hz, 20%) Test 10660 AAA Pulse Waveform (200Hz, 40%) Test 10661 AAA Pulse Waveform (200Hz, 60%) Test | DD 7.21 10.00 6.99 3.98 | ± 9.6 % ± 9.6 % ± 9.6 % |
|--|----------------------------------|-------------------------------|
| 10659 AAA Pulse Waveform (200Hz, 20%) Test 10660 AAA Pulse Waveform (200Hz, 40%) Test | 6.99 | |
| 10660 AAA Pulse Waveform (200Hz, 40%) Test | | |
| 10001 | | ± 9.6 % |
| 10661 AAA Pulse Waveform (200Hz, 60%) Test | 2.22 | ± 9.6 % |
| 10662 AAA Pulse Waveform (200Hz, 80%) Test | 0.97 | ± 9.6 % |
| 10670 AAA Bluetooth Low Energy Bluetoo | | ± 9.6 % |
| 10671 AAA IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle) WLAN | 9.09 | ± 9.6 % |
| 10672 AAA IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle) WLAN | 8.57 | ± 9.6 % |
| 10673 AAA IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle) WLAN | | ± 9.6 % |
| 10674 AAA IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle) WLAN | 8.74 | ± 9.6 % |
| 10675 AAA IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle) WLAN | | ± 9.6 % |
| 10676 AAA IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle) WLAN | 8.77 | ± 9.6 % |
| 10677 AAA IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle) WLAN | 8.73 | ± 9.6 % |
| 10678 AAA IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle) WLAN 10679 AAA IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle) WLAN WLAN | 8.78 | ± 9.6 % |
| | 8.89 | ± 9.6 % |
| 10001 | 8.80 | ± 9.6 % |
| 10681 AAA IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle) WLAN 10682 AAA IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle) WLAN | 8.62 8.83 | ± 9.6 % |
| 10683 AAA IEEE 802.11ax (20MHz, MCS11, 30pc duty cycle) WLAN | 8.42 | ± 9.6 % ± 9.6 % |
| 10684 AAA IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle) WLAN | 8.26 | ± 9.6 % |
| 10685 AAA IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle) WLAN | 8.33 | ± 9.6 % |
| 10686 AAA IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle) WLAN | 8.28 | ± 9.6 % |
| 10687 AAA IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle) WLAN | 8.45 | ± 9.6 % |
| 10688 AAA IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle) WLAN | 8.29 | ± 9.6 % |
| 10689 AAA IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) WLAN | 8.55 | ±9.6% |
| 10690 AAA IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle) WLAN | 8.29 | ± 9.6 % |
| 10691 AAA IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle) WLAN | 8.25 | ± 9.6 % |
| 10692 AAA IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle) WLAN | 8.29 | ± 9.6 % |
| 10693 AAA IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) WLAN | 8.25 | ± 9.6 % |
| 10694 AAA IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle) WLAN | 8.57 | ± 9.6 % |
| 10695 AAA IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle) WLAN 10696 AAA IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle) WLAN | 8.78 | ± 9.6 % |
| | 8.91 | ± 9.6 % |
| 10697 AAA IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle) WLAN 10698 AAA IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle) WLAN | 8.61 | ± 9.6 % |
| 10699 AAA IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle) WLAN | 8.89 8.82 | ± 9.6 % ± 9.6 % |
| 10700 AAA IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle) WLAN | 8.73 | ± 9.6 % |
| 10701 AAA IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle) WLAN | 8.86 | ± 9.6 % |
| 10702 AAA IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle) WLAN | 8.70 | ± 9.6 % |
| 10703 AAA IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle) WLAN | 8.82 | ± 9.6 % |
| 10704 AAA IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle) WLAN | 8.56 | ± 9.6 % |
| 10705 AAA IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle) WLAN | 8,69 | ± 9.6 % |
| 10706 AAA IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle) WLAN | 8.66 | ± 9.6 % |
| 10707 AAA IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle) WLAN | 8.32 | ± 9.6 % |
| 10708 AAA IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) WLAN | 8.55 | ± 9.6 % |
| 10709 AAA IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle) WLAN | 8.33 | ± 9.6 % |
| 10710 AAA IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle) WLAN | 8.29 | ± 9.6 % |
| 10711 AAA IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle) WLAN 10712 AAA IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle) WLAN | 8.39 | ±9.6 % |
| | 8.67 | ± 9.6 % |
| 10713 AAA IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle) WLAN 10714 AAA IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle) WLAN | 8.33 8.26 | ± 9.6 % ± 9.6 % |
| 10715 AAA IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle) WLAN | 8.45 | ± 9.6 % |
| 10716 AAA IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle) WLAN | 8.30 | ± 9.6 % |
| 10717 AAA IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle) WLAN | 8.48 | ± 9.6 % |
| 10718 AAA IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle) WLAN | 8.24 | ± 9.6 % |
| 10719 AAA IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle) WLAN | 8.81 | ± 9.6 % |
| 10720 AAA IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle) WLAN | 8.87 | ± 9.6 % |
| 10721 AAA IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle) WLAN | 8.76 | ± 9.6 % |
| 10722 AAA IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) WLAN | 8.55 | ± 9.6 % |
| 10723 AAA IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) WLAN | 8.70 | ± 9.6 % |
| 10724 AAA IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle) WLAN | 8.90 | ± 9.6 % |
| 10725 AAA IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle) WLAN | 8.74 | ± 9.6 % |
| 10726 AAA IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle) WLAN | 8.72 | ± 9.6 % |
| 10727 AAA IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle) WLAN | 8.66 | ± 9.6 % |

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| 40700 | | LEEE 000 44 av (00MHz, MCCO, 00ma duty avala) | WLAN | 8.65 | ± 9.6 % |
|----------------|------------|--|------------------|--------------|----------|
| 10728 10729 | AAA AAA | IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10729 | AAA | IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10730 | AAA | IEEE 802.11ax (80MHz, MCS1, 30pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10731 | AAA | IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10732 | AAA | IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.40 | ± 9.6 % |
| 10734 | AAA | IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10735 | AAA | IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10736 | AAA | IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10737 | AAA | IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10737 | AAA | IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10736 | AAA | IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10739 | AAA | IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10741 | AAA | IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle) | WLAN | 8.40 | ± 9.6 % |
| 10741 | AAA | IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) | WLAN | 8.43 | ± 9.6 % |
| 10742 | AAA | IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| | | IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) | WLAN | 9.16 | ± 9.6 % |
| 10744 | AAA | | WLAN | 8.93 | ± 9.6 % |
| 10745 | AAA | IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) | WLAN | 9.11 | ± 9.6 % |
| 10746 | AAA | IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) | WLAN | 9.04 | ± 9.6 % |
| 10747 | AAA_ | IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) | WLAN | 8.93 | ± 9.6 % |
| 10748 | AAA | IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10749 | AAA | IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) | WLAN | | ± 9.6 % |
| 10750 | AAA | IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) | | 8.79 8.82 | ± 9.6 % |
| 10751 | AAA | IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) | WLAN | | ± 9.6 % |
| 10752 | AAA | IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | |
| 10753 | AAA | IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) | WLAN | 9.00 | ± 9.6 % |
| 10754 | AAA | IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10755 | AAA | IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10756 | AAA | IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10757 | AAA | IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10758 | AAA | IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10759 | AAA | IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10760 | AAA | IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10761 | AAA | IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10762 | AAA | IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle) | WLAN | 8,49 | ± 9.6 % |
| 10763 | AAA | IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.53 | ± 9.6 % |
| 10764 | AAA | IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10765 | AAA | IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10766 | AAA | IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle) | WLAN | 8.51 | ± 9.6 % |
| 10767 | AAA | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 7.99 | ± 9.6 % |
| 10768 | AAA | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10760 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.01 | ± 9.6 % |
| 10769 | AAA | ואות (טר-טרטוא, דותם, ואוווג, ערטת, וא תוצו | TDD | 3.01 | _ 5.5 /3 |
| 40770 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.02 | ± 9.6 % |
| 10770 | AAA | OG INIX (GE*GEDIVI, 1 KD, 20 IVITIZ, QEOK, 13 KFIZ) | TDD | 0.02 | - 0.0 /0 |
| 10771 | AAA | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.02 | ± 9.6 % |
| | | TO ME (OR OFFILM A PROCESSION OF ORCE) | TDD FO ND FD4 | 0.00 | 1000 |
| 10772 | AAA | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.23 | ± 9.6 % |
| | <u> </u> | | TDD 50 ND 504 | 0.00 | ± 9.6 % |
| 10773 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.03 | ± 9.6 % |
| | | | TDD FOND FD4 | 0.00 | ± 9.6 % |
| 10774 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.02 | ± 9.0 % |
| <u></u> | | The second secon | TDD FO ND FD1 | 0.20 | 1060 |
| 10776 | AAA | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.30 | ± 9.6 % |
| | | | TDD FD4 | 0.04 | 1000 |
| 10778 | AAA | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.34 | ± 9.6 % |
| | 1 | TO VE OF OFFILE FOX DE COLUIT CECY AND COLUIT | TDD FOAD ED4 | 0.00 | 4060/ |
| 10780 | AAA | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.38 | ± 9.6 % |
| | | SO NO COD OFFINE FOR FOR COMMITTEE CONTRACTOR | TDD 5C ND ED1 | 0.00 | ± 9.6 % |
| 10781 | AAA | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.38 | I 9.0 % |
| | | TO ME OF OFFICE COMES TO LET COMES AS A SECOND C | TDD 50 ND 501 | 0.40 | ± 9.6 % |
| 10782 | AAA | 5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.43 | E9.0 % |
| | 1 | | TDD | 1 | |

| 10783 | AAA | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.31 | ± 9.6 % |
|-------|-----|--|------------------|------|---------|
| 10784 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz) | TDD 5G NR FR1 | 8.29 | 1060 |
| 10785 | AAA | , | TDD | | ± 9.6 % |
| | | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8,40 | ± 9.6 % |
| 10786 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10787 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.44 | ± 9.6 % |
| 10788 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.39 | ± 9.6 % |
| 10789 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.37 | ± 9.6 % |
| 10790 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 | 8.39 | ± 9.6 % |
| 10791 | AAA | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.83 | ± 9.6 % |
| 10792 | AAA | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.92 | ± 9.6 % |
| 10793 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.95 | ± 9.6 % |
| 10794 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.82 | ± 9.6 % |
| 10795 | AAA | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) | TDD | | |
| | | | 5G NR FR1 TDD | 7.84 | ± 9.6 % |
| 10796 | AAA | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.82 | ± 9.6 % |
| 10797 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10798 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10799 | AAA | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.93 | ± 9.6 % |
| 10801 | AAA | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10802 | AAA | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz) | 5G NR FR1 | 7.87 | ± 9.6 % |
| 10803 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 7.93 | ± 9.6 % |
| 10805 | AAA | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10806 | AAA | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.37 | ± 9.6 % |
| 10809 | AAA | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10810 | AAA | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.34 | ± 9.6 % |
| 10812 | AAA | | TDD | | |
| | | 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.35 | ±9.6% |
| 10817 | AAA | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10818 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10819 | AAA | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.33 | ± 9.6 % |
| 10820 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10821 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.41 | ± 9.6 % |
| 10822 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.41 | ± 9.6 % |
| 10823 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.36 | ± 9.6 % |
| 10824 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz) | TDD 5G NR FR1 | 8.39 | ±9.6% |
| | | | TDD | - + | |

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| 10825 | AAA | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
|-------|-----|---|------------------|------|---------|
| 10827 | AAA | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz) | 5G NR FR1 | 8.42 | ± 9.6 % |
| 10828 | AAA | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.43 | ± 9.6 % |
| 10829 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10830 | AAA | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.63 | ± 9.6 % |
| 10831 | AAA | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.73 | ± 9.6 % |
| 10832 | AAA | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.74 | ± 9.6 % |
| 10833 | AAA | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10834 | AAA | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.75 | ±9.6 % |
| 10835 | AAA | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10836 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.66 | ± 9.6 % |
| 10837 | AAA | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.68 | ± 9.6 % |
| 10839 | AAA | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10840 | AAA | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.67 | ± 9.6 % |
| 10841 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 7.71 | ±9.6% |
| 10843 | AAA | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.49 | ± 9.6 % |
| 10844 | AAA | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10846 | AAA | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10854 | AAA | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10855 | AAA | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10856 | AAA | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10857 | AAA | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10858 | AAA | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10859 | AAA | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10860 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10861 | AAA | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10863 | AAA | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10864 | AAA | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10865 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz) | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10866 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10868 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 5,89 | ± 9.6 % |
| 10869 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10870 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.86 | ± 9.6 % |

| 10871 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 5.75 | ± 9.6 % |
|-------|-----|--|------------------|------|---------|
| 10872 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 6.52 | ± 9.6 % |
| 10873 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.61 | ± 9.6 % |
| 10874 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.65 | ± 9.6 % |
| 10875 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 7.78 | ± 9.6 % |
| 10876 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz) | 5G NR FR2 | 8.39 | ± 9.6 % |
| 10877 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 7.95 | ± 9.6 % |
| 10878 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 8.41 | ± 9.6 % |
| 10879 | AAA | 5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 8.12 | ± 9.6 % |
| 10880 | AAA | 5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 8.38 | ± 9.6 % |
| 10881 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 5.75 | ± 9.6 % |
| 10882 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 TDD | 5.96 | ± 9.6 % |
| 10883 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 6.57 | ± 9.6 % |
| 10884 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 6.53 | ± 9.6 % |
| 10885 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.61 | ± 9.6 % |
| 10886 | AAA | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 6.65 | ± 9.6 % |
| 10887 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 7.78 | ± 9.6 % |
| 10888 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz) | 5G NR FR2 | 8.35 | ± 9.6 % |
| 10889 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 8.02 | ± 9.6 % |
| 10890 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) | 5G NR FR2 | 8.40 | ± 9.6 % |
| 10891 | AAA | 5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 8.13 | ± 9.6 % |
| 10892 | AAA | 5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz) | 5G NR FR2 | 8.41 | ± 9.6 % |

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client

PC Test

Certificate No: EX3-7406_May19

CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7406

Calibration procedure(s)

QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7

Calibration procedure for dosimetric E-field probes

Calibration date:

May 16, 2019

BN 23-2010

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 NRP | SN: 104778 | 03-Apr-19 (No. 217-02892/02893) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103244 | 03-Apr-19 (No. 217-02892) | Apr-20 |
| Power sensor NRP-Z91 | SN: 103245 | 03-Apr-19 (No. 217-02893) | Apr-20 |
| Reference 20 dB Attenuator | SN: S5277 (20x) | 04-Apr-19 (No. 217-02894) | Apr-20 |
| DAE4 | SN: 660 | 19-Dec-18 (No. DAE4-660_Dec18) | Dec-19 |
| Reference Probe ES3DV2 | SN: 3013 | 31-Dec-18 (No. ES3-3013_Dec18) | Dec-19 |
| Secondary Standards | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: MY41498087 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: 000110210 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check; Jun-20 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

Calibrated by:

Name

Function

Michael Weber

Laboratory Technician

Signature

Approved by:

Katja Pokovic

Technical Manager

Issued: May 16, 2019

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
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Servizio svizzero di taratura
Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL NORMx,v,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A, B, C, D crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ

φ rotation around probe axis

Polarization 8

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle

information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- Techniques", June 2013
 b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is
 implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included
 in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|-------------------------------|----------|----------|----------|-----------|
| Norm (μV/(V/m)²) ^A | 0.46 | 0.43 | 0.45 | ± 10.1 % |
| DCP (mV) ^B | 102.8 | 102.2 | 100.4 | |

Calibration Results for Modulation Response

| UID | Communication System Name | | A dB | B dBõV | С | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|--------|----------------------------------|---|---------|-----------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | Х | 0.00 | 0.00 | 1.00 | 0.00 | 182.0 | ± 2.7 % | ± 4.7 % |
| | | Υ | 0.00 | 0.00 | 1.00 | | 172.4 | 1 | |
| **** | | Z | 0.00 | 0.00 | 1.00 | 1 | 174.6 | 1 | |
| 10352- | Pulse Waveform (200Hz, 10%) | Х | 6.76 | 76.02 | 14.93 | 10.00 | 60.0 | ± 2.7 % | ± 9.6 % |
| AAA | | Y | 6.25 | 75.48 | 14.76 | 1 | 60.0 | 1 /- | - 313 /6 |
| | | Z | 15.00 | 84.32 | 17.62 | 1 | 60.0 | 1 | |
| 10353- | Pulse Waveform (200Hz, 20%) | Х | 15.00 | 85.05 | 16.36 | 6.99 | 80.0 | ± 1.9 % | ± 9.6 % |
| AAA | | Υ | 15.00 | 85.57 | 16.70 | | 80.0 | | |
| | | Z | 15.00 | 85.96 | 16.90 | 1 | 80.0 | 1 | |
| 10354- | Pulse Waveform (200Hz, 40%) | Х | 15.00 | 83.48 | 13.87 | 3.98 | 95.0 | ± 1.3 % | ± 9.6 % |
| AAA | | Y | 15.00 | 88.48 | 16.53 | 1 | 95.0 | | , , |
| | | Z | 15.00 | 85.80 | 15.05 | 1 | 95.0 | 1 | |
| 10355- | Pulse Waveform (200Hz, 60%) | Х | 0.28 | 60.00 | 4.49 | 2.22 | 120.0 | ± 1.3 % | ± 9.6 % |
| AAA | | Υ | 15.00 | 95.23 | 18.20 | | 120.0 | | |
| | | Z | 0.39 | 62.12 | 5.82 | | 120.0 | | |
| 10387- | QPSK Waveform, 1 MHz | X | 0.46 | 60.00 | 5.77 | 0.00 | 150.0 | ± 3.7 % | ± 9.6 % |
| AAA | | Υ | 14.25 | 443.18 | 61.66 | | 150.0 | | |
| | | Z | 0.48 | 60.00 | 6.06 | | 150.0 | | |
| 10388- | QPSK Waveform, 10 MHz | Х | 2.03 | 67.70 | 15.44 | 0.00 | 150.0 | ± 1.2 % | ± 9.6 % |
| AAA | 1 | Υ | 2.30 | 72.35 | 18.27 | | 150.0 | | |
| | | Z | 2.07 | 67.89 | 15.68 | | 150.0 | : | |
| 10396- | 64-QAM Waveform, 100 kHz | X | 2.49 | 68.06 | 17.57 | 3.01 | 150.0 | ± 1.6 % | ± 9.6 % |
| AAA | | Y | 1.98 | 66.67 | 17.49 | | 150.0 | | |
| | | Z | 2.52 | 68,32 | 17.86 | | 150.0 | | |
| 10399- | 64-QAM Waveform, 40 MHz | Х | 3.39 | 67.06 | 15.71 | 0.00 | 150.0 | ± 2.2 % | ± 9.6 % |
| AAA | | Υ | 3.39 | 68.23 | 16.67 | | 150.0 | | |
| 45.00 | | Z | 3.40 | 67.01 | 15.79 | | 150.0 | | |
| 10414- | WLAN CCDF, 64-QAM, 40MHz | Χ | 4.70 | 65.74 | 15.61 | 0.00 | 150.0 | ± 4.1 % | ± 9.6 % |
| AAA | | Y | 4.47 | 66.54 | 16.20 | | 150.0 | | |
| | details on LUD parameters and Am | Z | 4.70 | 65.63 | 15.63 | | 150.0 | | |

Note: For details on UID parameters see Appendix

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

A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

B Numerical linearization parameter: uncertainty not required.

E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Sensor Model Parameters

| | C1 fF | C2 fF | α V ⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V ⁻¹ | Т6 |
|---|----------|----------|----------------------|--------------------------|--------------------------|----------|-----------------------|-----------------------|------|
| X | 34.8 | 265.14 | 36.82 | 6.17 | 0.37 | 5.06 | 0.00 | 0.44 | 1.01 |
| Y | 19.8 | 147.90 | 35.69 | 7.11 | 0.37 | 5.03 | 0.00 | 0.19 | 1.00 |
| Z | 35.4 | 271.85 | 37.42 | 5.60 | 0.38 | 5.06 | 0.15 | 0.41 | 1.01 |

Other Probe Parameters

| Sensor Arrangement | Triangular |
|---|------------|
| Connector Angle (°) | 27.5 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|------------------------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 30 | 55.0 | 0.75 | 16.10 | 16.10 | 16.10 | 0.00 | 1.00 | ± 13.3 % |
| 750 | 41.9 | 0.89 | 10.26 | 10.26 | 10.26 | 0.44 | 0.93 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.78 | 9.78 | 9.78 | 0.44 | 0.91 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.57 | 8.57 | 8.57 | 0.39 | 0.80 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.18 | 8.18 | 8.18 | 0.39 | 0.80 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 8.06 | 8.06 | 8.06 | 0.33 | 0.87 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.67 | 7.67 | 7.67 | 0.37 | 0.87 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.44 | 7.44 | 7.44 | 0.40 | 0.88 | ± 12.0 % |
| 5250 | 35.9 | 4.71 | 5.54 | 5.54 | 5.54 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 4.94 | 4.94 | 4.94 | 0.40 | 1.80 | ± 13.1 % |
| 5750 | 35.4 | 5.22 | 5.23 | 5.23 | 5.23 | 0.40 | 1.80 | ± 13.1 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to \pm 110 MHz. F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to

measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of

the ConvF uncertainty for indicated target tissue parameters.

Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) ^c | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|----------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 55.5 | 0.96 | 10.05 | 10.05 | 10.05 | 0.50 | 0.80 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 9.78 | 9.78 | 9.78 | 0.40 | 0.93 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8.13 | 8.13 | 8.13 | 0.43 | 0.80 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.95 | 7.95 | 7.95 | 0.38 | 0.85 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.76 | 7.76 | 7.76 | 0.44 | 0.85 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.54 | 7.54 | 7.54 | 0.37 | 0.88 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.47 | 7.47 | 7.47 | 0.25 | 1.05 | ± 12.0 % |
| 5250 | 48.9 | 5.36 | 5.08 | 5.08 | 5.08 | 0.50 | 1.90 | ± 13.1 % |
| 5600 | 48.5 | 5.77 | 4.37 | 4.37 | 4.37 | 0.50 | 1.90 | ± 13.1 % |
| 5750 | 48.3 | 5.94 | 4.53 | 4.53 | 4.53 | 0.50 | 1.90 | ± 13.1 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to

measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of

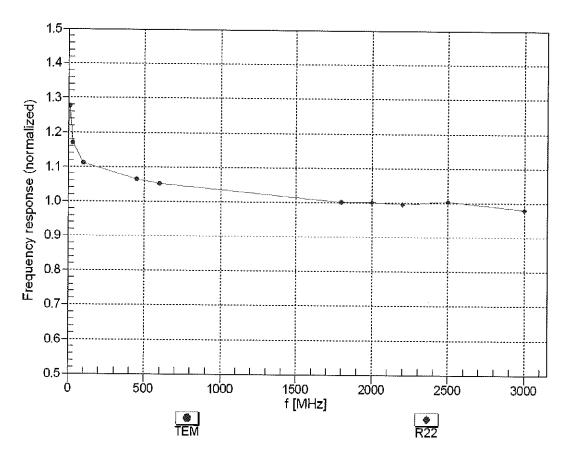
the ConvF uncertainty for indicated target tissue parameters.

A requestion of the convF uncertainty for indicated target tissue parameters.

A lipha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)

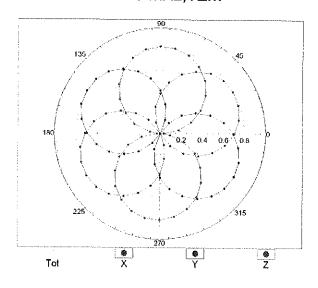


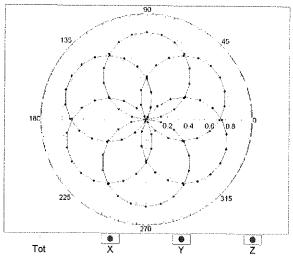
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

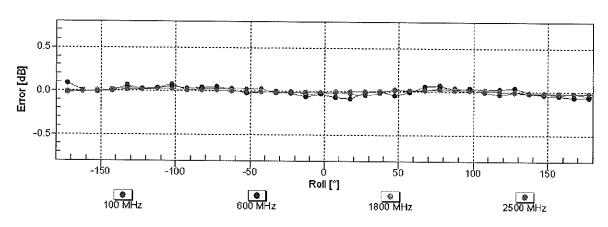
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

f=600 MHz,TEM

f=1800 MHz,R22

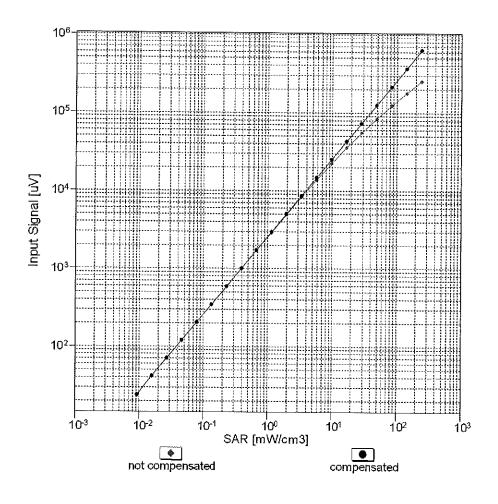


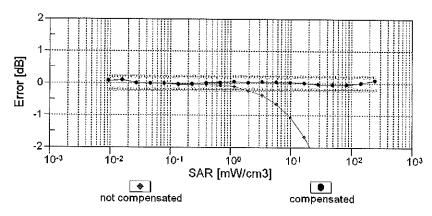




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

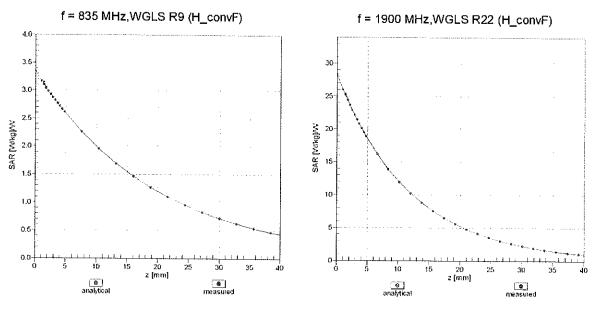
Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)



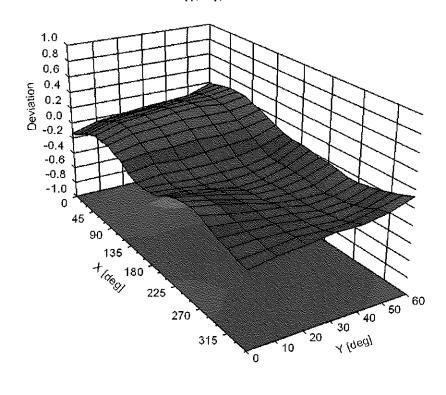


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (φ, θ), f = 900 MHz



EX3DV4- SN:7406 May 16, 2019

Appendix: Modulation Calibration Parameters

| UID | Rev | Communication System Name | Group | PAR (dB) | Unc ^t (k=2) |
|----------------|------------|---|------------------------|--------------|---------------------------|
| 0 | ********* | CW | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ± 9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) | WCDMA | 2.91 | ± 9.6 % |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WLAN | 1.87 | ± 9.6 % |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ± 9.6 % |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ± 9.6 % |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) | GSM | 9.57 | ± 9.6 % |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 6.56 | ± 9.6 % |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ± 9.6 % |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 9.55 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | GSM | 3.55 | ± 9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | GSM | 7.78 | ± 9.6 % |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | Bluetooth Bluetooth | 1.87 | ± 9.6 % ± 9.6 % |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.16 7.74 | ± 9.6 % |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 4.53 | ± 9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth | 3.83 | ± 9.6 % |
| 10035 10036 | CAA CAA | IEEE 802.15.1 Bluetooth (P/4-DQPSK, DH5) | Bluetooth | 8.01 | ± 9.6 % |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 4.77 | ± 9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.10 | ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.57 | ± 9.6 % |
| 10033 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10042 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9,83 | ±9.6% |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN WLAN | 9.62 9.94 | ± 9.6 % ± 9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10074 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10076 | CAB | IEEE 802.11g WiF1 2.4 GHz (DSSS/OFDM, 46 Mibps) | WLAN | 11.00 | ± 9.6 % |
| 10077 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ± 9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSDPA) | WCDMA | 3.98 | ± 9.6 % |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ± 9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ± 9.6 % |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | ± 9.6 % |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | ±9.6 % |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | ± 9.6 % |

| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
|----------------|------------|--|---------|---------------------------------------|--------------------|
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 5.75 | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.44 | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 | ± 9.6 % |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN | 8.10 | ± 9.6 % |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | WLAN | 8.46 | ± 9.6 % |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN | 8.15 | ± 9.6 % |
| 10117 | CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN | 8.07 | ± 9.6 % |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | WLAN | 8.59 | ± 9.6 % |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | ± 9.6 % |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | ± 9.6 % |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | ± 9.6 % |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | ± 9.6 % |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | ± 9.6 % |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | ± 9.6 % |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % ± 9.6 % |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | ±9.6 % |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-TDD | | ± 9.6 % |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | | 10.05 | ± 9.6 % |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 5.75 | ± 9.6 % |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 6.43 | ± 9.6 % |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 5.79 | ± 9.6 % |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.49 | ±9.6% |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.56 | ± 9.6 % |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-FDD | 5.82 | ± 9.6 % |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 6.58 | ±9.6 % |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QFSK) LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 5.46 | ± 9.6 % |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | ± 9.6 % |
| 10169 | CAE | LTE-FDD (SC-FDMA, 30% RB, 1.4 MHz, 64-QAM) LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 6.79 | ± 9.6 % |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QFSK) LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 5.73 | ± 9.6 % |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10172 | CAG | LTE TOD (SC FOMA 1 DD 20 MHz, OPOK) | LTE-FDD | 6.49 | ± 9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | ±9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10175 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10177 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | ±9.6% |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10183 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| | | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | ± 9.6 % |
| 10186 10187 | AAE CAF | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10188 | | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10193 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | WLAN | 8.09 | ± 9.6 % |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN | 8.12 | ± 9.6 % |
| 10195 | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.21 | ± 9.6 % |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.10 | ± 9.6 % |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | ± 9.6 % |
| | | | | · · · · · · · · · · · · · · · · · · · | |

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| 40000 | 040 | IEEE 800 44 n (UT Mixed 42 2 Mbno 46 OAM) | WLAN | 8.13 | ± 9.6 % |
|----------------|-----|---|--------------------|---------------|--------------------|
| 10220 10221 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.27 | ± 9.6 % |
| 10221 | CAC | IEEE 802.111 (HT Mixed, 72.2 Mbps, 64-QAM) | WLAN | 8.06 | ± 9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 30 Mbps, 64-QAM) | WLAN | 8.08 | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+) | WCDMA | 5.97 | ± 9.6 % |
| 10226 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.49 | ± 9.6 % |
| 10227 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.26 | ± 9.6 % |
| 10228 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-TDD | 9.22 | ± 9.6 % |
| 10229 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10230 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | ± 9.6 % |
| 10232 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10233 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10234 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10235 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10236 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TOD | 9.21 | ±9.6% |
| 10241 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-TDD LTE-TDD | 9.82 9.86 | ± 9.6 % ± 9.6 % |
| 10242 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.46 | ± 9.6 % |
| 10243 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QFSK) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10244 10245 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10245 | CAC | LTE-TDD (SC-FDMA, 50 % RB, 3 MHz, QPSK) | LTE-TDD | 9.30 | ±9.6 % |
| 10246 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.91 | ± 9.6 % |
| 10247 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | ± 9.6 % |
| 10249 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10250 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.81 | ± 9.6 % |
| 10251 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.17 | ± 9.6 % |
| 10252 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-TDD | 9.90 | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-TDD | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-TDD | 9.20 | ± 9.6 % |
| 10256 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD | 9.96 | ± 9.6 % |
| 10257 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | ± 9.6 % |
| 10258 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-TDD | 9.34 | ± 9.6 % |
| 10259 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-TDD | 9.98 | ± 9.6 % |
| 10260 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10261 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-TDD | 9.24 | ± 9.6 % |
| 10262 | | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | LTE-TDD | 9.83 | ± 9.6 % |
| 10263 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.16 | ± 9.6 % |
| 10264 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-TDD | 9.23 | ± 9.6 % |
| 10265 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-TDD | 9.92 10.07 | ± 9.6 % |
| 10266 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-TDD | 9.30 | ± 9.6 % |
| 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSR) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-TDD | 10.06 | ± 9.6 % |
| 10266 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 10-QAM) | LTE-TDD | 10.00 | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-PDMA, 100 % RB, 15 MHz, 04-QAM) | LTE-TOD | 9.58 | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | WCDMA | 4.87 | ± 9.6 % |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | WCDMA | 3.96 | ± 9.6 % |
| 10277 | CAA | PHS (QPSK) | PHS | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | 11.81 | ± 9.6 % |
| 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate | CDMA2000 | 3.91 | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate | CDMA2000 | 3.46 | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate | CDMA2000 | 3.39 | ± 9.6 % |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate | CDMA2000 | 3.50 | ± 9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | CDMA2000 | 12.49 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-FDD | 5.81 | ± 9.6 % |
| 10298 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | ± 9.6 % |

| 40000 | 1 4 4 15 | | | | |
|----------------|------------|---|---------------------------------------|--------------|--------------------|
| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10301 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | WiMAX | 12.03 | ± 9.6 % |
| 10302 | AAA | IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL | WiMAX | 12.57 | ± 9.6 % |
| 10303 | AAA | symbols) | | | |
| 10303 | AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | WiMAX | 12.52 | ± 9.6 % |
| 10305 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 | WiMAX | 11.86 | ± 9.6 % |
| 10000 | 1 | symbols) | WiMAX | 15.24 | ± 9.6 % |
| 10306 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 | 10000000 | ļ.,,,,, | |
| | 1,00, | symbols) | WiMAX | 14.67 | ± 9.6 % |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 | WIMAX | 44.40 | 1.0004 |
| | | symbols) | VVIIVIAA | 14.49 | ± 9.6 % |
| 10308 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | WiMAX | 14.46 | ± 9.6 % |
| 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 | WIMAX | 14.58 | ± 9.6 % |
| | | symbols) | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 14.50 | 1.5.0 76 |
| 10310 | AAA | IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 | WIMAX | 14.57 | ± 9.6 % |
| | | symbols) | | 17.01 | 2 0.0 70 |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | LTE-FDD | 6.06 | ± 9.6 % |
| 10313 | AAA | iDEN 1:3 | IDEN | 10.51 | ± 9.6 % |
| 10314 | AAA | IDEN 1:6 | iDEN | 13.48 | ± 9.6 % |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) | WLAN | 1.71 | ± 9.6 % |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10352 10353 | AAA | Pulse Waveform (200Hz, 10%) | Generic | 10.00 | ± 9.6 % |
| | AAA | Pulse Waveform (200Hz, 20%) | Generic | 6.99 | ± 9.6 % |
| 10354 10355 | AAA | Pulse Waveform (200Hz, 40%) | Generic | 3.98 | ± 9.6 % |
| 10356 | AAA | Pulse Waveform (200Hz, 60%) | Generic | 2.22 | ± 9.6 % |
| 10387 | AAA | Pulse Waveform (200Hz, 80%) | Generic | 0.97 | ± 9.6 % |
| 10387 | AAA | QPSK Waveform, 1 MHz | Generic | 5.10 | ± 9.6 % |
| 10396 | AAA | QPSK Waveform, 10 MHz 64-QAM Waveform, 100 kHz | Generic | 5.22 | ± 9.6 % |
| 10399 | AAA | 64-QAM Waveform, 40 MHz | Generic | 6.27 | ± 9.6 % |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | Generic | 6.27 | ± 9.6 % |
| 10401 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10402 | AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.60 | ±9.6% |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0) | WLAN | 8.53 | ± 9.6 % |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A) | CDMA2000 | 3.76 | ± 9.6 % |
| 10406 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate | CDMA2000 CDMA2000 | 3.77 | ±9.6 % |
| 10410 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 5.22 7.82 | ±9.6 % |
| | | Subframe=2,3,4,7,8,9, Subframe Conf=4) | C. C. LOD | 1.02 | ±9.6 % |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz | Generic | 8.54 | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) | WLAN | 1.54 | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.14 | ± 9.6 % |
| | | Long preambule) | | 0.11 | _ 0.0 % |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, | WLAN | 8.19 | ±9.6% |
| 10100 | | Short preambule) | | | , . |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | WLAN | 8.32 | ± 9.6 % |
| 10423 | AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | WLAN | 8.47 | ±9.6% |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | WLAN | 8.40 | ±9.6% |
| 10425 10426 | AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | WLAN | 8.41 | ± 9.6 % |
| 10426 | AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | WLAN | 8.45 | ± 9.6 % |
| 10427 | AAB AAD | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | WLAN | 8.41 | ± 9.6 % |
| 10430 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | LTE-FDD | 8.28 | ± 9.6 % |
| 10431 | AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | LTE-FDD | 8.38 | ±9.6% |
| 10433 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | LTE-FDD | 8.34 | ± 9.6 % |
| 10434 | AAA | W-CDMA (BS Test Model 1, 64 DPCH) | LTE-FDD | 8.34 | ± 9.6 % |
| 10435 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL | WCDMA | 8.60 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10447 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.50 | 1060/ |
| 10448 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.56 | ± 9.6 % |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%) | LTE-FDD | 7.53 7.51 | ±9.6 % |
| 10450 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-FDD | 7.51 | ± 9.6 % ± 9.6 % |
| | | , , , , , , , , , , , , , , , , , , , | | 7.70 | ± 0.0 /0 |

| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.59 | ±9.6 % |
|-------|-------|--|-----------------|----------|---------|
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ± 9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ±9.6% |
| 10462 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.30 | ± 9.6 % |
| 40400 | | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.56 | ± 9.6 % |
| 10463 | AAA | Subframe=2,3,4,7,8,9) | | | |
| 10464 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10465 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| 10466 | AAB | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 40407 | | Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10467 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LIE-IDD | 7.02 | 19.0 % |
| 10468 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10469 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.56 | ± 9.6 % |
| 10470 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| 10471 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| 10472 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.57 | ± 9.6 % |
| 10479 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10480 | AAA | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.18 | ± 9.6 % |
| 40404 | A 8 4 | Subframe=2,3,4,7,8,9) | I when the line | 0.45 | 1000 |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ± 9.6 % |
| 10482 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.71 | ± 9.6 % |
| 10483 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.39 | ± 9.6 % |
| 10484 | AAB | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.47 | ± 9.6 % |
| 10485 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL | LTE-TDD | 7.59 | ± 9.6 % |
| | | Subframe=2.3.4.7.8.9) | | | |
| 10486 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.38 | ± 9.6 % |
| 10487 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.60 | ± 9.6 % |
| 10488 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.70 | ± 9.6 % |
| 10489 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.31 | ± 9.6 % |
| 10490 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | <u> </u> | |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |

| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.41 | ± 9.6 % |
|---|-----|---|---------|------|---------|
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.37 | ± 9.6 % |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10497 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.40 | ± 9.6 % |
| 10499 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10501 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.44 | ± 9.6 % |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.72 | ± 9.6 % |
| 10504 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.31 | ± 9.6 % |
| 10505 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10507 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.36 | ± 9.6 % |
| 10508 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.99 | ± 9.6 % |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.49 | ± 9.6 % |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.51 | ± 9.6 % |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.74 | ± 9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8,42 | ± 9.6 % |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ± 9.6 % |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) | WLAN | 1.57 | ± 9.6 % |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10518 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | WLAN | | |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) | | 8.39 | ± 9.6 % |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 8.12 | ± 9.6 % |
| 10527 | AAB | IFFE 802 11a/h WiFi 5 CHz (OFDM 20 MF) | WLAN | 7.97 | ± 9.6 % |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10523 | | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.08 | ± 9.6 % |
| | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | WLAN | 8.27 | ±9.6% |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.21 | ± 9.6 % |
| 10528 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10529 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10531 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.43 | |
| 10532 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | WLAN | | ± 9.6 % |
| 10533 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10534 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| *************************************** | · | , | AALVAN | 8.45 | ± 9.6 % |
| | | | | | |

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| 10535 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ±9.6% |
|--------|----------|--|--------|------|------------|
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.32 | ±9.6 % |
| 10537 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | WLAN | 8,44 | ±9.6% |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.39 | ±9.6% |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.47 | ±9.6% |
| 10544 | AAB | IEEE 802.11ac WiF (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| | | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10548 | AAB | | WLAN | 8.38 | ± 9.6 % |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | | | |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.50 | ±9.6% |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.47 | ±9.6% |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.52 | ±9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty | WLAN | 8.25 | ± 9.6 % |
| | | cycle) | | | |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty | WLAN | 8.45 | ± 9.6 % |
| | | cycle) | | | |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty | WLAN | 8.13 | ± 9.6 % |
| | | cycle) | | | |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty | WLAN | 8.00 | ± 9.6 % |
| | | cycle) | | | |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty | WLAN | 8.37 | ± 9.6 % |
| | | cycle) | | | |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty | WLAN | 8.10 | ± 9.6 % |
| | <u> </u> | cycle) | | | |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty | WLAN | 8.30 | ± 9.6 % |
| | | cycle) | | | |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | WLAN | 1.99 | ± 9.6 % |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty | WLAN | 8.59 | ± 9.6 % |
| | | cycle) | | | |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty | WLAN | 8.60 | ± 9.6 % |
| | | cycle) | | | |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty | WLAN | 8.70 | ± 9.6 % |
| | | cycle) | | | |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty | WLAN | 8.49 | ± 9.6 % |
| | | cycle) | | | |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty | WLAN | 8.36 | ± 9.6 % |
| | 1 | cycle) | | | |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty | WLAN | 8.76 | ± 9.6 % |
| | | cycle) | • | | |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty | WLAN | 8.35 | ± 9.6 % |
| | 1.7. | cycle) | | | |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty | WLAN | 8.67 | ± 9.6 % |
| 1,0002 | ,,,,, | cycle) | 1 = | | |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| | | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mpps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10585 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10586 | AAB | HEEE OUZ. Hatti VVICTO GEIZ (OFDIN, 10 MIDPS, 30PC GUTY CYCLS) | WLAN | | ± 9.6 % |
| 10587 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle) | VALAIN | 8.36 | 1 I J.O 70 |

| 40500 | 1 4 4 5 | | | | |
|-------|---------|--|---------------|---------------|---------|
| 10588 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10589 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 | ±9.6 % |
| 10590 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10591 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | WLAN | 8.63 | ± 9.6 % |
| 10592 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10593 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | WLAN | 8.64 | ± 9.6 % |
| 10594 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10595 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10596 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % |
| 10597 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10598 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10599 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10600 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10601 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10602 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | WLAN | 8.94 | ± 9.6 % |
| 10603 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | WLAN | 9.03 | ± 9.6 % |
| 10604 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10605 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | WLAN | 8.97 | |
| 10606 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | WLAN | | ±9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10608 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | | 8.64 | ± 9.6 % |
| 10609 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10610 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10611 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10612 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10613 | AAB | IEEE 802.11ac WiFi (20MHz, MCSs, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10614 | AAB | IEEE 202 11ac WIFI (20MI) MOSO, 90pc duty cycle) | WLAN | 8.94 | ±9.6 % |
| 10615 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.59 | ±9.6 % |
| 10616 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10617 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10618 | | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10619 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.58 | ± 9.6 % |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.86 | ±9.6% |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10621 | AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10623 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.68 | ± 9.6 % |
| | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10624 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10625 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.96 | ± 9.6 % |
| 10626 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10627 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.88 | ± 9.6 % |
| 10628 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle) | WLAN | 8.71 | ± 9.6 % |
| 10629 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ± 9.6 % |
| 10630 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10631 | AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.81 | ± 9,6 % |
| 10632 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10633 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10634 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10635 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | WLAN | 8.79 | ± 9.6 % |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle) | WLAN | 8.85 | ± 9.6 % |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle) | WLAN | 8.98 | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle) | WLAN | 9.06 | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle) | WLAN | 9.05 | ± 9.6 % |
| 10645 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle) | WLAN | 9.03 | |
| 10646 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | 11.96 | ± 9.6 % |
| 10647 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | LTE-TDD | | ± 9.6 % |
| 10648 | AAA | CDMA2000 (1x Advanced) | CDMA2000 | 11.96 3.45 | ± 9.6 % |
| 10652 | AAD | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | | ± 9.6 % |
| 10653 | AAD | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 6.91 | ± 9.6 % |
| 10654 | AAD | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.42 | ± 9.6 % |
| | I | (| L L L L L D D | 6.96 | ± 9.6 % |

| 10055 | | LITE TOD (CEDMA COMILL E THICA CONT. A (A) | 1 (75 755 | 7.04 | |
|----------------|-----|--|--------------|---------------|--------------------|
| 10655 | AAE | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD | 7.21 10.00 | ± 9.6 % |
| 10658 10659 | AAA | Pulse Waveform (200Hz, 10%) Pulse Waveform (200Hz, 20%) | Test Test | 6.99 | ± 9.6 % ± 9.6 % |
| 10660 | AAA | Pulse Waveform (200Hz, 40%) | Test | 3.98 | ±9.6% |
| 10661 | AAA | Pulse Waveform (200Hz, 60%) | Test | 2.22 | ± 9.6 % |
| 10662 | AAA | Pulse Waveform (200Hz, 80%) | Test | 0.97 | ± 9.6 % |
| 10670 | AAA | Bluetooth Low Energy | Bluetooth | 2.19 | ± 9.6 % |
| 10671 | AAA | IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle) | WLAN | 9.09 | ± 9.6 % |
| 10672 | AAA | IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10673 | AAA | IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle) | WLAN | 8.78 | ±9.6% |
| 10674 | AAA | IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10675 | AAA | IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10676 | AAA | IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10677 | AAA | IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10678 | AAA | IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle) | WLAN | 8.78 | ± 9.6 % |
| 10679 | AAA | IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10680 | AAA | IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle) | WLAN | 8.80 | ± 9.6 % |
| 10681 | AAA | IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle) | WLAN | 8.62 | ± 9.6 % |
| 10682 | AAA | IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle) | WLAN | 8.83 | ± 9.6 % |
| 10683 | AAA | IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10684 | AAA | IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.26 | ±9.6 % |
| 10685 | AAA | IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10686 | AAA | IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle) | WLAN | 8.28 | ±9.6% |
| 10687 10688 | AAA | IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle) | WLAN WLAN | 8.45 8.29 | ± 9.6 % ± 9.6 % |
| | | IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle) | WLAN | 8.29 | |
| 10689 10690 | AAA | IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % ± 9.6 % |
| 10690 | AAA | IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle) IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10692 | AAA | IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) | WLAN | 8.25 | ± 9.6 % |
| 10694 | AAA | IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle) | WLAN | 8.57 | ± 9.6 % |
| 10695 | AAA | IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle) | WLAN | 8,78 | ± 9.6 % |
| 10696 | AAA | IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle) | WLAN | 8.91 | ± 9.6 % |
| 10697 | AAA | IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10698 | AAA | IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle) | WLAN | 8.89 | ± 9.6 % |
| 10699 | AAA | IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle) | WLAN | 8.82 | ± 9.6 % |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10701 | AAA | IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle) | WLAN | 8.86 | ± 9.6 % |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10703 | AAA | IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle) | WLAN | 8.82 | ±9.6% |
| 10704 | AAA | IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle) | WLAN | 8.56 | ± 9.6 % |
| 10705 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10706 | AAA | IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle) | WLAN | 8.66 | ± 9.6 % |
| 10707 | AAA | IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle) | WLAN | 8.32 | ± 9.6 % |
| 10708 | AAA | IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10709 10710 | AAA | IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle) IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle) | WLAN WLAN | 8.33 8.29 | ±9.6 % ±9.6 % |
| 10710 | AAA | IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10711 | AAA | IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10712 | AAA | IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.33 | ± 9.6 % |
| 10713 | AAA | IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.26 | ± 9.6 % |
| 10715 | AAA | IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10716 | AAA | IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.30 | ± 9.6 % |
| 10717 | AAA | IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10718 | AAA | IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle) | WLAN | 8.24 | ± 9.6 % |
| 10719 | AAA | IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle) | WLAN | 8.81 | ± 9.6 % |
| 10720 | AAA | IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle) | WLAN | 8.87 | ± 9.6 % |
| 10721 | AAA | IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10722 | AAA | IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) | WLAN | 8.55 | ± 9.6 % |
| 10723 | AAA | IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10724 | AAA | IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle) | WLAN | 8.90 | ± 9.6 % |
| 10725 | AAA | IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle) | WLAN | 8.74 | ± 9.6 % |
| 10726 | AAA | IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle) | WLAN | 8.72 | ± 9.6 % |
| 10727 | AAA | IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle) | WLAN | 8.66 | ± 9.6 % |

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| 10728 | 40700 | 1 ^ ^ ^ | JEEE COO 44 (CONTIL MOOD CO. 14 | | | |
|--|-------|--------------|--|---|---------------|---------|
| 10730 | 10728 | AAA | IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10731 AAA IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) | | | IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle) | | | |
| 10732 | | | IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) | | -) | |
| 10733 | | | IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) | | 8.42 | |
| 10734 | | | | | 8.46 | ± 9.6 % |
| 10735 | | | | WLAN | 8.40 | ± 9.6 % |
| 10736 | | | | WLAN | 8.25 | ± 9.6 % |
| 10737 | | | | WLAN | 8.33 | ± 9.6 % |
| 10738 | | 1 | IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10739 | | | IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10739 | | | | WLAN | 8.42 | ± 9.6 % |
| 10740 | | | | WLAN | | |
| 10741 AAA IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle) WLAN 8.40 ± 9.6 % 10742 AAA IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) WLAN 8.43 ± 9.6 % 10743 AAA IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10744 AAA IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) WLAN 9.16 ± 9.6 % 10745 AAA IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) WLAN 8.93 ± 9.6 % 10746 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.93 ± 9.6 % 10747 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 9.11 ± 9.6 % 10748 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 9.04 ± 9.6 % 10749 AAA IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) WLAN 8.93 ± 9.6 % 10750 AAA IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) WLAN 8.90 ± 9.6 % 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.79 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.77 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.58 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN | | - | | WLAN | 8.48 | |
| 10742 | | | | WLAN | 8.40 | |
| 10743 | | | | WLAN | 8.43 | |
| 10744 | | | IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle) | WLAN | 8.94 | |
| 10745 | | | IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) | WLAN | 9.16 | |
| 10746 | | - | IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) | WLAN | 8.93 | |
| 10747 AAA IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) WLAN 9.04 ± 9.6 % 10748 AAA IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) WLAN 8.93 ± 9.6 % 10749 AAA IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) WLAN 8.90 ± 9.6 % 10750 AAA IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) WLAN 8.79 ± 9.6 % 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS4 | | | IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) | WLAN | 9.11 | |
| 10748 AAA IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) WLAN 8.93 ± 9.6 % 10749 AAA IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) WLAN 8.90 ± 9.6 % 10750 AAA IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) WLAN 8.79 ± 9.6 % 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS4 | | | IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) | WLAN | 9.04 | |
| 10749 AAA IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) WLAN 8.90 ± 9.6 % 10750 AAA IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) WLAN 8.79 ± 9.6 % 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.58 ± 9.6 % | | | | WLAN | 8.93 | |
| 10750 AAA IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) WLAN 8.79 ± 9.6 % 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS6 | | | IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) | WLAN | | |
| 10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8.82 ± 9.6 % 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.54 ± 9.6 % | | | IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) | WLAN | 8.79 | |
| 10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8.81 ± 9.6 % 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10762 AAA IEEE 802.11ax (160MHz, MCS9 | | | | WLAN | 8.82 | |
| 10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9.00 ± 9.6 % 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) WLAN 8.49 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10762 AAA IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) WLAN 8.53 ± 9.6 % 10763 AAA IEEE 802.11ax (160MHz, MCS1 | | | IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) | | | |
| 10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8.94 ± 9.6 % 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) WLAN 8.49 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10762 AAA IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle) WLAN 8.49 ± 9.6 % 10763 AAA IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) WLAN 8.53 ± 9.6 % 10765 AAA IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) WLAN 8.54 ± 9.6 % | | AAA | IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) | WLAN | | |
| 10755 AAA IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle) WLAN 8.64 ± 9.6 % 10756 AAA IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8.77 ± 9.6 % 10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8.69 ± 9.6 % 10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10760 AAA IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle) WLAN 8.49 ± 9.6 % 10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8.58 ± 9.6 % 10762 AAA IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle) WLAN 8.49 ± 9.6 % 10763 AAA IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) WLAN 8.53 ± 9.6 % 10764 AAA IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) WLAN 8.54 ± 9.6 % 10765 AAA IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) WLAN 8.54 ± 9.6 % | | | IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) | | | |
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| 10765 AAA IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) WLAN 8.54 ± 9.6 % | | AAA | IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) | | | |
| 40700 444 400444 400444 | | | IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle) | | | |
| | 10766 | AAA | IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle) | | | |

May 16, 2019

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of

Schmid & Partner
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Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client

PC Test

Accreditation No.: SCS 0108

Certificate No: EX3-7417_Feb19

C

CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7417

Calibration procedure(s)

QA CAL-D1 (9) QA CAL-25 VS, QA CAL-25 V7 Calibration procedure for dosimetric E-field probes

12-96-20

Calibration date:

February 19, 2019

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 NRP | SN: 104778 | 04-Apr-18 (No. 217-02672/02673) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103244 | 04-Apr-18 (No. 217-02672) | Apr-19 |
| Power sensor NRP-Z91 | SN: 103245 | 04-Apr-18 (No. 217-02673) | Apr-19 |
| Reference 20 dB Attenuator | SN: S5277 (20x) | 04-Apr-18 (No. 217-02682) | Apr-19 |
| DAE4 | SN: 660 | 19-Dec-18 (No. DAE4-660_Dec18) | Dec-19 |
| Reference Probe ES3DV2 | SN: 3013 | 31-Dec-18 (No. ES3-3013_Dec18) | Dec-19 |
| Secondary Standards | ID | Check Date (in house) | Scheduled Check |
| Power meter E4419B | SN: GB41293874 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: MY41498087 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A | SN: 000110210 | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A | SN: US41080477 | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

Name Function Signature
Calibrated by: Claudio Leubler Laboratory Technician

Approved by: Katja Pokovic Technical Manager

Issued: February 20, 2019

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

Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
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Servizio svizzero di taratura
Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A, B, C, D crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Connector Angle

information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom
 exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

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EX3DV4 – SN:7417 February 19, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|--|----------|----------|----------|-----------|
| Norm (μV/(V/m) ²) ^A | 0.54 | 0.43 | 0.53 | ± 10.1 % |
| DCP (mV) ⁸ | 98.7 | 97.4 | 100.4 | |

Calibration Results for Modulation Response

| UID | Communication System Name | | A dB | B dBõV | С | D dB | VR mV | Max dev. | Max Unc ^E (k=2) |
|--------|-----------------------------|---|---------|-----------|-------|---------|----------|-------------|----------------------------------|
| 0 | CW | X | 0.00 | 0.00 | 1,00 | 0.00 | 144.6 | ± 3.3 % | ± 4.7 % |
| | | Y | 0.00 | 0.00 | 1.00 | | 149.7 | | |
| | | Z | 0.00 | 0.00 | 1.00 | | 143.1 | | |
| 10352- | Pulse Waveform (200Hz, 10%) | X | 15.00 | 88.38 | 19.65 | 10.00 | 60.0 | ± 3.3 % | ±9.6 % |
| AAA | | Y | 4.33 | 71.38 | 13.30 | | 60.0 | | |
| | | Z | 7.40 | 77.44 | 14.95 | | 60.0 | | |
| 10353- | Pulse Waveform (200Hz, 20%) | X | 15.00 | 92.19 | 20.43 | 6.99 | 80.0 | ± 2.2 % | ± 9.6 % |
| AAA | | Y | 5.53 | 76.01 | 13.64 | | 80.0 | | ļ |
| | | Z | 15.00 | 85.74 | 16.43 |] | 80.0 | | |
| 10354- | Pulse Waveform (200Hz, 40%) | Х | 15.00 | 107.68 | 26.54 | 3.98 | 95.0 | ± 1.3 % | ± 9.6 % |
| AAA | | Y | 9.05 | 79.53 | 12.66 | | 95.0 | | |
| | *** | Z | 15.00 | 90.71 | 17.41 | | 95.0 | | |
| 10355- | Pulse Waveform (200Hz, 60%) | Х | 15.00 | 127.17 | 33.83 | 2.22 | 120.0 | ± 1.2 % | ± 9.6 % |
| AAA | | Y | 0.26 | 60.00 | 4.45 |] | 120.0 | | |
| | | Z | 15.00 | 99.84 | 20.30 | | 120.0 | | |
| 10387- | QPSK Waveform, 1 MHz | X | 0.56 | 60.62 | 7.74 | 0.00 | 150.0 | ± 3.6 % | ± 9.6 % |
| AAA | | Y | 0.42 | 60.00 | 4.69 | | 150.0 | | |
| | | Z | 0.44 | 60.00 | 5.48 | | 150.0 | | |
| 10388- | QPSK Waveform, 10 MHz | X | 2.27 | 69.09 | 16.46 | 0.00 | 150.0 | ± 1.3 % | ± 9.6 % |
| AAA | | Υ | 1.94 | 67.43 | 15.43 | | 150.0 | | |
| | | Z | 2.06 | 68.27 | 16.05 | | 150.0 |] | |
| 10396- | 64-QAM Waveform, 100 kl-lz | X | 3.15 | 72.71 | 19.95 | 3.01 | 150.0 | ± 2.5 % | ± 9.6 % |
| AAA | | Υ | 2.04 | 67.08 | 18.19 |] | 150.0 | | |
| | | Z | 2.07 | 66.03 | 16.88 | | 150.0 | | |
| 10399- | 64-QAM Waveform, 40 MHz | Х | 3.52 | 67.53 | 16.10 | 0.00 | 150.0 | ± 2.4 % | ± 9.6 % |
| AAA | | Υ | 3.32 | 66.83 | 15.68 | | 150.0 | | |
| | | Z | 3.38 | 67.15 | 15.89 | | 150.0 | | |
| 10414- | WLAN CCDF, 64-QAM, 40MHz | X | 4.80 | 65.90 | 15.74 | 0.00 | 150.0 | ± 4.4 % | ± 9.6 % |
| AAA | | Y | 4.58 | 65.58 | 15.59 | | 150.0 | | |
| | 1 | Z | 4.60 | 65.76 | 15.65 | | 150.0 |] | |

Note: For details on UID parameters see Appendix

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%.

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A The uncertainties of Norm X,Y,Z do not affect the E2-field uncertainty inside TSL (see Pages 5 and 6).

B Numerical linearization parameter: uncertainty not required.

E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

February 19, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Sensor Model Parameters

| | C1 fF | C2 fF | α V⁻¹ | T1 ms.V ⁻² | T2 ms.V ⁻¹ | T3 ms | T4 V ⁻² | T5 V⁻¹ | Т6 |
|---|----------|----------|----------|--------------------------|--------------------------|----------|-----------------------|-----------|------|
| X | 37.6 | 279.10 | 35.33 | 9.45 | 0.00 | 5.09 | 1.69 | 0.14 | 1.01 |
| Υ | 29.6 | 227.60 | 37.50 | 5.19 | 0.43 | 5.04 | 0.00 | 0.16 | 1.01 |
| Z | 28.8 | 214.34 | 35.37 | 6.91 | 0.00 | 5.04 | 0.00 | 0.24 | 1.00 |

Other Probe Parameters

| Sensor Arrangement | Triangular |
|---|------------|
| Connector Angle (°) | 120.5 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |

February 19, 2019 EX3DV4-SN:7417

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|----------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 41.9 | 0.89 | 10.36 | 10.36 | 10.36 | 0.54 | 0.99 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 10.07 | 10.07 | 10.07 | 0.48 | 0.84 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.39 | 8.39 | 8.39 | 0.38 | 0.85 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.11 | 8.11 | 8.11 | 0.39 | 0.84 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 7.73 | 7.73 | 7.73 | 0.30 | 0.93 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.46 | 7.46 | 7.46 | 0.39 | 0.95 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.17 | 7.17 | 7.17 | 0.31 | 1.05 | ± 12.0 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be released to ± 10% if liquid compensation formula is applied to

measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of

the ConvF uncertainty for indicated target tissue parameters.

Galpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

February 19, 2019

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|---------------------------------------|----------------------|---------|---------|---------|--------------------|----------------------------|--------------|
| 750 | 55.5 | 0.96 | 10.35 | 10.35 | 10.35 | 0.63 | 0.84 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 10.11 | 10.11 | 10.11 | 0.43 | 0.84 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8,21 | 8.21 | 8.21 | 0.43 | 0.88 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.86 | 7.86 | 7.86 | 0.43 | 0.87 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.64 | 7.64 | 7.64 | 0.41 | 0.93 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.51 | 7.51 | 7.51 | 0.40 | 0.95 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.37 | 7.37 | 7.37 | 0.33 | 1.05 | ± 12.0 % |

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

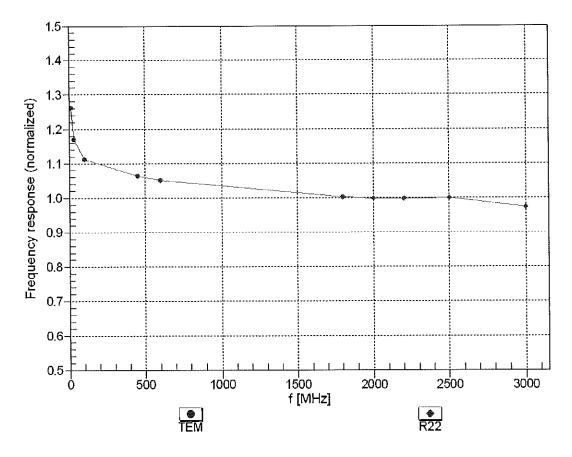
F At frequencies below 3 GHz the validity of these pages of the convF assessed at 1 and 1

F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

February 19, 2019 EX3DV4-SN:7417

Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

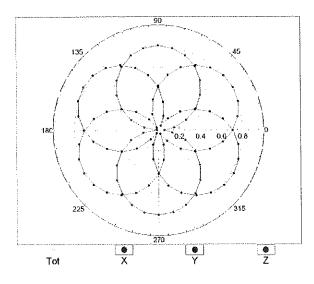
February 19, 2019

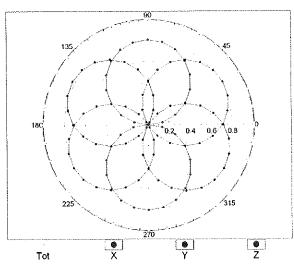
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

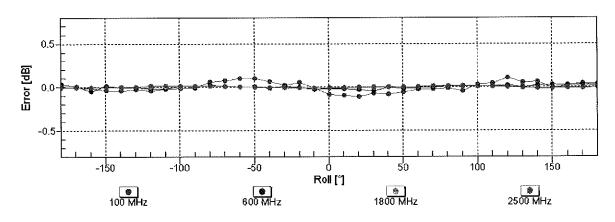


1Hz.TEM

f=1800 MHz,R22

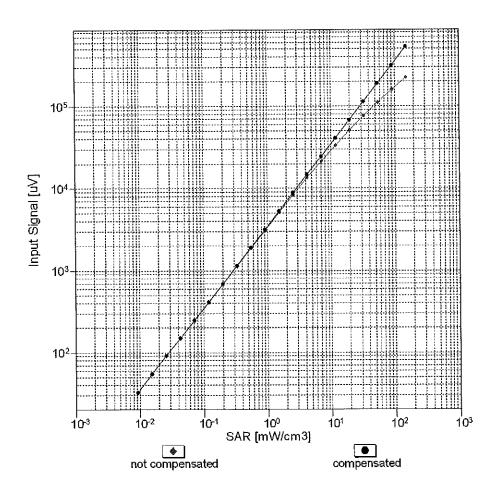


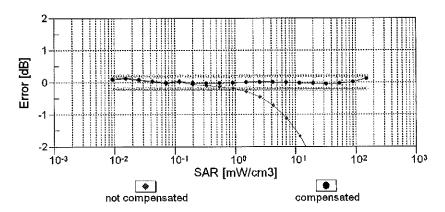




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)

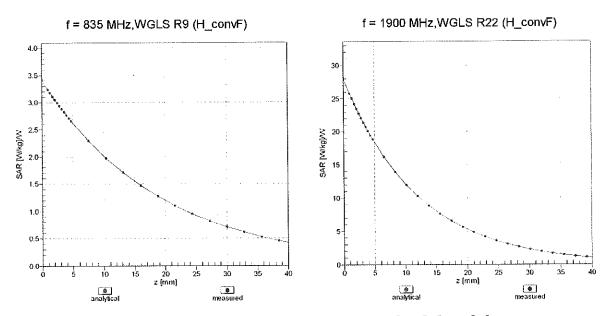




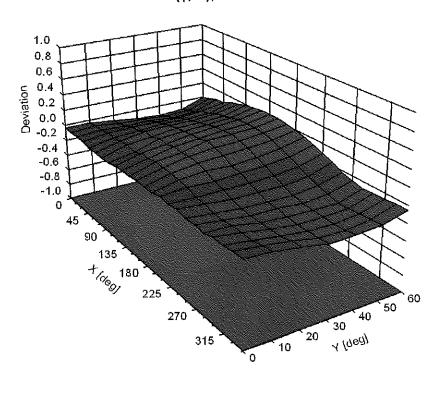
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ , ϑ), f = 900 MHz



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Appendix: Modulation Calibration Parameters

| מוט | Rev | Communication System Name | Group | PAR | Unc⁵ |
|-------|-------|---|------------------------|--------------|--------------------|
| 0 | | OM | | (dB) | (k=2) |
| 10010 | C A A | CW 100 100 100 100 100 100 100 100 100 10 | CW | 0.00 | ± 4.7 % |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms) | Test | 10.00 | ±9.6 % |
| 10011 | CAB | UMTS-FDD (WCDMA) IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | WCDMA | 2.91 | ± 9.6 % |
| 10012 | CAB | | WLAN | 1.87 | ±9.6% |
| 10013 | DAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | WLAN | 9.46 | ±9.6% |
| 10021 | DAC | GSM-FDD (TDMA, GMSK) | GSM | 9.39 | ±9.6% |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0) GPRS-FDD (TDMA, GMSK, TN 0-1) | GSM | 9.57 | ±9.6 % |
| 10024 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | GSM | 6.56 | ±9.6% |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | GSM | 12.62 | ± 9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 9.55 | ±9.6 % |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | GSM | 4.80 | ± 9.6 % |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 3.55 | ± 9.6 % |
| 10020 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | GSM | 7.78 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | Bluetooth | 5.30 | ± 9.6 % |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | Bluetooth | 1.87 | ± 9.6 % |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 1.16 | ±9.6% |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | Bluetooth | 7.74 | ±9.6 % |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | Bluetooth Bluetooth | 4.53 3.83 | ±9.6% |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | Bluetooth | 8.01 | ± 9.6 % ± 9.6 % |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | Bluetooth | | |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | Bluetooth | 4.77 4.10 | ± 9.6 % ± 9.6 % |
| 10039 | CAB | CDMA2000 (1xRTT, RC1) | CDMA2000 | 4.10 | ± 9.6 % |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS | 7.78 | ± 9.6 % |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | AMPS | 0.00 | ± 9.6 % |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | DECT | 13.80 | ± 9.6 % |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | DECT | 10.79 | ± 9.6 % |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | TD-SCDMA | 11.01 | ± 9.6 % |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | GSM | 6.52 | ± 9.6 % |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | WLAN | 2.12 | ± 9.6 % |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | WLAN | 2.83 | ± 9.6 % |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | WLAN | 3.60 | ± 9.6 % |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | WLAN | 8.68 | ± 9.6 % |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | WLAN | 8.63 | ± 9.6 % |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | WLAN | 9.09 | ± 9.6 % |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | WLAN | 9.00 | ± 9.6 % |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | WLAN | 9.38 | ± 9.6 % |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | WLAN | 10.12 | ± 9.6 % |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | WLAN | 10.24 | ± 9.6 % |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | WLAN | 10.56 | ± 9.6 % |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | WLAN | 9.83 | ± 9.6 % |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | WLAN | 9.62 | ± 9.6 % |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | WLAN | 9.94 | ± 9.6 % |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | WLAN | 10.30 | ± 9.6 % |
| 10075 | CAB | IEEE 802.11g WiFl 2.4 GHz (DSSS/OFDM, 36 Mbps) | WLAN | 10.77 | ±9.6 % |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | WLAN | 10.94 | ± 9.6 % |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | WLAN | 11.00 | ± 9.6 % |
| 10081 | CAB | CDMA2000 (1xRTT, RC3) | CDMA2000 | 3.97 | ±9.6 % |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS | 4.77 | ± 9.6 % |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | GSM | 6.56 | ± 9.6 % |
| 10097 | CAB | UMTS-FDD (HSDPA) | WCDMA | 3.98 | ± 9.6 % |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2) | WCDMA | 3.98 | ± 9.6 % |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | GSM | 9.55 | ± 9.6 % |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-FDD | 5.67 | ± 9.6 % |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ±9.6% |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | LTE-TDD | 9.29 | ± 9.6 % |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.97 | ± 9.6 % |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.01 | ± 9.6 % |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | LTE-FDD | 5.80 | ± 9.6 % |

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| | | 175 FD 700 FD114 4000/ FD 40.1111 40.0111 | LTE EDD | C 40 | +060/ |
|-------|-------------|--|--------------------|--------------|--------------------|
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | LTE-FDD LTE-FDD | 6.43 5.75 | ± 9.6 % ± 9.6 % |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | LTE-FDD | 6.44 | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | | | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.59 6.62 | ± 9.6 % |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | LTE-FDD | 8.10 | ± 9.6 % |
| 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | WLAN WLAN | | ±9.6 % |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | | 8.46 | |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN | 8.15 8.07 | ± 9.6 % ± 9.6 % |
| 10117 | CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | WLAN WLAN | | |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | | 8.59 | ± 9.6 % |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.53 | ± 9.6 % |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.35 | ± 9.6 % |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | LTE-FDD | 6.65 | ± 9.6 % |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.76 | ± 9.6 % |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.41 | ± 9.6 % |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.72 | ± 9.6 % |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-FDD | 6.42 | ± 9.6 % |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-FDD | 6.60 | ± 9.6 % |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | LTE-TDD | 9.28 | ± 9.6 % |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | LTE-TDD | 9.92 | ± 9.6 % |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | LTE-TDD | 10.05 | ± 9.6 % |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | LTE-FDD | 5.75 | ± 9.6 % |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-FDD | 5.79 | ± 9.6 % |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | LTE-FDD | 6.62 | ± 9.6 % |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-FDD | 6.56 | ± 9.6 % |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | LTE-FDD | 5.82 | ±9.6% |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | LTE-FDD | 6.43 | ± 9.6 % |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | LTE-FDD | 6.58 | ± 9.6 % |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | LTE-FDD | 5.46 | ± 9.6 % |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.21 | ±9.6 % |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.79 | ± 9.6 % |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-FDD | 6.49 | ± 9.6 % |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | LTE-TDD | 9.21 | ± 9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | LTE-TDD | 9.48 | ± 9.6 % |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | LTE-FDD | 5.72 | ±9.6% |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-FDD | 5.72 | ± 9.6 % |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | LTE-FDD | 6.52 | ± 9.6 % |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | LTE-FDD | 6.51 | ± 9.6 % |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-FDD | 6.50 | ±9.6 % |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | LTE-FDD | 5.73 | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | LTE-FDD | 6.52 | ±9.6 % |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | LTE-FDD | 6.50 | ± 9.6 % |
| 10193 | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | WLAN | 8.09 | ± 9.6 % |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN | 8.12 | ± 9.6 % |
| 10195 | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN | 8.21 | ± 9.6 % |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | WLAN | 8.10 | ± 9.6 % |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | WLAN | 8.27 | ±9.6 % |
| 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | WLAN | 8.03 | ± 9.6 % |
| | | | | <u></u> | |

| 10222 CAC IEEE 802.11 n (HT Mixed, 172.2 Mbps, 8F-QAM) | 40000 | 040 | EEEE OOO 44. (UEAR ALAD OAR AD OARD | | | |
|--|--------|---|---|----------|--------|---------------|
| 19222 CAC IEEE 802.11n (HT Mixed, 15 Mpps, BPSK) WLAN 8.48 9.6 % 19224 CAG IEEE 802.11n (HT Mixed, 90 Mps, 16-CAM) WLAN 8.48 9.6 % 19225 CAB UMTS-FDD (HSPA+) WCOMA 5.97 9.6 % 19226 CAA UMTS-FDD (HSPA+) WCOMA 5.97 9.6 % 19226 CAA UMTS-FDD (HSPA+) WCOMA 5.97 9.6 % 19226 CAA UMTS-FDD (HSPA+) WCOMA 5.97 9.6 % 19227 CAA UTE-TDD (SC-FDMA, 1R8, 1.4 MHz, 16-CAM) UTE-TDD 10.26 9.8 % 19228 CAA UTE-TDD (SC-FDMA, 1R8, 1.4 MHz, 2.9SK) UTE-TDD 10.25 9.8 % 19229 CAC UTE-TDD (SC-FDMA, 1R8, 1.4 MHz, 2.9SK) UTE-TDD 9.49 9.9.6 % 19229 CAC UTE-TDD (SC-FDMA, 1R8, 3 MHz, 16-CAM) UTE-TDD 9.42 9.9.6 % 19230 CAC UTE-TDD (SC-FDMA, 1R8, 3 MHz, 2.9SK) UTE-TDD 9.42 9.9.6 % 19230 CAC UTE-TDD (SC-FDMA, 1R8, 3 MHz, 2.9CK) UTE-TDD 9.48 9.9.6 % 19232 CAF UTE-TDD (SC-FDMA, 1R8, 3 MHz, 2.9CK) UTE-TDD 9.49 9.9.6 % 19232 CAF UTE-TDD (SC-FDMA, 1R8, 5 MHz, 2.16-CAM) UTE-TDD 9.49 9.9.6 % 19234 CAF UTE-TDD (SC-FDMA, 1R8, 5 MHz, 2.16-CAM) UTE-TDD 9.48 9.9.6 % 19234 CAF UTE-TDD (SC-FDMA, 1R8, 5 MHz, 2.16-CAM) UTE-TDD 9.21 9.9.6 % 19234 CAF UTE-TDD (SC-FDMA, 1R8, 5 MHz, 2.16-CAM) UTE-TDD 9.21 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 10 MHz, 2.6-CAM) UTE-TDD 9.21 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 10 MHz, 2.6-CAM) UTE-TDD 9.48 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 2.6-CAM) UTE-TDD 9.48 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 2.6-CAM) UTE-TDD 9.49 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 2.6-CAM) UTE-TDD 9.49 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 4.6-CAM) UTE-TDD 9.21 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 4.6-CAM) UTE-TDD 9.22 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 1R8, 16 MHz, 4.6-CAM) UTE-TDD 9.24 9.9.6 % 19236 CAF UTE-TDD (SC-FDMA, 50%, R8, 14 MHz, 16-CAM) UTE-TDD 9.24 9.9.6 % 19236 CAF UTE | 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | WLAN | 8.13 | ± 9.6 % |
| 19223 CAC IEEE 802.11 (n HT Mixed, 90 Mbps, 16-QAM) | | | | WLAN | 8.27 | ±9.6 % |
| 10224 CAC | | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | WLAN | 8.06 | ± 9.6 % |
| 10224 CAC | 10223 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | WLAN | 8.48 | ± 9.6 % |
| 10225 CAB UNITS-FDD (HSPA+) WCDMA TE-TDD 9.49 9.6 % 10227 CAA LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-CAM) LTE-TDD 10.29 9.6 % 10228 CAA LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-CAM) LTE-TDD 10.29 9.6 % 10228 CAA LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-CAM) LTE-TDD 9.48 9.6 % 10229 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-CAM) LTE-TDD 9.48 9.6 % 10230 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-CAM) LTE-TDD 9.49 9.6 % 10231 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 0.0 KM) LTE-TDD 9.19 9.9 6 % 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0.0 KM) LTE-TDD 9.19 9.9 6 % 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0.0 KM) LTE-TDD 10.25 9.6 % 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0.0 KM) LTE-TDD 10.25 9.6 % 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0.0 KMz, 0.0 KM, 0.0 KMZ, 0.0 K | 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbos, 64-QAM) | | ~~~ | |
| 19226 CAA | 10225 | CAB | | | | |
| 19222 CAA | | | | | | 10.60/ |
| 10228 CAA | | | | ***** | | |
| 19229 CAC | | | | | | |
| 10230 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | | | | | | |
| 10231 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, GPSK) LTE-TDD 9.19 ±9.6 % 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-TDD 10.25 ±9.6 % 10234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 18-QAM) LTE-TDD 10.25 ±9.6 % 10235 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 2 QPSK) LTE-TDD 9.21 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-TDD 9.21 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-TDD 10.25 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-TDD 10.25 ±9.6 % 10238 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-TDD 10.25 ±9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 6-QAM) LTE-TDD 9.48 ±9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 6-QAM) LTE-TDD 9.48 ±9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 6-QAM) LTE-TDD 9.48 ±9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 6-QAM) LTE-TDD 9.21 ±9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 6-QAM) LTE-TDD 9.21 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 6-QAM) LTE-TDD 9.28 ±9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 6-QAM) LTE-TDD 9.86 ±9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 0-PSK) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 0-PSK) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 6-QAM) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 6-QAM) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 6-QAM) LTE-TDD 10.06 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 6-QAM) LTE-TDD 10.06 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 6-QAM) LTE-TDD 9.91 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 6-QAM) LTE-TDD 9.91 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 6-QAM) LTE-TDD 9.91 ±9.6 % 10249 CAF LTE-TDD | | | | LTE-TDD | 9.48 | ± 9.6 % |
| 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 4 C-AMM) LTE-TDD 9.48 ±9.6 % 10234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 4 C-AMM) LTE-TDD 10.25 ±9.6 % 10235 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 4 C-AMM) LTE-TDD 9.48 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 4 C-AMM) LTE-TDD 9.48 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 4 C-AMM) LTE-TDD 9.48 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 4 C-AMM) LTE-TDD 9.21 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 4 C-AMM) LTE-TDD 9.21 ±9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 1 C-AMM) LTE-TDD 9.48 ±9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 1 C-AMM) LTE-TDD 10.25 ±9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 2 C-AMM) LTE-TDD 10.25 ±9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.22 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.22 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.66 ±9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-QAM) LTE-TDD 9.66 ±9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-QAM) LTE-TDD 9.66 ±9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-QAM) LTE-TDD 9.66 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-QAM) LTE-TDD 9.60 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-QAM) LTE-TDD 9.60 ±9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.00 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.00 ±9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.01 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.24 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.24 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.24 ±9.6 % 10 | | | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | LTE-TDD | 10.25 | ± 9.6 % |
| 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 46-AM) LTE-TDD 9.48 ± 9.6 % 10234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 40-AM) LTE-TDD 9.21 ± 9.6 % 10235 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-AM) LTE-TDD 9.21 ± 9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-AM) LTE-TDD 10.25 ± 9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-CAM) LTE-TDD 10.25 ± 9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 2 GPSK) LTE-TDD 10.25 ± 9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 2 GPSK) LTE-TDD 9.21 ± 9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-CAM) LTE-TDD 9.24 ± 9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 2 GPSK) LTE-TDD 9.24 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 2 GPSK) LTE-TDD 9.24 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-CAM) LTE-TDD 9.22 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-CAM) LTE-TDD 9.22 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-CAM) LTE-TDD 9.22 ± 9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-CAM) LTE-TDD 9.26 ± 9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, GPSK) LTE-TDD 9.46 ± 9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-CAM) LTE-TDD 9.46 ± 9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-CAM) LTE-TDD 9.66 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-CAM) LTE-TDD 10.66 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-TDD 10.66 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-TDD 10.66 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-TDD 10.09 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-TDD 9.90 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-CAM) LTE-TDD 9.91 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 16 MHz, 64-CAM) LTE-TDD 9.91 ± 9.6 % 10245 CAF LTE-TDD (SC-FD | _10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | LTE-TDD | 9.19 | ±9.6% |
| 10234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-CAM) | 10232 | CAF | | | | |
| 10234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 1-6-QAM) LTE-TDD 9.48 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 1-6-QAM) LTE-TDD 10.25 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-TDD 10.25 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 1-6-QAM) LTE-TDD 9.48 ±9.6 % 10238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 1-6-QAM) LTE-TDD 9.48 ±9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 1-6-QAM) LTE-TDD 9.48 ±9.6 % 10239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 1-6-QAM) LTE-TDD 9.25 ±9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.21 ±9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.86 ±9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.86 ±9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.86 ±9.6 % 10244 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 9.46 ±9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 9.46 ±9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 9.30 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.91 ±9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.90 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.90 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.90 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0 PSK) LTE-TDD 9.90 ±9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0 PSK) LTE-TDD 9.90 ±9.6 % 10264 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0 PSK) LTE-TDD 9.90 ±9.6 % 10265 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0 PSK) LTE-TDD 9.90 ±9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 16 MH | 10233 | CAF | | | | |
| 10236 CAF LTE-TDD SC-FDMA, 1 RB, 10 MHz, 16-CAM LTE-TDD 9.48 ±9.6 % 10237 CAF LTE-TDD SC-FDMA, 1 RB, 10 MHz, 64-CAM LTE-TDD 10.25 ±9.6 % 10237 CAF LTE-TDD SC-FDMA, 1 RB, 10 MHz, GPSK LTE-TDD 9.21 ±9.6 % 10238 CAF LTE-TDD SC-FDMA, 1 RB, 10 MHz, GPSK LTE-TDD 9.48 ±9.6 % 10239 CAF LTE-TDD SC-FDMA, 1 RB, 15 MHz, 16-CAM LTE-TDD 9.48 ±9.6 % 10240 CAF LTE-TDD SC-FDMA, 1 RB, 15 MHz, GPSK LTE-TDD 9.48 ±9.6 % 10240 CAF LTE-TDD SC-FDMA, 1 RB, 15 MHz, GPSK LTE-TDD 9.21 ±9.6 % 10241 CAA LTE-TDD SC-FDMA, 50% RB, 1.4 MHz, 16-CAM LTE-TDD 9.82 ±9.6 % 10242 CAA LTE-TDD SC-FDMA, 50% RB, 1.4 MHz, GPSK LTE-TDD 9.80 ±9.6 % 10242 CAA LTE-TDD SC-FDMA, 50% RB, 1.4 MHz, GPSK LTE-TDD 9.80 ±9.6 % 10243 CAA LTE-TDD SC-FDMA, 50% RB, 3 MHz, GPSK LTE-TDD 9.80 ±9.6 % 10245 CAC LTE-TDD SC-FDMA, 50% RB, 3 MHz, GPSK LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 3 MHz, GPSK LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 3 MHz, GPSK LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 5 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 5 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 5 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10246 CAC LTE-TDD SC-FDMA, 50% RB, 5 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10246 CAF LTE-TDD SC-FDMA, 50% RB, 6 MHz, 16-CAM LTE-TDD 9.90 ±9.6 % 10246 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, 16-CAM LTE-TDD 9.90 ±9.6 % 10246 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, 16-CAM LTE-TDD 9.90 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, 16-CAM LTE-TDD 9.90 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, GPSK LTE-TDD 9.90 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, GPS | | | LTE-TDD (SC-EDMA 1 RB 5 MHz, OPSK) | | | |
| 19236 CAF LTE-TDD (SC-PDMA, 1 RB, 10 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19238 CAF LTE-TDD (SC-PDMA, 1 RB, 10 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19238 CAF LTE-TDD (SC-PDMA, 1 RB, 15 MHz, 16-OAM) LTE-TDD 9.48 ±9.6 % 19239 CAF LTE-TDD (SC-PDMA, 1 RB, 15 MHz, GP-QAM) LTE-TDD 19.25 ±9.6 % 19.240 CAF LTE-TDD (SC-PDMA, 1 RB, 15 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19.241 CAA LTE-TDD (SC-PDMA, 1 RB, 15 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19.242 CAA LTE-TDD (SC-PDMA, 50% RB, 1.4 MHz, GP-QAM) LTE-TDD 9.86 ±9.6 % 19.242 CAA LTE-TDD (SC-PDMA, 50% RB, 1.4 MHz, GP-QAM) LTE-TDD 9.86 ±9.6 % 19.243 CAA LTE-TDD (SC-PDMA, 50% RB, 1.4 MHz, GP-QK) LTE-TDD 9.86 ±9.6 % 19.244 CAA LTE-TDD (SC-PDMA, 50% RB, 1 MHz, GP-QK) LTE-TDD 9.86 ±9.6 % 19.245 CAC LTE-TDD (SC-PDMA, 50% RB, 3 MHz, GP-QAM) LTE-TDD 9.46 ±9.6 % 19.245 CAC LTE-TDD (SC-PDMA, 50% RB, 3 MHz, GP-QAM) LTE-TDD 10.06 ±9.6 % 19.246 CAC LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 10.06 ±9.6 % 19.246 CAC LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 10.06 ±9.6 % 19.246 CAC LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 10.06 ±9.6 % 19.246 CAC LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 9.90 ±9.6 % 19.249 CAF LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 9.91 ±9.6 % 19.249 CAF LTE-TDD (SC-PDMA, 50% RB, 5 MHz, GP-SK) LTE-TDD 9.91 ±9.6 % 19.249 CAF LTE-TDD (SC-PDMA, 50% RB, 10 MHz, GP-SK) LTE-TDD 9.91 ±9.6 % 19.249 CAF LTE-TDD SC-PDMA, 50% RB, 10 MHz, GP-SK) LTE-TDD 9.24 ±9.6 % 19.255 CAF LTE-TDD (SC-PDMA, 50% RB, 10 MHz, GP-SK) LTE-TDD 9.26 ±9.6 % 19.256 CAF LTE-TDD SC-PDMA, 50% RB, 10 MHz, GP-SK) LTE-TDD 9.26 ±9.6 % 19.256 CAF LTE-TDD SC-PDMA, 50% RB, 10 MHz, GP-SK) LTE-TDD 9.90 ±9.6 % 19.256 CAF LTE-TDD SC-PDMA, 100% RB, 15 MHz, GP-SK) LTE-TDD 9.90 ±9.6 % | | | LTE-TOD (SC-FOMA 1 DR 10 MUZ 16 OAM) | | | |
| 19237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-TDD 10.25 ±9.6 % 19239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QFSK) LTE-TDD 10.25 ±9.6 % 19240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-TDD 9.21 ±9.6 % 19241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.82 ±9.6 % 19242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 9.86 ±9.6 % 19242 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 9.86 ±9.6 % 19244 CAC LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 9.86 ±9.6 % 19244 CAC LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 10.06 ±9.6 % 19244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 % 19244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 % 19246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-TDD 9.30 ±9.6 % 19249 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, GPGAM) LTE-TDD 9.30 ±9.6 % 19249 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, GPGAM) LTE-TDD 10.06 ±9.6 % 19249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.29 ±9.6 % 19251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.29 ±9.6 % 19251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.29 ±9.6 % 19251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19253 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19253 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19256 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19256 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, QPSK) LTE-TDD 9.9 ±9.6 % 19256 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, QPSK) LTE-TDD 9.9 ± | | | | | | |
| 10238 | | | | | | |
| 10239 | | | | | | |
| 10240 CAF LTE-TDD SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-TDD 9.21 ±9.6 % | | | | LTE-TDD | 9.48 | |
| 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.82 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.86 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 10.06 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 9.30 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.91 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.29 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.21 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, 16-QAM) LTE-TDD 9.24 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.20 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % | | CAF | | LTE-TDD | 10.25 | ±9.6% |
| 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 46-QAM) LTE-TDD 9.82 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.86 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD 9.86 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-TDD 9.30 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.30 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.29 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 10.17 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 10.17 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 10.17 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 10.17 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.90 ± 9.6 % 10256 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 6-QAM) LTE-TDD 9.90 ± 9.6 % | 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | LTE-TDD | 9.21 | ±9.6 % |
| 10242 | 10241 | CAA | | | | |
| 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-TDD 9.48 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 9.30 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 9.30 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 9.31 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 9.29 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.81 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.81 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 0.17 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 20-QAM) LTE-TDD 9.20 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 20-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 20-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 20-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 20-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.90 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.90 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.20 ± 9.6 % 10256 C | 10242 | CAA | | | | |
| 10244 | | | | | | |
| 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-TDD 10.06 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 10.09 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.29 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.29 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.81 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, GPSK) LTE-TDD 9.81 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, GPSK) LTE-TDD 9.24 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, GPSK) LTE-TDD 9.24 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, GPSK) LTE-TDD 9.90 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, GPSK) LTE-TDD 9.90 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, GPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, GPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 100% RB, 14 MHz, GPSK) LTE-TDD 9.90 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, GPSK) LTE-TDD 9.96 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, GPSK) LTE-TDD 9.94 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.94 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.94 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.94 ± 9.6 % 10260 CAF LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.94 ± 9.6 % 10260 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.92 ± 9.6 % 10260 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.93 ± 9.6 % 10260 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10260 CAF LTE-TDD (SC-FDMA, 100% | | | | | | |
| 10246 CAC LTE-TDD SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-TDD 9.30 ±9.6 % 10247 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 4-QAM) LTE-TDD 9.91 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 10.09 ±9.6 % 10249 CAF LTE-TDD SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.29 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.29 ±9.6 % 10250 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.11 ±9.6 % 10251 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, 04-QAM) LTE-TDD 9.11 ±9.6 % 10252 CAF LTE-TDD SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10253 CAF LTE-TDD SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.24 ±9.6 % 10253 CAF LTE-TDD SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-TDD 9.24 ±9.6 % 10255 CAF LTE-TDD SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ±9.6 % 10255 CAF LTE-TDD SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ±9.6 % 10255 CAF LTE-TDD SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ±9.6 % 10256 CAA LTE-TDD SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.06 ±9.6 % 10258 CAA LTE-TDD SC-FDMA, 100% RB, 14 MHz, 04-QAM) LTE-TDD 9.06 ±9.6 % 10258 CAA LTE-TDD SC-FDMA, 100% RB, 14 MHz, 04-QAM) LTE-TDD 9.06 ±9.6 % 10258 CAA LTE-TDD SC-FDMA, 100% RB, 14 MHz, 04-QAM) LTE-TDD 9.06 ±9.6 % 10256 CAC LTE-TDD SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-TDD 9.34 ±9.6 % 10256 CAC LTE-TDD SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-TDD 9.34 ±9.6 % 10260 CAC LTE-TDD SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-TDD 9.38 ±9.6 % 10260 CAC LTE-TDD SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-TDD 9.24 ±9.6 % 10260 CAF LTE-TDD SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-TDD 9.24 ±9.6 % 10260 CAF LTE-TDD SC-FDMA, 100% RB, 5 MHz, 04-QAM) LTE-TDD 10.16 ±9.6 % 10260 CAF LTE-TDD SC-FDMA, 100% RB, 5 MHz, 04-QAM) LTE-TDD 10.16 ±9.6 % 10260 CAF LT | | | | | ····· | |
| 10247 CAF | | | | | | |
| 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | **** | | | | | |
| 10249 | | | | LTE-TDD | 9.91 | ± 9.6 % |
| 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9,81 ± 9,6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 10.17 ± 9,6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9,24 ± 9,6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9,90 ± 9,6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9,90 ± 9,6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 20PSK) LTE-TDD 9,20 ± 9,6 % 10256 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9,20 ± 9,6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9,20 ± 9,6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, GPSK) LTE-TDD 9,96 ± 9,6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9,96 ± 9,6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9,34 ± 9,6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9,38 ± 9,6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9,98 ± 9,6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9,97 ± 9,6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9,97 ± 9,6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9,83 ± 9,6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9,83 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 40-QAM) LTE-TDD 9,83 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9,92 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9,92 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 10.16 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 10.16 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 10.16 ± 9,6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 10.06 ± 9,6 % 1 | 10248 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | LTE-TDD | 10.09 | ± 9.6 % |
| 10250 CAF | 10249 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | LTE-TDD | 9.29 | ±9.6 % |
| 10251 CAF | 10250 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | | | |
| 10252 | | • | | | | |
| 10253 | | 4 | | | | |
| 10254 CAF | | • | | | | |
| 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ±9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ±9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD 10.08 ±9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.34 ±9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.98 ±9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-TDD 9.97 ±9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.97 ±9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.20 ±9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 10.07 ±9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ±9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.13 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.10 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.10 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.10 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.11 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.13 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.13 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.14 ±9.6 % 10270 CAF LTE-T | | | | | | |
| 10256 | | | | | | |
| 10257 | | } | | | | |
| 10258 | | | | LTE-TDD | 9.96 | ± 9.6 % |
| 10258 | 10257 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD | 10.08 | ± 9.6 % |
| 10259 | 10258 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1,4 MHz, QPSK) | LTE-TDD | | |
| 10260 | | CAC | | | | |
| 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9.83 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 10.16 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.23 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 9.92 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 10.07 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, GPSK) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, GPSK) LTE-TDD 10.10 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, GPSK) LTE-TDD 10.13 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAA PHS (QPSK) Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.39 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC3, SO3, Full R | | 1 | | | | |
| 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9.83 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 10.16 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 10.13 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP R | | | | | ······ | |
| 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 10.16 ±9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ±9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ±9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ±9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 10.13 ±9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ±9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ±9.6 % 10277 CAA PHS (QPSK) W8 84MHz, Rolloff 0.5 | | | | | | |
| 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, GPSK) LTE-TDD 10.13 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10278 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS |)····· | | | | | $\overline{}$ |
| 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 | | 1 | | | | |
| 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 < | | *************************************** | | | | |
| 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % </td <td></td> <td></td> <td></td> <td></td> <td>9.92</td> <td>± 9.6 %</td> | | | | | 9.92 | ± 9.6 % |
| 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % </td <td>10266</td> <td>CAF</td> <td>LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)</td> <td>LTE-TDD</td> <td>10.07</td> <td>± 9.6 %</td> | 10266 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | LTE-TDD | 10.07 | ± 9.6 % |
| 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % < | | CAF | | | | |
| 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO35, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % | | | | | | |
| 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % | | | | | | |
| 10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % | | | | | | |
| 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | |) | | ***,-*** | | |
| 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ±9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ±9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ±9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ±9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ±9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ±9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ±9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ±9.6 % | | | PHS (QPSK, BW 884MHz, Rolloff 0.5) | PHS | | ± 9.6 % |
| 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | PHS | 12.18 | ±9.6% |
| 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | 10290 | AAB | | | | |
| 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | · | | | | |
| 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % | | | | | | |
| | | | | | | |
| 10299 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-FDD 6.39 ± 9.6 % | | | | | | |
| | 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | LTE-FDD | 6.39 | ± 9.6 % |

| 10300 AAD | 6.60 12.03 12.57 12.52 11.86 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 6.27 | ± 9.6 % ± 9.6 % |
|---|---|--|
| 10302 | 12.57 12.52 11.86 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % |
| Symbols | 12.52 11.86 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % |
| 10303 | 11.86 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % |
| 10304 | 11.86 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % |
| 10305 | 15.24 14.67 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % |
| Symbols | 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| Symbols 10307 | 14.49 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % ±9.6 % |
| 10307 | 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % |
| 10308 | 14.46 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % |
| 10308 | 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10309 | 14.58 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| Symbols | 14.57 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10310 | 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| Symbols 10311 AAD LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-FDD 10313 AAA IDEN 1:3 IDEN 10314 AAA IDEN 1:6 IDEN 10315 AAB IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) WLAN 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 80%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10399 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 CDMA2000 10406 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 LTE-TDD Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 6.06 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10311 AAD LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-FDD 10313 AAA IDEN 1:3 IDEN 10314 AAA IDEN 1:6 IDEN 10315 AAB IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) WLAN 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 60%) Generic 10355 AAA Pulse Waveform (200Hz, 80%) Generic 10366 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 10 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10399 AAA 64-QAM Waveform, 10 KHz Generic 10400 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN | 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10313 AAA IDEN 1:3 IDEN 10314 AAA IDEN 1:6 IDEN 10315 AAB IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) WLAN 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10366 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN< | 10.51 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10314 AAA IDEN 1:6 IDEN 10315 AAB IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) WLAN 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-Q | 13.48 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10315 AAB IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) WLAN 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10366 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA Pulse Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10399 AAA 64-QAM Waveform, 100 kHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB <td>1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22</td> <td>± 9.6 % ± 9.6 %</td> | 1.71 8.36 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % |
| 10316 AAB IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) WLAN 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10400 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, | 8.36 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10317 AAC IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) WLAN 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 80%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2 | 10.00 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10352 AAA Pulse Waveform (200Hz, 10%) Generic 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 </td <td>6.99 3.98 2.22 0.97 5.10 5.22</td> <td>± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %</td> | 6.99 3.98 2.22 0.97 5.10 5.22 | ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % |
| 10353 AAA Pulse Waveform (200Hz, 20%) Generic 10354 AAA Pulse Waveform (200Hz, 40%) Generic 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TD | 3.98 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % ±9.6 % |
| 10355 AAA Pulse Waveform (200Hz, 60%) Generic 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 2.22 0.97 5.10 5.22 | ±9.6 % ±9.6 % |
| 10356 AAA Pulse Waveform (200Hz, 80%) Generic 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 0.97 5.10 5.22 | ± 9.6 % |
| 10387 AAA QPSK Waveform, 1 MHz Generic 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 5.10 5.22 | |
| 10388 AAA QPSK Waveform, 10 MHz Generic 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 5.22 | ± 9.6 % |
| 10396 AAA 64-QAM Waveform, 100 kHz Generic 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| 10399 AAA 64-QAM Waveform, 40 MHz Generic 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 6 27 | ± 9.6 % |
| 10400 AAD IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) WLAN 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | | ±9.6% |
| 10401 AAD IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) WLAN 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 6.27 | ±9.6 % |
| 10402 AAD IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) WLAN 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 8.37 | ± 9.6 % |
| 10403 AAB CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 10404 AAB CDMA2000 (1xEV-DO, Rev. A) CDMA2000 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 8.60 8.53 | ± 9.6 % ± 9.6 % |
| 10404 | 3.76 | ± 9.6 % |
| 10406 AAB CDMA2000, RC3, SO32, SCH0, Full Rate CDMA2000 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) LTE-TDD | 3.77 | ± 9.6 % |
| 10410 AAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | 5.22 | ± 9.6 % |
| Subframe=2,3,4,7,8,9, Subframe Conf=4) | 7.82 | ± 9.6 % |
| | 7.02 | 0.0 ,0 |
| S COMPANIA I REPORT AND AND CONTROL AND ADDRESS AND AD | 8.54 | ±9.6 % |
| 10415 AAA IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) WLAN | 1.54 | ± 9.6 % |
| 10416 AAA IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) WLAN | 8.23 | ± 9.6 % |
| 10417 AAB IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) WLAN | 8.23 | ± 9.6 % |
| 10418 AAA IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, WLAN | 8.14 | ± 9.6 % |
| Long preambule) | | |
| 10419 AAA IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, WLAN | 8.19 | ± 9.6 % |
| Short preambule) | 0.00 | |
| 10422 AAB IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) WLAN | 8.32 | ± 9.6 % |
| 10423 AAB IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) WLAN | 8.47 | ± 9.6 % |
| 10424 AAB IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) WLAN | 8.40 | |
| 10425 AAB IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) WLAN 10426 AAB IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) WLAN | 8.41 8.45 | ± 9.6 % ± 9.6 % |
| 10 (20) (12 22 00 22) (1.7 (| 8.41 | ± 9.6 % |
| 1 10-121 10-120 12-22 00211111 (111 01001110014) 1-2-14-15-15-15-15-15-15-15-15-15-15-15-15-15- | 8.28 | ± 9.6 % |
| 10100 17000 12100 (41 200 4 200 | 8.38 | ± 9.6 % |
| 10.01 | 8.34 | ± 9.6 % |
| 10432 AAC LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD 10433 AAC LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) LTE-FDD | 8.34 | ± 9.6 % |
| 10433 AAC LTE-FDD (OFDMA, 20 MHz, E-1M 3.1) 10434 AAA W-CDMA (BS Test Model 1, 64 DPCH) WCDMA | 8.60 | ± 9.6 % |
| 10434 AAA W-CDMA (BS Test Model 1, 64 b) CH) 10435 AAF LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL LTE-TDD | 0.00 | ± 9.6 % |
| Subframe=2,3,4,7,8,9) | 7.82 | |
| | | · , |
| 1 10447 AAD ETE-FDD (OFDMA, 5 MHZ, E-TM 3, 1, GIIDDING 44%) LTE-FDD T | | ± 9.6 % |
| 10411 100 111 111 1111 | 7.82 | ± 9.6 % |
| 10447 AAD LTE-FDD (OFDMA, 5 MHz, E-1M 3.1, Clipping 44%) LTE-FDD 10448 AAD LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) LTE-FDD 10449 AAC LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) LTE-FDD 10450 AAC LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) LTE-FDD | 7.82 7.56 | |

| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | WCDMA | 7.50 | 1060/ |
|---------|------------------|--|--|---|--------------------|
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | WLAN | 7.59 8.63 | ± 9.6 % ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA) | WCDMA | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | CDMA2000 | 8.25 | ±9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR) | WCDMA | 2.39 | ± 9.6 % |
| 10461 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.82 | ±9.6% |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10462 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.30 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10463 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.56 | ± 9.6 % |
| 40404 | 4.45 | Subframe=2,3,4,7,8,9) | | | |
| 10464 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| 10465 | AAB | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL | | 0.00 | |
| 10405 | AAB | Subframe=2,3,4,7,8,9) | LTE-TDD | 8.32 | ± 9.6 % |
| 10466 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 10400 | 1,440 | Subframe=2,3,4,7,8,9) | | 0.07 | 19.0 % |
| 10467 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | -, -, -, -, -, -, -, -, -, -, -, -, -, | 1.02 | 2 0,0 70 |
| 10468 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | 0,0,0 | |
| 10469 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.56 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10470 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL | LTE-TDD | 7.82 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10471 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| 10.170 | = - | Subframe=2,3,4,7,8,9) | | | |
| 10472 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 10473 | AAE | Subframe=2,3,4,7,8,9) | LTC TOD | 7.00 | 1.000 |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 7.82 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| 10414 | \ \\\ | Subframe=2,3,4,7,8,9) | L1E-100 | 0.32 | I 9.0 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| 10170 | ' | Subframe=2,3,4,7,8,9) | | 0.01 | 2 0.0 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL | LTE-TDD | 8.32 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.57 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | *************************************** | |
| 10479 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.74 | ±9.6% |
| 10100 | | Subframe=2,3,4,7,8,9) | | | |
| 10480 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.18 | ± 9.6 % |
| 40404 | 000 | Subframe=2,3,4,7,8,9) | LTE TOO | 0.45 | |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.45 | ± 9.6 % |
| 10482 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL | LTE-TDD | 7.71 | ± 9.6 % |
| 10402 | AAB | Subframe=2,3,4,7,8,9) | LIE-IDD | 1.11 | 19.0 % |
| 10483 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.39 | ± 9.6 % |
| 10:100 | | Subframe=2,3,4,7,8,9) | | 3.00 | 20.070 |
| 10484 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.47 | ± 9.6 % |
| 10 10 7 | | Subframe=2,3,4,7,8,9) | | " | _ 5.5 % |
| 10485 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL | LTE-TDD | 7.59 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10486 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.38 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10487 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.60 | ± 9.6 % |
| | <u> </u> | Subframe=2,3,4,7,8,9) | | <u> </u> | |
| 10488 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL | LTE-TDD | 7.70 | ± 9.6 % |
| 40400 | A A F | Subframe=2,3,4,7,8,9) | 1 75 755 | | 1000 |
| 10489 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.31 | ± 9.6 % |
| 10490 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| 10430 | AAE | Subframe=2,3,4,7,8,9) | L1E-100 | 0.34 | I 3.0 70 |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10101 | . , , _ | Subframe=2,3,4,7,8,9) | 212 100 | '• | 25.0 /0 |
| | | | | · | J |

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| | | | | 1 24 1 | |
|----------------|------------|--|--------------|--------------|--------------------|
| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.41 | ± 9.6 % |
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.55 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL | LTE-TDD | 8.37 | ± 9.6 % |
| 10495 | AAF | Subframe=2,3,4,7,8,9) | | 0.07 | 0.0 /0 |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10497 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAA | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL | LTE-TDD | 8.40 | ± 9.6 % |
| 10400 | / * * * * | Subframe=2,3,4,7,8,9) | | | |
| 10499 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | | Subframe=2,3,4,7,8,9) | LTE-TDD | 7.67 | ± 9.6 % |
| 10500 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | LIE-IDD | 7.67 | I 9.0 % |
| 10501 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL | LTE-TDD | 8.44 | ±9.6% |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL | LTE-TDD | 7.72 | ± 9.6 % |
| 10505 | ~~E | Subframe=2,3,4,7,8,9) | | 1.72 | 2.0.0 /0 |
| 10504 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL | LTE-TDD | 8.31 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | 0.54 | . 0 0 0/ |
| 10505 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 10000 | / " " _ | Subframe=2,3,4,7,8,9) | | | |
| 10507 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL | LTE-TDD | 8.36 | ± 9.6 % |
| 10500 | | Subframe=2,3,4,7,8,9) | LTE-TDD | 8.55 | ± 9.6 % |
| 10508 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LIE-IDD | 0.55 | 1.3.0 76 |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL | LTE-TDD | 7.99 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | 1 | |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL | LTE-TDD | 8.49 | ±9.6% |
| 10511 | AAE | Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL | LTE-TDD | 8.51 | ± 9.6 % |
| 10011 | ^^_ | Subframe=2,3,4,7,8,9) | | | |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL | LTE-TDD | 7.74 | ± 9.6 % |
| 40540 | | Subframe=2,3,4,7,8,9) | LTE-TDD | 8.42 | ±9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LIE-IDD | 0.42 | ± 9,0 % |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL | LTE-TDD | 8.45 | ± 9.6 % |
| | | Subframe=2,3,4,7,8,9) | | | |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | WLAN | 1.58 | ± 9.6 % |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | WLAN WLAN | 1.57 1.58 | ± 9.6 % ± 9.6 % |
| 10517 10518 | AAA AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.23 | ± 9.6 % |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.12 | ±9.6% |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 7.97 | ± 9.6 % |
| 10522 10523 | AAB AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | WLAN WLAN | 8.45 8.08 | ± 9.6 % ± 9.6 % |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.27 | ± 9.6 % |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) | WLAN WLAN | 8.21 8.36 | ± 9.6 % ± 9.6 % |
| 10528 10529 | AAB AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10529 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | WLAN | 8.43 | ± 9.6 % |
| 10532 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | WLAN | 8.29 | ± 9.6 % |
| 10533 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10534 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |

| 40505 | 1 4 4 5 | | | | |
|-------|-----------|---|---------------|--------|---------|
| 10535 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | WLAN | 8.32 | ± 9.6 % |
| 10537 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | WLAN | 8.44 | ±9.6% |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | WLAN | 8.54 | ± 9.6 % |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | WLAN | 8.39 | ± 9.6 % |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | WLAN | 8.46 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | WLAN | 8.65 | ± 9.6 % |
| 10544 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | WLAN | 8.47 | ±9.6% |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle) | WLAN | 8.55 | ±9.6 % |
| 10546 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | WLAN | 8.49 | ±9.6% |
| 10548 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | WLAN | 8.42 | ± 9.6 % |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | WLAN | 8.47 | ± 9.6 % |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | WLAN | | |
| 10562 | | | | 8.56 | ± 9.6 % |
| | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle) | WLAN | 8.25 | ±9.6% |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | WLAN | 8.45 | ± 9.6.% |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.13 | ±9.6% |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 8.00 | ± 9.6 % |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | WLAN | 8.37 | ±9.6% |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.10 | ±9.6% |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | WLAN | 8.30 | ± 9.6 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | WLAN | 1.99 | ±9.6 % |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty | WLAN | 8.59 | ± 9.6 % |
| 10576 | AAA | cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) | WLAN | 8.60 | ± 9.6 % |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) | WLAN | 8.60 | ±9.6 % |
| 10585 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10586 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10587 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 16 Mbps, 90pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10001 | 1 , 4 ,10 | imme court fain this to on a for bing at hispo, cope duty cycle) | 1 ** 14 11 11 | 1 0.00 | 0.0 /0 |