# APPENDIX C CALIBRATION CERTIFICATES

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

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

Accredited by the Swiss 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 **Auden**

Certificate No: **EX3-3820_Jun18**

## CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3820

Calibration procedure(s): QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6
Calibration procedure for dosimetric E-field probes

Calibration date: June 26, 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 ± 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 |
| Reference Probe ES3DV2 | SN: 3013 | 30-Dec-17 (No. ES3-3013_Dec17) | Dec-18 |
| DAE4 | SN: 660 | 21-Dec-17 (No. DAE4-660_Dec17) | Dec-18 |
| | | | |
| 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 HP 8753E | SN: US37390585 | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |

| | Name | Function | Signature |
|---|---|---|---|
| Calibrated by: | Leif Klysner | Laboratory Technician | |
| Approved by: | Katja Pokovic | Technical Manager | |

Issued: June 27, 2018

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

## 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 ϑ | ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 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 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"

## 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 $E^2$-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).

# Probe EX3DV4

# SN:3820

Manufactured: September 2, 2011
Calibrated: June 26, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3820

## Basic Calibration Parameters

| | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|---|---|---|---|---|
| Norm ($\mu V/(V/m)^2$)[A] | 0.40 | 0.47 | 0.50 | ± 10.1 % |
| DCP (mV)[B] | 97.2 | 102.3 | 99.7 | |

## Modulation Calibration Parameters

| UID | Communication System Name | | A dB | B dB√μV | C | D dB | VR mV | Unc[E] (k=2) |
|---|---|---|---|---|---|---|---|---|
| 0 | CW | X | 0.0 | 0.0 | 1.0 | 0.00 | 188.0 | ±3.5 % |
| | | Y | 0.0 | 0.0 | 1.0 | | 176.4 | |
| | | Z | 0.0 | 0.0 | 1.0 | | 184.2 | |

Note: For details on UID parameters see Appendix.

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| X | 47.66 | 365.1 | 37.10 | 12.32 | 0.944 | 5.036 | 0.000 | 0.592 | 1.010 |
| Y | 48.98 | 364.1 | 35.44 | 15.30 | 0.607 | 5.083 | 1.076 | 0.406 | 1.007 |
| Z | 47.72 | 378.2 | 40.37 | 16.84 | 1.209 | 5.100 | 0.000 | 0.550 | 1.022 |

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 $E^2$-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.

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3820

## 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 | 9.72 | 9.72 | 9.72 | 0.33 | 1.06 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 9.40 | 9.40 | 9.40 | 0.46 | 0.85 | ± 12.0 % |
| 900 | 41.5 | 0.97 | 9.22 | 9.22 | 9.22 | 0.39 | 0.92 | ± 12.0 % |
| 1450 | 40.5 | 1.20 | 8.31 | 8.31 | 8.31 | 0.39 | 0.80 | ± 12.0 % |
| 1640 | 40.2 | 1.31 | 7.78 | 7.78 | 7.78 | 0.29 | 0.85 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 7.80 | 7.80 | 7.80 | 0.36 | 0.80 | ± 12.0 % |
| 1810 | 40.0 | 1.40 | 7.58 | 7.58 | 7.58 | 0.40 | 0.91 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 7.57 | 7.57 | 7.57 | 0.45 | 0.80 | ± 12.0 % |
| 2000 | 40.0 | 1.40 | 7.55 | 7.55 | 7.55 | 0.46 | 0.80 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 6.79 | 6.79 | 6.79 | 0.43 | 0.80 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 6.61 | 6.61 | 6.61 | 0.45 | 0.81 | ± 12.0 % |
| 3500 | 37.9 | 2.91 | 6.66 | 6.66 | 6.66 | 0.30 | 1.20 | ± 13.1 % |
| 5200 | 36.0 | 4.66 | 4.82 | 4.82 | 4.82 | 0.40 | 1.80 | ± 13.1 % |
| 5300 | 35.9 | 4.76 | 4.60 | 4.60 | 4.60 | 0.40 | 1.80 | ± 13.1 % |
| 5500 | 35.6 | 4.96 | 4.61 | 4.61 | 4.61 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 4.50 | 4.50 | 4.50 | 0.40 | 1.80 | ± 13.1 % |
| 5800 | 35.3 | 5.27 | 4.53 | 4.53 | 4.53 | 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. 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.

[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.

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3820

## Calibration Parameter Determined in Body Tissue Simulating Media

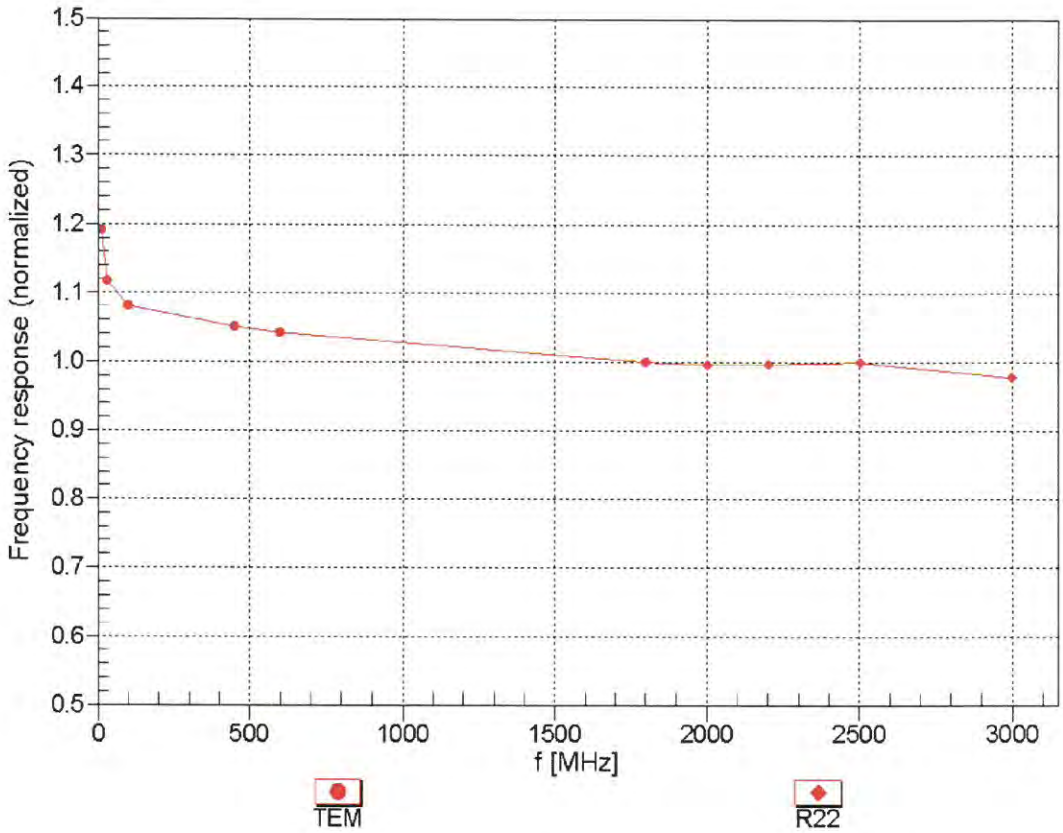
| f (MHz) [C] | Relative Permittivity [F] | Conductivity (S/m) [F] | ConvF X | ConvF Y | ConvF Z | Alpha [G] | Depth [G] (mm) | Unc (k=2) |
|---|---|---|---|---|---|---|---|---|
| 750 | 55.5 | 0.96 | 9.60 | 9.60 | 9.60 | 0.43 | 0.80 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 9.32 | 9.32 | 9.32 | 0.42 | 0.87 | ± 12.0 % |
| 900 | 55.0 | 1.05 | 9.28 | 9.28 | 9.28 | 0.47 | 0.85 | ± 12.0 % |
| 1450 | 54.0 | 1.30 | 7.92 | 7.92 | 7.92 | 0.34 | 0.80 | ± 12.0 % |
| 1640 | 53.7 | 1.42 | 8.03 | 8.03 | 8.03 | 0.45 | 0.80 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 7.55 | 7.55 | 7.55 | 0.43 | 0.80 | ± 12.0 % |
| 1810 | 53.3 | 1.52 | 7.42 | 7.42 | 7.42 | 0.43 | 0.80 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 7.36 | 7.36 | 7.36 | 0.40 | 0.80 | ± 12.0 % |
| 2000 | 53.3 | 1.52 | 7.31 | 7.31 | 7.31 | 0.42 | 0.80 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 6.84 | 6.84 | 6.84 | 0.34 | 0.93 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 6.75 | 6.75 | 6.75 | 0.27 | 0.95 | ± 12.0 % |
| 3500 | 51.3 | 3.31 | 6.62 | 6.62 | 6.62 | 0.25 | 1.25 | ± 13.1 % |
| 5200 | 49.0 | 5.30 | 4.40 | 4.40 | 4.40 | 0.50 | 1.90 | ± 13.1 % |
| 5300 | 48.9 | 5.42 | 4.23 | 4.23 | 4.23 | 0.50 | 1.90 | ± 13.1 % |
| 5500 | 48.6 | 5.65 | 3.99 | 3.99 | 3.99 | 0.50 | 1.90 | ± 13.1 % |
| 5600 | 48.5 | 5.77 | 3.84 | 3.84 | 3.84 | 0.50 | 1.90 | ± 13.1 % |
| 5800 | 48.2 | 6.00 | 3.94 | 3.94 | 3.94 | 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. 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.

[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.

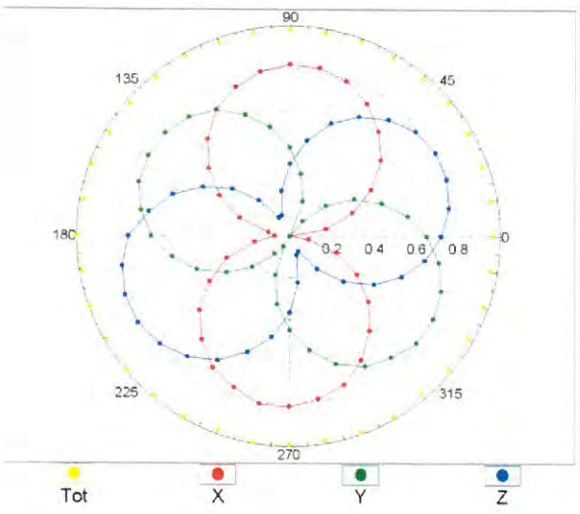
# Frequency Response of E-Field
## (TEM-Cell:ifi110 EXX, Waveguide: R22)



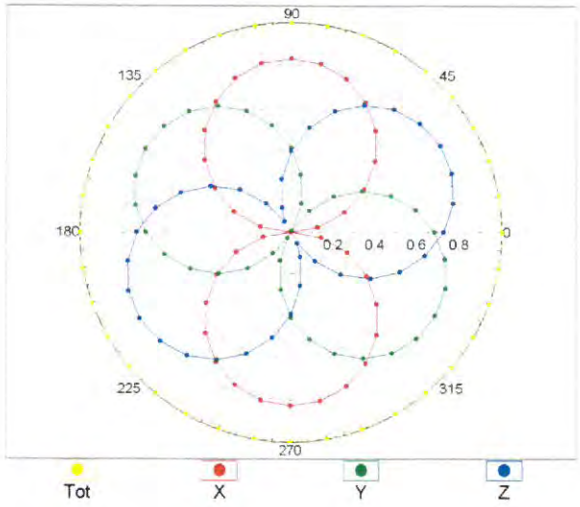

**Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)**

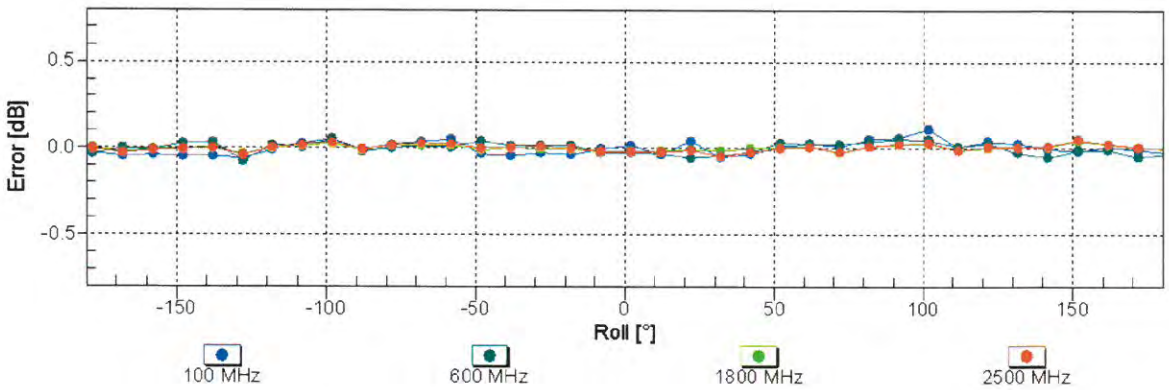
# Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



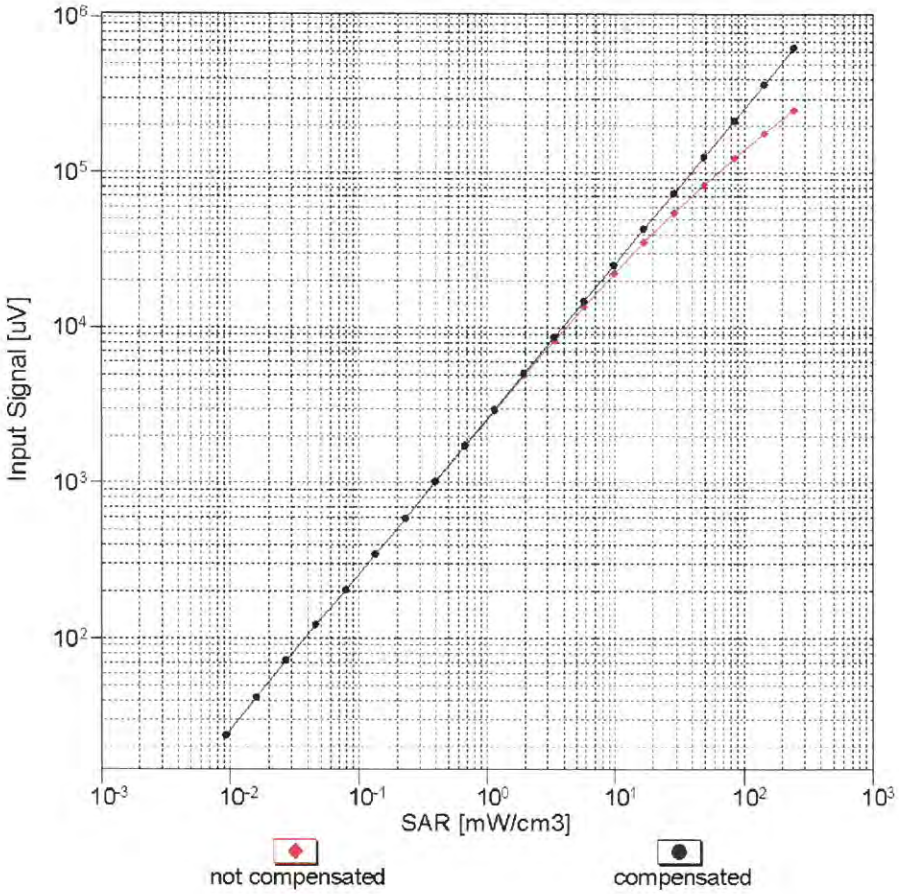

f=1800 MHz,R22

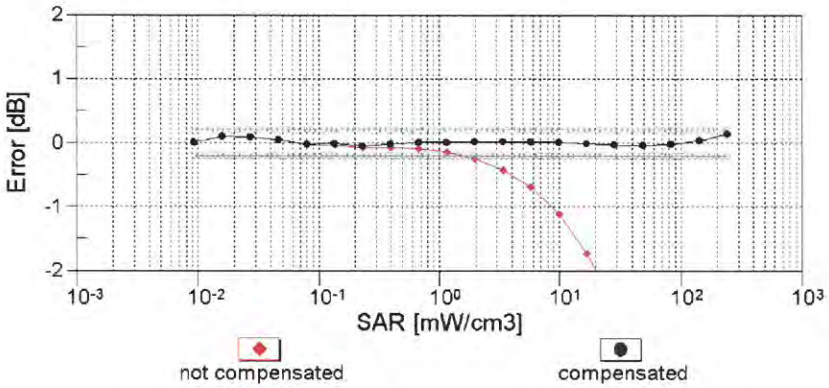



**Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)**

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

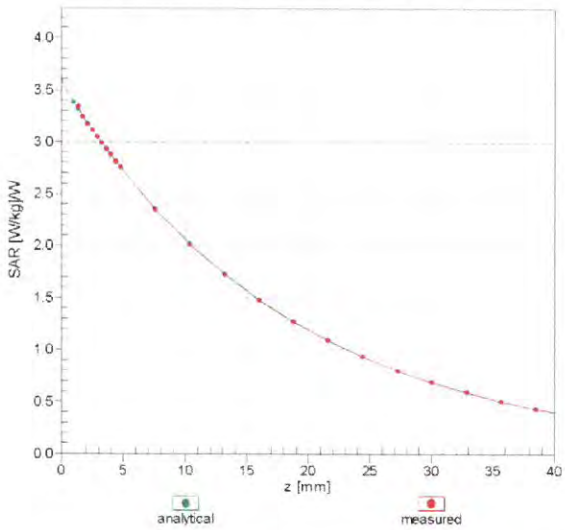


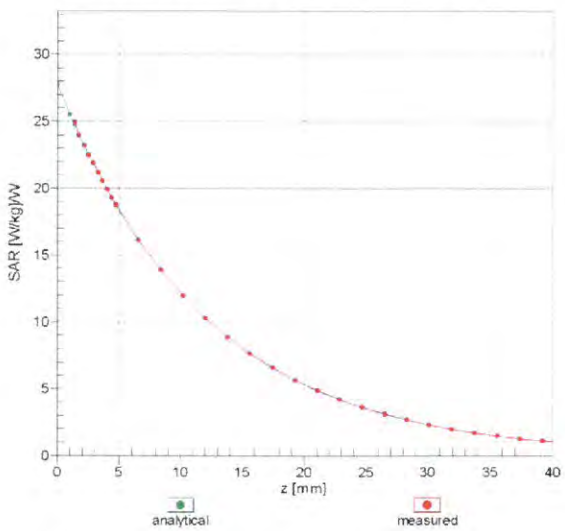

**Uncertainty of Linearity Assessment: ± 0.6% (k=2)**

# Conversion Factor Assessment

f = 900 MHz,WGLS R9 (H_convF)

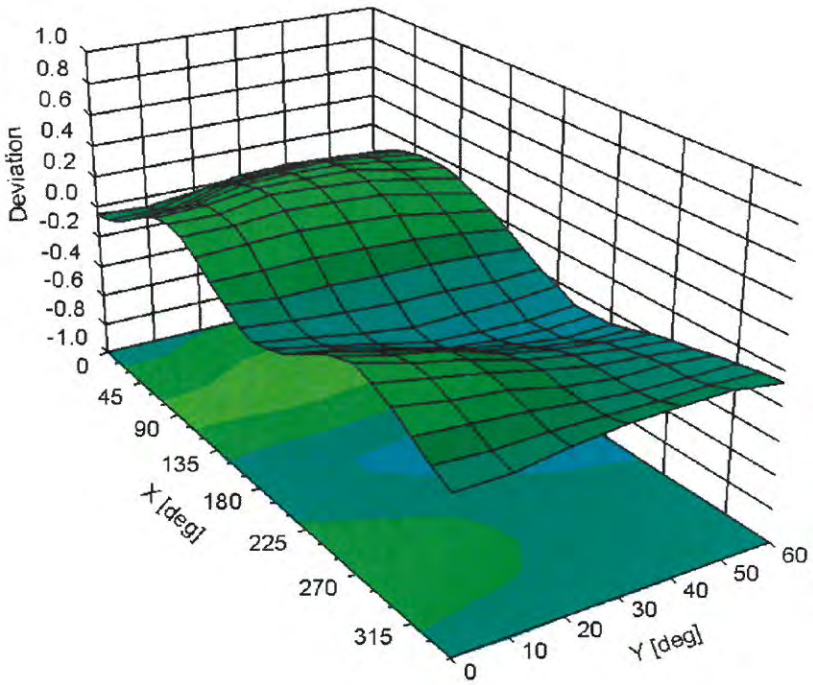


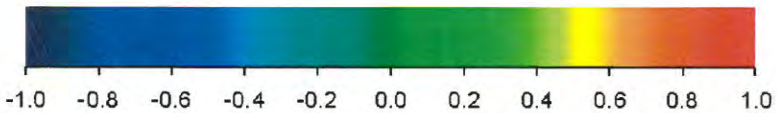

f = 1810 MHz,WGLS R22 (H_convF)




# Deviation from Isotropy in Liquid

**Error (ϕ, ϑ), f = 900 MHz**




**Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)**

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3820

## Other Probe Parameters

| | |
|---|---|
| Sensor Arrangement | Triangular |
| Connector Angle (°) | 32.4 |
| 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 |

## Appendix: Modulation Calibration Parameters

| UID | Communication System Name | | A dB | B dB√μV | C | D dB | VR mV | Max Unc$^E$ (k=2) |
|---|---|---|---|---|---|---|---|---|
| 0 | CW | X | 0.00 | 0.00 | 1.00 | 0.00 | 188.0 | ± 3.5 % |
| | | Y | 0.00 | 0.00 | 1.00 | | 176.4 | |
| | | Z | 0.00 | 0.00 | 1.00 | | 184.2 | |
| 10010-CAA | SAR Validation (Square, 100ms, 10ms) | X | 2.27 | 64.87 | 9.94 | 10.00 | 20.0 | ± 9.6 % |
| | | Y | 3.59 | 70.77 | 12.79 | | 20.0 | |
| | | Z | 2.75 | 66.85 | 11.07 | | 20.0 | |
| 10011-CAB | UMTS-FDD (WCDMA) | X | 0.83 | 64.39 | 12.93 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.14 | 69.97 | 16.70 | | 150.0 | |
| | | Z | 100.00 | 164.68 | 47.04 | | 150.0 | |
| 10012-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) | X | 1.06 | 62.50 | 13.97 | 0.41 | 150.0 | ± 9.6 % |
| | | Y | 1.18 | 64.85 | 16.05 | | 150.0 | |
| | | Z | 1.72 | 77.78 | 24.82 | | 150.0 | |
| 10013-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.78 | 66.26 | 16.74 | 1.46 | 150.0 | ± 9.6 % |
| | | Y | 4.89 | 66.88 | 17.27 | | 150.0 | |
| | | Z | 4.97 | 67.94 | 18.56 | | 150.0 | |
| 10021-DAC | GSM-FDD (TDMA, GMSK) | X | 29.58 | 96.57 | 22.64 | 9.39 | 50.0 | ± 9.6 % |
| | | Y | 100.00 | 115.92 | 28.37 | | 50.0 | |
| | | Z | 100.00 | 116.12 | 28.80 | | 50.0 | |
| 10023-DAC | GPRS-FDD (TDMA, GMSK, TN 0) | X | 17.45 | 89.91 | 20.80 | 9.57 | 50.0 | ± 9.6 % |
| | | Y | 100.00 | 115.55 | 28.25 | | 50.0 | |
| | | Z | 100.00 | 115.79 | 28.70 | | 50.0 | |
| 10024-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1) | X | 100.00 | 108.09 | 23.68 | 6.56 | 60.0 | ± 9.6 % |
| | | Y | 100.00 | 115.38 | 27.11 | | 60.0 | |
| | | Z | 100.00 | 114.83 | 27.07 | | 60.0 | |
| 10025-DAC | EDGE-FDD (TDMA, 8PSK, TN 0) | X | 3.83 | 66.26 | 23.12 | 12.57 | 50.0 | ± 9.6 % |
| | | Y | 6.32 | 83.32 | 33.10 | | 50.0 | |
| | | Z | 5.27 | 76.55 | 29.71 | | 50.0 | |
| 10026-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1) | X | 8.30 | 87.99 | 30.43 | 9.56 | 60.0 | ± 9.6 % |
| | | Y | 13.69 | 102.61 | 36.80 | | 60.0 | |
| | | Z | 27.02 | 120.57 | 42.89 | | 60.0 | |
| 10027-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2) | X | 100.00 | 106.08 | 22.01 | 4.80 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 116.66 | 26.90 | | 80.0 | |
| | | Z | 100.00 | 116.26 | 26.81 | | 80.0 | |
| 10028-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3) | X | 100.00 | 104.28 | 20.57 | 3.55 | 100.0 | ± 9.6 % |
| | | Y | 100.00 | 119.25 | 27.30 | | 100.0 | |
| | | Z | 100.00 | 120.86 | 27.94 | | 100.0 | |
| 10029-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2) | X | 5.54 | 79.45 | 25.98 | 7.80 | 80.0 | ± 9.6 % |
| | | Y | 7.52 | 87.84 | 30.19 | | 80.0 | |
| | | Z | 13.09 | 102.56 | 36.16 | | 80.0 | |
| 10030-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1) | X | 39.24 | 96.66 | 20.08 | 5.30 | 70.0 | ± 9.6 % |
| | | Y | 100.00 | 114.21 | 26.13 | | 70.0 | |
| | | Z | 100.00 | 113.53 | 25.95 | | 70.0 | |
| 10031-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3) | X | 0.70 | 64.67 | 7.60 | 1.88 | 100.0 | ± 9.6 % |
| | | Y | 100.00 | 119.57 | 25.93 | | 100.0 | |
| | | Z | 100.00 | 203.35 | 58.30 | | 100.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5) | X | 0.22 | 60.00 | 4.46 | 1.17 | 100.0 | ± 9.6 % |
| | | Y | 100.00 | 128.90 | 28.50 | | 100.0 | |
| | | Z | 0.05 | 60.00 | 716.63 | | 100.0 | |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1) | X | 5.88 | 82.11 | 20.60 | 5.30 | 70.0 | ± 9.6 % |
| | | Y | 100.00 | 130.10 | 35.25 | | 70.0 | |
| | | Z | 100.00 | 130.44 | 35.50 | | 70.0 | |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3) | X | 1.91 | 70.14 | 14.59 | 1.88 | 100.0 | ± 9.6 % |
| | | Y | 15.17 | 101.17 | 26.24 | | 100.0 | |
| | | Z | 100.00 | 133.78 | 35.08 | | 100.0 | |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5) | X | 1.40 | 67.44 | 13.13 | 1.17 | 100.0 | ± 9.6 % |
| | | Y | 5.12 | 86.66 | 21.65 | | 100.0 | |
| | | Z | 100.00 | 135.93 | 35.45 | | 100.0 | |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1) | X | 7.18 | 85.26 | 21.74 | 5.30 | 70.0 | ± 9.6 % |
| | | Y | 100.00 | 130.56 | 35.46 | | 70.0 | |
| | | Z | 100.00 | 130.90 | 35.71 | | 70.0 | |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3) | X | 1.82 | 69.68 | 14.36 | 1.88 | 100.0 | ± 9.6 % |
| | | Y | 12.48 | 98.46 | 25.46 | | 100.0 | |
| | | Z | 100.00 | 133.83 | 35.05 | | 100.0 | |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5) | X | 1.40 | 67.68 | 13.34 | 1.17 | 100.0 | ± 9.6 % |
| | | Y | 5.36 | 87.69 | 22.12 | | 100.0 | |
| | | Z | 100.00 | 137.34 | 36.07 | | 100.0 | |
| 10039-CAB | CDMA2000 (1xRTT, RC1) | X | 1.21 | 66.39 | 12.34 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.64 | 77.56 | 17.99 | | 150.0 | |
| | | Z | 100.00 | 136.32 | 35.05 | | 150.0 | |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 8.42 | 80.60 | 16.47 | 7.78 | 50.0 | ± 9.6 % |
| | | Y | 100.00 | 111.73 | 25.67 | | 50.0 | |
| | | Z | 100.00 | 110.52 | 25.33 | | 50.0 | |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM) | X | 0.08 | 120.65 | 10.32 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.02 | 122.96 | 9.69 | | 150.0 | |
| | | Z | 0.00 | 63.55 | 28.74 | | 150.0 | |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24) | X | 8.00 | 77.28 | 18.17 | 13.80 | 25.0 | ± 9.6 % |
| | | Y | 100.00 | 114.54 | 29.18 | | 25.0 | |
| | | Z | 100.00 | 115.08 | 29.90 | | 25.0 | |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12) | X | 8.49 | 80.03 | 17.94 | 10.79 | 40.0 | ± 9.6 % |
| | | Y | 100.00 | 114.59 | 28.12 | | 40.0 | |
| | | Z | 100.00 | 115.30 | 28.83 | | 40.0 | |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps) | X | 10.16 | 85.42 | 22.06 | 9.03 | 50.0 | ± 9.6 % |
| | | Y | 100.00 | 125.26 | 34.24 | | 50.0 | |
| | | Z | 100.00 | 124.20 | 33.96 | | 50.0 | |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3) | X | 4.34 | 75.04 | 23.40 | 6.55 | 100.0 | ± 9.6 % |
| | | Y | 5.46 | 80.99 | 26.66 | | 100.0 | |
| | | Z | 8.64 | 93.41 | 32.33 | | 100.0 | |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps) | X | 1.09 | 63.38 | 14.43 | 0.61 | 110.0 | ± 9.6 % |
| | | Y | 1.26 | 66.48 | 16.96 | | 110.0 | |
| | | Z | 2.62 | 87.60 | 28.83 | | 110.0 | |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps) | X | 2.51 | 80.68 | 19.07 | 1.30 | 110.0 | ± 9.6 % |
| | | Y | 100.00 | 141.35 | 37.14 | | 110.0 | |
| | | Z | 100.00 | 167.83 | 48.09 | | 110.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps) | X | 2.14 | 74.46 | 18.99 | 2.04 | 110.0 | ± 9.6 % |
| | | Y | 7.65 | 98.54 | 28.83 | | 110.0 | |
| | | Z | 100.00 | 156.65 | 45.98 | | 110.0 | |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps) | X | 4.57 | 66.22 | 16.16 | 0.49 | 100.0 | ± 9.6 % |
| | | Y | 4.69 | 66.85 | 16.68 | | 100.0 | |
| | | Z | 4.78 | 68.02 | 18.03 | | 100.0 | |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps) | X | 4.59 | 66.31 | 16.25 | 0.72 | 100.0 | ± 9.6 % |
| | | Y | 4.71 | 66.97 | 16.79 | | 100.0 | |
| | | Z | 4.81 | 68.17 | 18.16 | | 100.0 | |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps) | X | 4.88 | 66.60 | 16.50 | 0.86 | 100.0 | ± 9.6 % |
| | | Y | 5.00 | 67.23 | 17.02 | | 100.0 | |
| | | Z | 5.10 | 68.35 | 18.32 | | 100.0 | |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps) | X | 4.74 | 66.48 | 16.58 | 1.21 | 100.0 | ± 9.6 % |
| | | Y | 4.87 | 67.15 | 17.14 | | 100.0 | |
| | | Z | 4.98 | 68.34 | 18.49 | | 100.0 | |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps) | X | 4.76 | 66.51 | 16.74 | 1.46 | 100.0 | ± 9.6 % |
| | | Y | 4.89 | 67.19 | 17.32 | | 100.0 | |
| | | Z | 5.00 | 68.38 | 18.68 | | 100.0 | |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps) | X | 5.06 | 66.69 | 17.19 | 2.04 | 100.0 | ± 9.6 % |
| | | Y | 5.18 | 67.32 | 17.75 | | 100.0 | |
| | | Z | 5.28 | 68.42 | 19.03 | | 100.0 | |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps) | X | 5.11 | 66.77 | 17.42 | 2.55 | 100.0 | ± 9.6 % |
| | | Y | 5.24 | 67.43 | 18.01 | | 100.0 | |
| | | Z | 5.34 | 68.50 | 19.26 | | 100.0 | |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps) | X | 5.19 | 66.78 | 17.61 | 2.67 | 100.0 | ± 9.6 % |
| | | Y | 5.32 | 67.39 | 18.18 | | 100.0 | |
| | | Z | 5.41 | 68.45 | 19.42 | | 100.0 | |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps) | X | 4.87 | 66.36 | 17.04 | 1.99 | 100.0 | ± 9.6 % |
| | | Y | 4.99 | 66.98 | 17.59 | | 100.0 | |
| | | Z | 5.08 | 68.03 | 18.86 | | 100.0 | |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.85 | 66.66 | 17.23 | 2.30 | 100.0 | ± 9.6 % |
| | | Y | 4.98 | 67.36 | 17.85 | | 100.0 | |
| | | Z | 5.10 | 68.57 | 19.20 | | 100.0 | |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.91 | 66.82 | 17.55 | 2.83 | 100.0 | ± 9.6 % |
| | | Y | 5.05 | 67.54 | 18.19 | | 100.0 | |
| | | Z | 5.18 | 68.80 | 19.56 | | 100.0 | |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.90 | 66.73 | 17.69 | 3.30 | 100.0 | ± 9.6 % |
| | | Y | 5.03 | 67.44 | 18.35 | | 100.0 | |
| | | Z | 5.17 | 68.69 | 19.70 | | 100.0 | |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.95 | 66.86 | 18.00 | 3.82 | 90.0 | ± 9.6 % |
| | | Y | 5.08 | 67.61 | 18.70 | | 90.0 | |
| | | Z | 5.23 | 68.89 | 20.05 | | 90.0 | |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.96 | 66.66 | 18.12 | 4.15 | 90.0 | ± 9.6 % |
| | | Y | 5.08 | 67.35 | 18.79 | | 90.0 | |
| | | Z | 5.22 | 68.57 | 20.11 | | 90.0 | |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.99 | 66.73 | 18.22 | 4.30 | 90.0 | ± 9.6 % |
| | | Y | 5.10 | 67.42 | 18.89 | | 90.0 | |
| | | Z | 5.25 | 68.64 | 20.20 | | 90.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10081-CAB | CDMA2000 (1xRTT, RC3) | X | 0.62 | 62.47 | 9.69 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.98 | 68.75 | 13.96 | | 150.0 | |
| | | Z | 100.00 | 144.14 | 36.74 | | 150.0 | |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.76 | 60.00 | 4.46 | 4.77 | 80.0 | ± 9.6 % |
| | | Y | 0.79 | 60.00 | 4.75 | | 80.0 | |
| | | Z | 0.84 | 60.00 | 4.63 | | 80.0 | |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4) | X | 100.00 | 108.18 | 23.74 | 6.56 | 60.0 | ± 9.6 % |
| | | Y | 100.00 | 115.44 | 27.16 | | 60.0 | |
| | | Z | 100.00 | 114.99 | 27.16 | | 60.0 | |
| 10097-CAB | UMTS-FDD (HSDPA) | X | 1.61 | 65.71 | 14.22 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.91 | 69.00 | 16.46 | | 150.0 | |
| | | Z | 9.83 | 102.12 | 30.17 | | 150.0 | |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2) | X | 1.57 | 65.64 | 14.17 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.88 | 68.97 | 16.44 | | 150.0 | |
| | | Z | 10.76 | 104.21 | 30.81 | | 150.0 | |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4) | X | 8.35 | 88.07 | 30.46 | 9.56 | 60.0 | ± 9.6 % |
| | | Y | 13.81 | 102.80 | 36.86 | | 60.0 | |
| | | Z | 27.23 | 120.71 | 42.92 | | 60.0 | |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | X | 2.82 | 68.51 | 15.54 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.30 | 71.53 | 17.30 | | 150.0 | |
| | | Z | 6.75 | 86.01 | 24.16 | | 150.0 | |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | X | 3.07 | 66.55 | 15.23 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.28 | 68.02 | 16.24 | | 150.0 | |
| | | Z | 3.86 | 72.40 | 19.31 | | 150.0 | |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | X | 3.18 | 66.59 | 15.37 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.38 | 67.95 | 16.32 | | 150.0 | |
| | | Z | 3.89 | 71.91 | 19.19 | | 150.0 | |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) | X | 5.78 | 73.84 | 19.40 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 7.24 | 78.41 | 21.73 | | 65.0 | |
| | | Z | 10.48 | 86.31 | 25.44 | | 65.0 | |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) | X | 5.93 | 72.40 | 19.61 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.74 | 75.29 | 21.26 | | 65.0 | |
| | | Z | 7.74 | 78.89 | 23.50 | | 65.0 | |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) | X | 5.64 | 71.33 | 19.45 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.26 | 73.70 | 20.88 | | 65.0 | |
| | | Z | 7.20 | 77.28 | 23.11 | | 65.0 | |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | X | 2.46 | 67.78 | 15.34 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.87 | 70.74 | 17.15 | | 150.0 | |
| | | Z | 6.31 | 87.14 | 24.91 | | 150.0 | |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | X | 2.72 | 66.30 | 15.05 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.94 | 67.95 | 16.20 | | 150.0 | |
| | | Z | 3.68 | 73.83 | 20.00 | | 150.0 | |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | X | 1.97 | 66.77 | 14.80 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.33 | 69.93 | 16.83 | | 150.0 | |
| | | Z | 7.38 | 93.63 | 27.29 | | 150.0 | |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | X | 2.40 | 66.79 | 15.11 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.70 | 69.09 | 16.66 | | 150.0 | |
| | | Z | 4.56 | 81.06 | 22.94 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | X | 2.85 | 66.36 | 15.15 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.07 | 67.90 | 16.24 | | 150.0 | |
| | | Z | 3.72 | 73.15 | 19.73 | | 150.0 | |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | X | 2.55 | 67.02 | 15.30 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.85 | 69.17 | 16.77 | | 150.0 | |
| | | Z | 4.50 | 79.81 | 22.48 | | 150.0 | |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) | X | 5.03 | 66.81 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.12 | 67.32 | 16.54 | | 150.0 | |
| | | Z | 5.28 | 68.50 | 17.87 | | 150.0 | |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) | X | 5.32 | 66.97 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.41 | 67.46 | 16.61 | | 150.0 | |
| | | Z | 5.53 | 68.43 | 17.81 | | 150.0 | |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.12 | 66.99 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.22 | 67.53 | 16.56 | | 150.0 | |
| | | Z | 5.39 | 68.71 | 17.89 | | 150.0 | |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) | X | 4.99 | 66.66 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.09 | 67.20 | 16.49 | | 150.0 | |
| | | Z | 5.20 | 68.20 | 17.74 | | 150.0 | |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) | X | 5.41 | 67.19 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.50 | 67.66 | 16.72 | | 150.0 | |
| | | Z | 5.70 | 68.93 | 18.07 | | 150.0 | |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) | X | 5.10 | 66.95 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.19 | 67.47 | 16.54 | | 150.0 | |
| | | Z | 5.38 | 68.73 | 17.91 | | 150.0 | |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | X | 3.21 | 66.59 | 15.29 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.42 | 67.95 | 16.23 | | 150.0 | |
| | | Z | 3.93 | 71.85 | 19.05 | | 150.0 | |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | X | 3.34 | 66.74 | 15.49 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.54 | 68.03 | 16.39 | | 150.0 | |
| | | Z | 4.02 | 71.68 | 19.09 | | 150.0 | |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | X | 1.72 | 66.43 | 14.23 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.13 | 70.21 | 16.64 | | 150.0 | |
| | | Z | 31.12 | 120.09 | 34.26 | | 150.0 | |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | X | 2.19 | 66.99 | 14.48 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.63 | 70.26 | 16.58 | | 150.0 | |
| | | Z | 11.22 | 97.58 | 27.61 | | 150.0 | |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | X | 2.03 | 65.12 | 13.06 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.32 | 67.44 | 14.72 | | 150.0 | |
| | | Z | 4.42 | 80.07 | 20.90 | | 150.0 | |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | X | 0.98 | 62.52 | 9.74 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.34 | 66.74 | 12.73 | | 150.0 | |
| | | Z | 100.00 | 124.26 | 29.87 | | 150.0 | |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 1.73 | 64.88 | 10.88 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.39 | 68.68 | 12.88 | | 150.0 | |
| | | Z | 100.00 | 126.68 | 32.43 | | 150.0 | |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 1.97 | 66.42 | 11.78 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.19 | 72.28 | 14.57 | | 150.0 | |
| | | Z | 100.00 | 128.65 | 33.41 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | X | 2.73 | 66.36 | 15.09 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.96 | 68.02 | 16.25 | | 150.0 | |
| | | Z | 3.71 | 73.98 | 20.08 | | 150.0 | |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | X | 2.86 | 66.42 | 15.19 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.07 | 67.96 | 16.28 | | 150.0 | |
| | | Z | 3.74 | 73.28 | 19.81 | | 150.0 | |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | X | 5.95 | 75.83 | 20.27 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 8.01 | 81.86 | 23.19 | | 65.0 | |
| | | Z | 14.27 | 94.24 | 28.37 | | 65.0 | |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) | X | 5.43 | 72.17 | 19.19 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.33 | 75.51 | 21.10 | | 65.0 | |
| | | Z | 7.69 | 80.29 | 23.76 | | 65.0 | |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) | X | 5.80 | 73.19 | 20.02 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.73 | 76.49 | 21.88 | | 65.0 | |
| | | Z | 8.22 | 81.53 | 24.66 | | 65.0 | |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | X | 2.01 | 67.12 | 15.04 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.40 | 70.46 | 17.14 | | 150.0 | |
| | | Z | 8.76 | 96.93 | 28.45 | | 150.0 | |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | X | 2.40 | 66.80 | 15.12 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.70 | 69.10 | 16.68 | | 150.0 | |
| | | Z | 4.57 | 81.09 | 22.97 | | 150.0 | |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | X | 1.55 | 66.19 | 13.80 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.01 | 70.64 | 16.60 | | 150.0 | |
| | | Z | 100.00 | 140.43 | 38.57 | | 150.0 | |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | X | 1.82 | 65.27 | 12.83 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.20 | 68.35 | 14.92 | | 150.0 | |
| | | Z | 11.45 | 96.56 | 26.01 | | 150.0 | |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | X | 2.56 | 67.08 | 15.35 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.86 | 69.24 | 16.82 | | 150.0 | |
| | | Z | 4.55 | 80.05 | 22.60 | | 150.0 | |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | X | 1.91 | 65.64 | 13.09 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.33 | 68.92 | 15.26 | | 150.0 | |
| | | Z | 13.96 | 99.53 | 26.98 | | 150.0 | |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | X | 2.53 | 67.25 | 15.32 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.82 | 69.49 | 16.80 | | 150.0 | |
| | | Z | 5.02 | 82.00 | 23.21 | | 150.0 | |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | X | 2.75 | 66.32 | 15.09 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.97 | 67.93 | 16.23 | | 150.0 | |
| | | Z | 3.70 | 73.78 | 20.00 | | 150.0 | |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | X | 2.86 | 66.50 | 15.22 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.08 | 68.06 | 16.33 | | 150.0 | |
| | | Z | 3.80 | 73.66 | 19.96 | | 150.0 | |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | X | 3.50 | 69.08 | 18.85 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.75 | 70.62 | 19.67 | | 150.0 | |
| | | Z | 4.70 | 78.19 | 25.09 | | 150.0 | |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.23 | 71.58 | 19.13 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 4.87 | 74.34 | 20.39 | | 150.0 | |
| | | Z | 7.29 | 85.90 | 27.06 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.74 | 74.07 | 20.61 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.56 | 77.15 | 21.92 | | 150.0 | |
| | | Z | 9.94 | 93.24 | 30.19 | | 150.0 | |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | X | 2.90 | 68.30 | 18.49 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.25 | 70.96 | 19.84 | | 150.0 | |
| | | Z | 4.01 | 78.75 | 25.77 | | 150.0 | |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | X | 3.90 | 73.75 | 20.69 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.16 | 79.36 | 22.99 | | 150.0 | |
| | | Z | 10.56 | 100.20 | 33.39 | | 150.0 | |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | X | 3.19 | 69.53 | 17.81 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.94 | 73.66 | 19.65 | | 150.0 | |
| | | Z | 6.17 | 86.81 | 27.42 | | 150.0 | |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) | X | 6.79 | 85.96 | 26.31 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 15.63 | 104.26 | 33.03 | | 65.0 | |
| | | Z | 100.00 | 152.71 | 48.62 | | 65.0 | |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) | X | 10.73 | 90.79 | 26.15 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 76.03 | 127.18 | 36.79 | | 65.0 | |
| | | Z | 100.00 | 141.65 | 42.99 | | 65.0 | |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) | X | 7.02 | 82.76 | 22.95 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 35.67 | 111.71 | 32.19 | | 65.0 | |
| | | Z | 100.00 | 139.10 | 41.61 | | 65.0 | |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | X | 2.87 | 67.97 | 18.23 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.21 | 70.57 | 19.56 | | 150.0 | |
| | | Z | 3.91 | 78.03 | 25.33 | | 150.0 | |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | X | 3.91 | 73.77 | 20.70 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.17 | 79.39 | 23.01 | | 150.0 | |
| | | Z | 10.60 | 100.29 | 33.42 | | 150.0 | |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | X | 2.89 | 68.13 | 18.33 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.24 | 70.76 | 19.67 | | 150.0 | |
| | | Z | 3.97 | 78.38 | 25.51 | | 150.0 | |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | X | 3.87 | 73.53 | 20.57 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.10 | 79.07 | 22.85 | | 150.0 | |
| | | Z | 10.19 | 99.34 | 33.07 | | 150.0 | |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | X | 3.50 | 71.45 | 19.08 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 4.48 | 76.30 | 21.16 | | 150.0 | |
| | | Z | 8.22 | 93.64 | 30.41 | | 150.0 | |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | X | 3.18 | 69.45 | 17.76 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.93 | 73.56 | 19.59 | | 150.0 | |
| | | Z | 6.11 | 86.54 | 27.30 | | 150.0 | |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | X | 2.88 | 68.11 | 18.32 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.23 | 70.74 | 19.66 | | 150.0 | |
| | | Z | 3.96 | 78.35 | 25.50 | | 150.0 | |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | X | 3.86 | 73.51 | 20.55 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.09 | 79.04 | 22.84 | | 150.0 | |
| | | Z | 10.15 | 99.27 | 33.04 | | 150.0 | |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | X | 3.18 | 69.43 | 17.75 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.92 | 73.53 | 19.58 | | 150.0 | |
| | | Z | 6.08 | 86.47 | 27.28 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | X | 2.90 | 68.16 | 18.34 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.24 | 70.79 | 19.69 | | 150.0 | |
| | | Z | 3.98 | 78.43 | 25.53 | | 150.0 | |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | X | 3.88 | 73.58 | 20.59 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.12 | 79.14 | 22.88 | | 150.0 | |
| | | Z | 10.26 | 99.48 | 33.12 | | 150.0 | |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | X | 3.19 | 69.49 | 17.78 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.94 | 73.61 | 19.62 | | 150.0 | |
| | | Z | 6.14 | 86.65 | 27.34 | | 150.0 | |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | X | 2.90 | 68.21 | 18.41 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 3.25 | 70.85 | 19.75 | | 150.0 | |
| | | Z | 3.99 | 78.50 | 25.61 | | 150.0 | |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | X | 4.01 | 74.28 | 21.00 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 5.35 | 80.07 | 23.35 | | 150.0 | |
| | | Z | 11.41 | 102.07 | 34.10 | | 150.0 | |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | X | 3.26 | 69.91 | 18.06 | 3.01 | 150.0 | ± 9.6 % |
| | | Y | 4.06 | 74.17 | 19.95 | | 150.0 | |
| | | Z | 6.51 | 88.00 | 27.95 | | 150.0 | |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) | X | 4.41 | 66.16 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 66.77 | 16.27 | | 150.0 | |
| | | Z | 4.62 | 67.98 | 17.65 | | 150.0 | |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.58 | 66.47 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.69 | 67.09 | 16.39 | | 150.0 | |
| | | Z | 4.81 | 68.30 | 17.77 | | 150.0 | |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.62 | 66.51 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.74 | 67.11 | 16.41 | | 150.0 | |
| | | Z | 4.85 | 68.31 | 17.77 | | 150.0 | |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) | X | 4.42 | 66.22 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.53 | 66.83 | 16.29 | | 150.0 | |
| | | Z | 4.63 | 68.07 | 17.68 | | 150.0 | |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM) | X | 4.60 | 66.49 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.71 | 67.11 | 16.40 | | 150.0 | |
| | | Z | 4.82 | 68.32 | 17.78 | | 150.0 | |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) | X | 4.62 | 66.52 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.74 | 67.13 | 16.42 | | 150.0 | |
| | | Z | 4.85 | 68.34 | 17.79 | | 150.0 | |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) | X | 4.36 | 66.22 | 15.77 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.48 | 66.85 | 16.26 | | 150.0 | |
| | | Z | 4.59 | 68.16 | 17.68 | | 150.0 | |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) | X | 4.59 | 66.46 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.70 | 67.08 | 16.39 | | 150.0 | |
| | | Z | 4.81 | 68.28 | 17.76 | | 150.0 | |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM) | X | 4.63 | 66.46 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.75 | 67.05 | 16.40 | | 150.0 | |
| | | Z | 4.85 | 68.22 | 17.75 | | 150.0 | |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK) | X | 4.97 | 66.66 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.06 | 67.21 | 16.49 | | 150.0 | |
| | | Z | 5.18 | 68.23 | 17.75 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) | X | 5.28 | 66.91 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.36 | 67.38 | 16.59 | | 150.0 | |
| | | Z | 5.53 | 68.53 | 17.89 | | 150.0 | |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.01 | 66.77 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.11 | 67.33 | 16.47 | | 150.0 | |
| | | Z | 5.24 | 68.37 | 17.74 | | 150.0 | |
| 10225-CAB | UMTS-FDD (HSPA+) | X | 2.65 | 65.26 | 14.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.82 | 66.55 | 15.63 | | 150.0 | |
| | | Z | 3.24 | 70.82 | 18.67 | | 150.0 | |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) | X | 11.47 | 92.08 | 26.66 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 91.36 | 130.79 | 37.78 | | 65.0 | |
| | | Z | 100.00 | 141.90 | 43.15 | | 65.0 | |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) | X | 10.85 | 89.85 | 25.35 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 68.33 | 122.93 | 35.09 | | 65.0 | |
| | | Z | 100.00 | 138.74 | 41.51 | | 65.0 | |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) | X | 8.03 | 89.61 | 27.69 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 24.81 | 114.02 | 35.97 | | 65.0 | |
| | | Z | 100.00 | 153.31 | 48.90 | | 65.0 | |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) | X | 10.81 | 90.89 | 26.19 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 76.70 | 127.32 | 36.84 | | 65.0 | |
| | | Z | 100.00 | 141.61 | 42.98 | | 65.0 | |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) | X | 10.21 | 88.74 | 24.90 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 58.56 | 120.04 | 34.29 | | 65.0 | |
| | | Z | 100.00 | 138.58 | 41.40 | | 65.0 | |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK) | X | 7.66 | 88.62 | 27.26 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 22.70 | 112.05 | 35.32 | | 65.0 | |
| | | Z | 100.00 | 153.11 | 48.77 | | 65.0 | |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) | X | 10.79 | 90.87 | 26.18 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 76.69 | 127.33 | 36.84 | | 65.0 | |
| | | Z | 100.00 | 141.64 | 42.99 | | 65.0 | |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) | X | 10.19 | 88.72 | 24.90 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 58.44 | 120.02 | 34.29 | | 65.0 | |
| | | Z | 100.00 | 138.61 | 41.41 | | 65.0 | |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) | X | 7.36 | 87.72 | 26.83 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 21.03 | 110.26 | 34.68 | | 65.0 | |
| | | Z | 100.00 | 152.70 | 48.52 | | 65.0 | |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) | X | 10.79 | 90.90 | 26.19 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 77.22 | 127.47 | 36.88 | | 65.0 | |
| | | Z | 100.00 | 141.66 | 43.00 | | 65.0 | |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) | X | 10.28 | 88.85 | 24.93 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 59.86 | 120.39 | 34.37 | | 65.0 | |
| | | Z | 100.00 | 138.52 | 41.37 | | 65.0 | |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) | X | 7.67 | 88.67 | 27.28 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 22.88 | 112.26 | 35.38 | | 65.0 | |
| | | Z | 100.00 | 153.17 | 48.79 | | 65.0 | |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) | X | 10.76 | 90.85 | 26.17 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 76.68 | 127.34 | 36.84 | | 65.0 | |
| | | Z | 100.00 | 141.67 | 43.00 | | 65.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) | X | 10.16 | 88.69 | 24.89 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 58.30 | 120.01 | 34.28 | | 65.0 | |
| | | Z | 100.00 | 138.65 | 41.42 | | 65.0 | |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK) | X | 7.65 | 88.63 | 27.26 | 6.02 | 65.0 | ± 9.6 % |
| | | Y | 22.78 | 112.18 | 35.36 | | 65.0 | |
| | | Z | 100.00 | 153.20 | 48.80 | | 65.0 | |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 7.64 | 79.37 | 24.46 | 6.98 | 65.0 | ± 9.6 % |
| | | Y | 9.48 | 84.64 | 26.94 | | 65.0 | |
| | | Z | 13.65 | 95.22 | 32.26 | | 65.0 | |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.05 | 77.70 | 23.68 | 6.98 | 65.0 | ± 9.6 % |
| | | Y | 8.30 | 81.77 | 25.72 | | 65.0 | |
| | | Z | 12.41 | 92.80 | 31.22 | | 65.0 | |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) | X | 5.84 | 74.87 | 23.33 | 6.98 | 65.0 | ± 9.6 % |
| | | Y | 6.46 | 77.70 | 24.98 | | 65.0 | |
| | | Z | 8.47 | 85.73 | 29.63 | | 65.0 | |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | X | 5.29 | 73.69 | 17.46 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 8.12 | 80.92 | 20.73 | | 65.0 | |
| | | Z | 100.00 | 126.71 | 35.61 | | 65.0 | |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | X | 5.18 | 73.12 | 17.16 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 7.73 | 79.85 | 20.27 | | 65.0 | |
| | | Z | 100.00 | 126.21 | 35.40 | | 65.0 | |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | X | 4.31 | 73.88 | 17.47 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 9.24 | 86.90 | 23.16 | | 65.0 | |
| | | Z | 100.00 | 126.35 | 34.36 | | 65.0 | |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) | X | 4.45 | 71.49 | 17.18 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.01 | 77.14 | 20.22 | | 65.0 | |
| | | Z | 10.59 | 87.86 | 24.60 | | 65.0 | |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) | X | 4.48 | 71.09 | 16.99 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 5.87 | 76.20 | 19.81 | | 65.0 | |
| | | Z | 9.23 | 84.87 | 23.50 | | 65.0 | |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) | X | 5.36 | 77.27 | 19.79 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 10.78 | 90.11 | 25.21 | | 65.0 | |
| | | Z | 100.00 | 130.59 | 36.94 | | 65.0 | |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) | X | 5.39 | 74.24 | 20.05 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.75 | 78.97 | 22.57 | | 65.0 | |
| | | Z | 10.28 | 88.53 | 26.89 | | 65.0 | |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) | X | 5.19 | 72.32 | 18.86 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.25 | 76.21 | 21.05 | | 65.0 | |
| | | Z | 8.22 | 82.50 | 24.18 | | 65.0 | |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) | X | 5.87 | 77.82 | 21.01 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 9.24 | 86.82 | 25.03 | | 65.0 | |
| | | Z | 37.03 | 114.88 | 34.51 | | 65.0 | |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) | X | 5.33 | 71.70 | 18.97 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.16 | 74.84 | 20.81 | | 65.0 | |
| | | Z | 7.37 | 79.30 | 23.34 | | 65.0 | |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) | X | 5.67 | 72.64 | 19.71 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.53 | 75.77 | 21.52 | | 65.0 | |
| | | Z | 7.87 | 80.48 | 24.15 | | 65.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) | X | 5.71 | 75.28 | 20.26 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 7.47 | 80.83 | 23.03 | | 65.0 | |
| | | Z | 12.56 | 92.28 | 27.97 | | 65.0 | |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 4.04 | 69.65 | 14.62 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.07 | 75.95 | 17.72 | | 65.0 | |
| | | Z | 100.00 | 122.03 | 32.77 | | 65.0 | |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 3.95 | 69.00 | 14.23 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 5.69 | 74.62 | 17.08 | | 65.0 | |
| | | Z | 100.00 | 121.15 | 32.37 | | 65.0 | |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) | X | 3.28 | 69.68 | 14.78 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.37 | 80.32 | 19.92 | | 65.0 | |
| | | Z | 75.35 | 117.49 | 30.74 | | 65.0 | |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) | X | 4.82 | 72.54 | 18.23 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.31 | 77.82 | 21.06 | | 65.0 | |
| | | Z | 10.52 | 88.16 | 25.44 | | 65.0 | |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) | X | 4.87 | 72.35 | 18.16 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.27 | 77.35 | 20.88 | | 65.0 | |
| | | Z | 9.87 | 86.59 | 24.88 | | 65.0 | |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) | X | 5.33 | 76.81 | 20.04 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 9.15 | 87.11 | 24.61 | | 65.0 | |
| | | Z | 70.08 | 125.67 | 36.47 | | 65.0 | |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) | X | 5.38 | 74.18 | 20.01 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.73 | 78.91 | 22.52 | | 65.0 | |
| | | Z | 10.24 | 88.40 | 26.82 | | 65.0 | |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) | X | 5.18 | 72.30 | 18.85 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.24 | 76.18 | 21.05 | | 65.0 | |
| | | Z | 8.20 | 82.47 | 24.17 | | 65.0 | |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) | X | 5.82 | 77.64 | 20.91 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 9.12 | 86.55 | 24.91 | | 65.0 | |
| | | Z | 35.50 | 114.00 | 34.24 | | 65.0 | |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) | X | 5.42 | 72.17 | 19.19 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.33 | 75.51 | 21.10 | | 65.0 | |
| | | Z | 7.69 | 80.30 | 23.77 | | 65.0 | |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) | X | 5.79 | 73.18 | 20.01 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.73 | 76.48 | 21.87 | | 65.0 | |
| | | Z | 8.21 | 81.50 | 24.64 | | 65.0 | |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) | X | 5.94 | 75.79 | 20.26 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 7.99 | 81.80 | 23.16 | | 65.0 | |
| | | Z | 14.17 | 94.10 | 28.32 | | 65.0 | |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) | X | 6.09 | 72.33 | 19.70 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.85 | 74.98 | 21.24 | | 65.0 | |
| | | Z | 7.72 | 78.22 | 23.32 | | 65.0 | |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) | X | 6.09 | 71.98 | 19.61 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 6.78 | 74.45 | 21.07 | | 65.0 | |
| | | Z | 7.54 | 77.37 | 23.01 | | 65.0 | |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | X | 6.01 | 73.82 | 19.62 | 3.98 | 65.0 | ± 9.6 % |
| | | Y | 7.24 | 77.73 | 21.68 | | 65.0 | |
| | | Z | 9.32 | 83.64 | 24.76 | | 65.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) | X | 2.42 | 65.43 | 14.40 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.62 | 67.03 | 15.61 | | 150.0 | |
| | | Z | 3.33 | 73.26 | 19.54 | | 150.0 | |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) | X | 1.38 | 65.56 | 13.83 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.72 | 69.59 | 16.48 | | 150.0 | |
| | | Z | 100.00 | 146.31 | 41.06 | | 150.0 | |
| 10277-CAA | PHS (QPSK) | X | 2.29 | 61.61 | 7.35 | 9.03 | 50.0 | ± 9.6 % |
| | | Y | 2.34 | 62.34 | 7.90 | | 50.0 | |
| | | Z | 2.54 | 62.33 | 8.00 | | 50.0 | |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5) | X | 4.07 | 69.55 | 14.07 | 9.03 | 50.0 | ± 9.6 % |
| | | Y | 7.95 | 80.43 | 19.13 | | 50.0 | |
| | | Z | 7.26 | 77.94 | 18.06 | | 50.0 | |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38) | X | 4.18 | 69.82 | 14.25 | 9.03 | 50.0 | ± 9.6 % |
| | | Y | 8.16 | 80.74 | 19.30 | | 50.0 | |
| | | Z | 7.49 | 78.32 | 18.26 | | 50.0 | |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate | X | 1.05 | 64.64 | 11.20 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.76 | 71.84 | 15.41 | | 150.0 | |
| | | Z | 100.00 | 132.28 | 33.17 | | 150.0 | |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate | X | 0.61 | 62.34 | 9.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.95 | 68.38 | 13.76 | | 150.0 | |
| | | Z | 100.00 | 143.78 | 36.57 | | 150.0 | |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate | X | 0.67 | 64.13 | 10.90 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.74 | 77.70 | 18.10 | | 150.0 | |
| | | Z | 100.00 | 159.02 | 42.81 | | 150.0 | |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate | X | 0.85 | 66.91 | 12.76 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 6.38 | 96.73 | 24.88 | | 150.0 | |
| | | Z | 100.00 | 168.80 | 47.18 | | 150.0 | |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr. | X | 7.66 | 80.36 | 21.49 | 9.03 | 50.0 | ± 9.6 % |
| | | Y | 12.17 | 90.88 | 26.28 | | 50.0 | |
| | | Z | 50.80 | 114.51 | 32.91 | | 50.0 | |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) | X | 2.47 | 67.87 | 15.40 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.89 | 70.87 | 17.22 | | 150.0 | |
| | | Z | 6.46 | 87.63 | 25.10 | | 150.0 | |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) | X | 1.26 | 64.71 | 11.97 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.75 | 69.75 | 15.19 | | 150.0 | |
| | | Z | 100.00 | 134.02 | 34.83 | | 150.0 | |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) | X | 2.36 | 68.20 | 13.52 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.43 | 73.15 | 15.84 | | 150.0 | |
| | | Z | 100.00 | 132.13 | 35.60 | | 150.0 | |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) | X | 1.82 | 64.24 | 10.85 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 2.18 | 66.39 | 12.08 | | 150.0 | |
| | | Z | 100.00 | 124.21 | 31.76 | | 150.0 | |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) | X | 4.59 | 64.78 | 16.94 | 4.17 | 50.0 | ± 9.6 % |
| | | Y | 4.96 | 66.46 | 18.00 | | 50.0 | |
| | | Z | 5.39 | 69.01 | 19.81 | | 50.0 | |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.13 | 65.63 | 17.77 | 4.96 | 50.0 | ± 9.6 % |
| | | Y | 5.34 | 66.57 | 18.42 | | 50.0 | |
| | | Z | 5.63 | 68.33 | 19.79 | | 50.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC) | X | 4.88 | 65.29 | 17.60 | 4.96 | 50.0 | ± 9.6 % |
| | | Y | 5.09 | 66.26 | 18.29 | | 50.0 | |
| | | Z | 5.39 | 68.15 | 19.72 | | 50.0 | |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC) | X | 4.68 | 65.10 | 17.07 | 4.17 | 50.0 | ± 9.6 % |
| | | Y | 4.89 | 66.08 | 17.75 | | 50.0 | |
| | | Z | 5.20 | 68.05 | 19.27 | | 50.0 | |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols) | X | 4.48 | 67.75 | 19.41 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.71 | 69.04 | 20.42 | | 35.0 | |
| | | Z | 6.14 | 75.94 | 23.95 | | 35.0 | |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols) | X | 4.73 | 66.53 | 18.94 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.92 | 67.52 | 19.74 | | 35.0 | |
| | | Z | 5.62 | 71.52 | 22.13 | | 35.0 | |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols) | X | 4.64 | 66.74 | 18.93 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.84 | 67.81 | 19.76 | | 35.0 | |
| | | Z | 5.66 | 72.30 | 22.36 | | 35.0 | |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC) | X | 4.62 | 66.96 | 19.06 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.83 | 68.07 | 19.93 | | 35.0 | |
| | | Z | 5.73 | 72.89 | 22.67 | | 35.0 | |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.79 | 66.73 | 19.08 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.98 | 67.77 | 19.90 | | 35.0 | |
| | | Z | 5.71 | 71.84 | 22.32 | | 35.0 | |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols) | X | 4.69 | 66.61 | 18.93 | 6.02 | 35.0 | ± 9.6 % |
| | | Y | 4.87 | 67.63 | 19.73 | | 35.0 | |
| | | Z | 5.63 | 71.86 | 22.23 | | 35.0 | |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) | X | 2.81 | 67.24 | 15.15 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.26 | 70.05 | 16.82 | | 150.0 | |
| | | Z | 6.11 | 82.76 | 23.09 | | 150.0 | |
| 10313-AAA | iDEN 1:3 | X | 2.72 | 68.85 | 13.88 | 6.99 | 70.0 | ± 9.6 % |
| | | Y | 6.74 | 81.65 | 19.41 | | 70.0 | |
| | | Z | 100.00 | 116.93 | 28.94 | | 70.0 | |
| 10314-AAA | iDEN 1:6 | X | 3.52 | 73.46 | 18.52 | 10.00 | 30.0 | ± 9.6 % |
| | | Y | 14.65 | 98.15 | 27.72 | | 30.0 | |
| | | Z | 297.27 | 144.47 | 38.49 | | 30.0 | |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle) | X | 0.97 | 62.30 | 13.80 | 0.17 | 150.0 | ± 9.6 % |
| | | Y | 1.09 | 64.70 | 15.96 | | 150.0 | |
| | | Z | 1.69 | 79.83 | 26.00 | | 150.0 | |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) | X | 4.47 | 66.20 | 15.92 | 0.17 | 150.0 | ± 9.6 % |
| | | Y | 4.58 | 66.85 | 16.44 | | 150.0 | |
| | | Z | 4.69 | 68.08 | 17.83 | | 150.0 | |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle) | X | 4.47 | 66.20 | 15.92 | 0.17 | 150.0 | ± 9.6 % |
| | | Y | 4.58 | 66.85 | 16.44 | | 150.0 | |
| | | Z | 4.69 | 68.08 | 17.83 | | 150.0 | |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | X | 4.57 | 66.51 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.69 | 67.14 | 16.38 | | 150.0 | |
| | | Z | 4.80 | 68.40 | 17.78 | | 150.0 | |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | X | 5.31 | 66.85 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.37 | 67.26 | 16.50 | | 150.0 | |
| | | Z | 5.56 | 68.46 | 17.82 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) | X | 5.54 | 67.08 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.63 | 67.59 | 16.52 | | 150.0 | |
| | | Z | 5.73 | 68.34 | 17.60 | | 150.0 | |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0) | X | 1.05 | 64.64 | 11.20 | 0.00 | 115.0 | ± 9.6 % |
| | | Y | 1.76 | 71.84 | 15.41 | | 115.0 | |
| | | Z | 100.00 | 132.28 | 33.17 | | 115.0 | |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A) | X | 1.05 | 64.64 | 11.20 | 0.00 | 115.0 | ± 9.6 % |
| | | Y | 1.76 | 71.84 | 15.41 | | 115.0 | |
| | | Z | 100.00 | 132.28 | 33.17 | | 115.0 | |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate | X | 19.76 | 100.64 | 25.59 | 0.00 | 100.0 | ± 9.6 % |
| | | Y | 100.00 | 120.36 | 29.84 | | 100.0 | |
| | | Z | 100.00 | 149.48 | 43.21 | | 100.0 | |
| 10410-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 27.32 | 104.37 | 26.03 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 123.54 | 31.08 | | 80.0 | |
| | | Z | 100.00 | 147.64 | 42.34 | | 80.0 | |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle) | X | 0.90 | 61.64 | 13.32 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.00 | 63.67 | 15.26 | | 150.0 | |
| | | Z | 1.35 | 75.86 | 24.24 | | 150.0 | |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle) | X | 4.42 | 66.20 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 66.81 | 16.34 | | 150.0 | |
| | | Z | 4.63 | 68.03 | 17.73 | | 150.0 | |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) | X | 4.42 | 66.20 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 66.81 | 16.34 | | 150.0 | |
| | | Z | 4.63 | 68.03 | 17.73 | | 150.0 | |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule) | X | 4.40 | 66.34 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 66.98 | 16.36 | | 150.0 | |
| | | Z | 4.64 | 68.31 | 17.81 | | 150.0 | |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule) | X | 4.43 | 66.30 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.54 | 66.92 | 16.36 | | 150.0 | |
| | | Z | 4.65 | 68.20 | 17.78 | | 150.0 | |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) | X | 4.54 | 66.32 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.65 | 66.91 | 16.37 | | 150.0 | |
| | | Z | 4.75 | 68.08 | 17.72 | | 150.0 | |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) | X | 4.70 | 66.62 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.82 | 67.23 | 16.48 | | 150.0 | |
| | | Z | 4.93 | 68.42 | 17.83 | | 150.0 | |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) | X | 4.62 | 66.57 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.74 | 67.18 | 16.46 | | 150.0 | |
| | | Z | 4.85 | 68.42 | 17.84 | | 150.0 | |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) | X | 5.25 | 66.96 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.33 | 67.44 | 16.60 | | 150.0 | |
| | | Z | 5.49 | 68.57 | 17.89 | | 150.0 | |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) | X | 5.26 | 67.01 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.33 | 67.46 | 16.60 | | 150.0 | |
| | | Z | 5.55 | 68.77 | 17.99 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) | X | 5.26 | 66.96 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.35 | 67.44 | 16.59 | | 150.0 | |
| | | Z | 5.52 | 68.59 | 17.89 | | 150.0 | |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) | X | 4.09 | 70.21 | 17.69 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.37 | 71.56 | 18.62 | | 150.0 | |
| | | Z | 5.82 | 78.95 | 22.74 | | 150.0 | |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) | X | 4.07 | 66.63 | 15.76 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.22 | 67.44 | 16.38 | | 150.0 | |
| | | Z | 4.44 | 69.46 | 18.16 | | 150.0 | |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) | X | 4.38 | 66.58 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.51 | 67.26 | 16.42 | | 150.0 | |
| | | Z | 4.66 | 68.77 | 17.95 | | 150.0 | |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) | X | 4.64 | 66.60 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.76 | 67.22 | 16.48 | | 150.0 | |
| | | Z | 4.87 | 68.45 | 17.86 | | 150.0 | |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH) | X | 4.15 | 70.89 | 17.54 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.53 | 72.64 | 18.67 | | 150.0 | |
| | | Z | 7.09 | 82.89 | 23.74 | | 150.0 | |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 24.60 | 102.81 | 25.59 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 123.31 | 30.97 | | 80.0 | |
| | | Z | 100.00 | 147.30 | 42.18 | | 80.0 | |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | X | 3.32 | 66.37 | 14.85 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.53 | 67.60 | 15.79 | | 150.0 | |
| | | Z | 4.02 | 71.32 | 18.30 | | 150.0 | |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) | X | 3.91 | 66.40 | 15.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.06 | 67.22 | 16.25 | | 150.0 | |
| | | Z | 4.28 | 69.30 | 18.07 | | 150.0 | |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%) | X | 4.20 | 66.39 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.32 | 67.10 | 16.33 | | 150.0 | |
| | | Z | 4.48 | 68.69 | 17.92 | | 150.0 | |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | X | 4.40 | 66.35 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 67.00 | 16.34 | | 150.0 | |
| | | Z | 4.64 | 68.30 | 17.78 | | 150.0 | |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%) | X | 3.18 | 66.38 | 14.35 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.44 | 67.83 | 15.43 | | 150.0 | |
| | | Z | 4.12 | 72.39 | 18.21 | | 150.0 | |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) | X | 6.12 | 67.55 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 6.19 | 67.95 | 16.72 | | 150.0 | |
| | | Z | 6.37 | 68.83 | 17.83 | | 150.0 | |
| 10457-AAA | UMTS-FDD (DC-HSDPA) | X | 3.69 | 64.85 | 15.56 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 3.77 | 65.44 | 16.05 | | 150.0 | |
| | | Z | 3.83 | 66.57 | 17.51 | | 150.0 | |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers) | X | 3.74 | 69.88 | 16.74 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.15 | 71.87 | 18.05 | | 150.0 | |
| | | Z | 6.76 | 82.62 | 23.25 | | 150.0 | |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers) | X | 5.00 | 68.27 | 17.97 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.14 | 68.78 | 18.40 | | 150.0 | |
| | | Z | 5.73 | 72.13 | 20.67 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10460-AAA | UMTS-FDD (WCDMA, AMR) | X | 0.69 | 64.49 | 13.27 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 1.03 | 71.74 | 18.06 | | 150.0 | |
| | | Z | 100.00 | 184.49 | 54.58 | | 150.0 | |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 23.89 | 104.89 | 26.96 | 3.29 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 130.07 | 34.09 | | 80.0 | |
| | | Z | 100.00 | 170.21 | 52.27 | | 80.0 | |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.60 | 64.82 | 10.96 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.86 | 23.34 | | 80.0 | |
| | | Z | 100.00 | 143.39 | 39.69 | | 80.0 | |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.16 | 61.38 | 8.85 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 8.49 | 80.07 | 15.85 | | 80.0 | |
| | | Z | 100.00 | 136.22 | 36.37 | | 80.0 | |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 15.04 | 97.12 | 24.24 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 127.37 | 32.66 | | 80.0 | |
| | | Z | 100.00 | 170.30 | 51.97 | | 80.0 | |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.45 | 63.83 | 10.44 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.10 | 22.97 | | 80.0 | |
| | | Z | 100.00 | 141.97 | 39.03 | | 80.0 | |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.11 | 60.93 | 8.58 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 4.16 | 73.39 | 13.73 | | 80.0 | |
| | | Z | 100.00 | 134.48 | 35.59 | | 80.0 | |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 18.13 | 99.69 | 24.95 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 127.69 | 32.81 | | 80.0 | |
| | | Z | 100.00 | 170.90 | 52.23 | | 80.0 | |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.48 | 64.08 | 10.57 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.32 | 23.08 | | 80.0 | |
| | | Z | 100.00 | 142.55 | 39.29 | | 80.0 | |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.11 | 60.94 | 8.58 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 4.24 | 73.57 | 13.79 | | 80.0 | |
| | | Z | 100.00 | 134.69 | 35.67 | | 80.0 | |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 18.25 | 99.80 | 24.97 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 127.74 | 32.82 | | 80.0 | |
| | | Z | 100.00 | 171.17 | 52.34 | | 80.0 | |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.48 | 64.02 | 10.54 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.24 | 23.03 | | 80.0 | |
| | | Z | 100.00 | 142.54 | 39.28 | | 80.0 | |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.11 | 60.91 | 8.55 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 4.14 | 73.34 | 13.70 | | 80.0 | |
| | | Z | 100.00 | 134.66 | 35.65 | | 80.0 | |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 18.11 | 99.68 | 24.93 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 127.70 | 32.80 | | 80.0 | |
| | | Z | 100.00 | 171.13 | 52.32 | | 80.0 | |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.47 | 63.99 | 10.52 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.24 | 23.03 | | 80.0 | |
| | | Z | 100.00 | 142.62 | 39.31 | | 80.0 | |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.10 | 60.89 | 8.55 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 4.09 | 73.24 | 13.66 | | 80.0 | |
| | | Z | 100.00 | 134.72 | 35.68 | | 80.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.44 | 63.78 | 10.40 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 106.01 | 22.93 | | 80.0 | |
| | | Z | 100.00 | 142.22 | 39.12 | | 80.0 | |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.10 | 60.86 | 8.52 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 3.98 | 72.96 | 13.56 | | 80.0 | |
| | | Z | 100.00 | 134.57 | 35.61 | | 80.0 | |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 6.08 | 82.51 | 21.61 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 34.82 | 110.64 | 30.41 | | 80.0 | |
| | | Z | 100.00 | 145.60 | 43.20 | | 80.0 | |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.16 | 75.77 | 17.47 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 42.85 | 104.48 | 26.37 | | 80.0 | |
| | | Z | 100.00 | 130.57 | 36.17 | | 80.0 | |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.16 | 72.48 | 15.88 | 3.23 | 80.0 | ± 9.6 % |
| | | Y | 24.18 | 95.59 | 23.58 | | 80.0 | |
| | | Z | 100.00 | 127.95 | 34.86 | | 80.0 | |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 1.96 | 65.98 | 13.58 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.64 | 81.59 | 20.64 | | 80.0 | |
| | | Z | 100.00 | 127.97 | 34.02 | | 80.0 | |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.49 | 70.21 | 15.33 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 9.22 | 83.90 | 20.77 | | 80.0 | |
| | | Z | 100.00 | 128.26 | 35.29 | | 80.0 | |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.32 | 69.33 | 14.96 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 7.69 | 81.20 | 19.89 | | 80.0 | |
| | | Z | 100.00 | 127.48 | 34.99 | | 80.0 | |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.39 | 68.19 | 15.57 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.26 | 81.08 | 21.53 | | 80.0 | |
| | | Z | 100.00 | 133.28 | 37.08 | | 80.0 | |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.53 | 65.87 | 14.08 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.08 | 73.44 | 18.08 | | 80.0 | |
| | | Z | 100.00 | 124.45 | 33.58 | | 80.0 | |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.56 | 65.66 | 13.98 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.99 | 72.72 | 17.77 | | 80.0 | |
| | | Z | 100.00 | 123.84 | 33.38 | | 80.0 | |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.88 | 68.87 | 16.67 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.62 | 77.17 | 20.79 | | 80.0 | |
| | | Z | 100.00 | 133.82 | 38.32 | | 80.0 | |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.04 | 66.77 | 15.84 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.91 | 71.35 | 18.47 | | 80.0 | |
| | | Z | 9.87 | 89.46 | 26.24 | | 80.0 | |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.14 | 66.73 | 15.85 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.97 | 70.99 | 18.33 | | 80.0 | |
| | | Z | 8.76 | 86.64 | 25.27 | | 80.0 | |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.25 | 68.32 | 16.64 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.46 | 74.06 | 19.67 | | 80.0 | |
| | | Z | 16.65 | 99.46 | 29.56 | | 80.0 | |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.47 | 66.60 | 16.14 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.11 | 69.87 | 18.11 | | 80.0 | |
| | | Z | 6.30 | 79.04 | 22.87 | | 80.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.54 | 66.55 | 16.14 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.16 | 69.65 | 18.03 | | 80.0 | |
| | | Z | 6.12 | 78.04 | 22.47 | | 80.0 | |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.43 | 69.35 | 16.92 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.08 | 76.35 | 20.40 | | 80.0 | |
| | | Z | 37.13 | 113.21 | 33.12 | | 80.0 | |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.48 | 66.89 | 16.30 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.17 | 70.37 | 18.35 | | 80.0 | |
| | | Z | 6.63 | 80.25 | 23.38 | | 80.0 | |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.58 | 66.76 | 16.29 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.22 | 69.93 | 18.20 | | 80.0 | |
| | | Z | 6.24 | 78.46 | 22.71 | | 80.0 | |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 1.42 | 62.38 | 10.83 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.91 | 75.77 | 17.45 | | 80.0 | |
| | | Z | 100.00 | 120.52 | 30.09 | | 80.0 | |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.37 | 60.00 | 8.61 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 2.01 | 64.49 | 11.62 | | 80.0 | |
| | | Z | 41.09 | 97.34 | 21.84 | | 80.0 | |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.39 | 60.00 | 8.48 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 1.89 | 63.54 | 11.02 | | 80.0 | |
| | | Z | 5.19 | 74.74 | 15.22 | | 80.0 | |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.57 | 68.35 | 15.99 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.74 | 78.65 | 20.96 | | 80.0 | |
| | | Z | 100.00 | 133.37 | 37.55 | | 80.0 | |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.76 | 66.36 | 14.82 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.99 | 72.53 | 18.20 | | 80.0 | |
| | | Z | 37.62 | 110.73 | 31.16 | | 80.0 | |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.82 | 66.29 | 14.74 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.03 | 72.24 | 18.02 | | 80.0 | |
| | | Z | 29.89 | 106.28 | 29.87 | | 80.0 | |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.85 | 68.70 | 16.58 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.54 | 76.90 | 20.67 | | 80.0 | |
| | | Z | 100.00 | 133.75 | 38.28 | | 80.0 | |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.03 | 66.68 | 15.78 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.89 | 71.24 | 18.41 | | 80.0 | |
| | | Z | 9.69 | 89.09 | 26.09 | | 80.0 | |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.13 | 66.65 | 15.79 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.95 | 70.89 | 18.26 | | 80.0 | |
| | | Z | 8.61 | 86.33 | 25.15 | | 80.0 | |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.40 | 69.23 | 16.86 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.02 | 76.15 | 20.31 | | 80.0 | |
| | | Z | 35.05 | 112.15 | 32.82 | | 80.0 | |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.47 | 66.84 | 16.26 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.15 | 70.30 | 18.31 | | 80.0 | |
| | | Z | 6.58 | 80.11 | 23.32 | | 80.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.57 | 66.70 | 16.25 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.20 | 69.85 | 18.15 | | 80.0 | |
| | | Z | 6.19 | 78.29 | 22.63 | | 80.0 | |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.85 | 68.72 | 16.71 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.07 | 73.73 | 19.33 | | 80.0 | |
| | | Z | 11.66 | 89.86 | 26.23 | | 80.0 | |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.99 | 66.90 | 16.45 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.58 | 69.64 | 18.10 | | 80.0 | |
| | | Z | 6.01 | 75.75 | 21.63 | | 80.0 | |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.06 | 66.75 | 16.43 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.60 | 69.28 | 17.98 | | 80.0 | |
| | | Z | 5.84 | 74.71 | 21.24 | | 80.0 | |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.89 | 69.69 | 16.95 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 5.60 | 76.17 | 20.13 | | 80.0 | |
| | | Z | 22.79 | 102.04 | 29.74 | | 80.0 | |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.86 | 67.04 | 16.49 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.49 | 70.06 | 18.28 | | 80.0 | |
| | | Z | 6.20 | 77.14 | 22.21 | | 80.0 | |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.91 | 66.76 | 16.43 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.47 | 69.48 | 18.08 | | 80.0 | |
| | | Z | 5.85 | 75.55 | 21.62 | | 80.0 | |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) | X | 0.86 | 61.72 | 13.29 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.96 | 63.93 | 15.37 | | 150.0 | |
| | | Z | 1.46 | 79.09 | 25.79 | | 150.0 | |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle) | X | 0.40 | 64.69 | 12.76 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.91 | 79.80 | 21.72 | | 150.0 | |
| | | Z | 100.00 | 307.99 | 99.87 | | 150.0 | |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle) | X | 0.69 | 62.75 | 13.23 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.84 | 66.74 | 16.49 | | 150.0 | |
| | | Z | 100.00 | 187.53 | 56.74 | | 150.0 | |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle) | X | 4.41 | 66.27 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.52 | 66.89 | 16.32 | | 150.0 | |
| | | Z | 4.63 | 68.18 | 17.74 | | 150.0 | |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle) | X | 4.59 | 66.50 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.70 | 67.11 | 16.43 | | 150.0 | |
| | | Z | 4.81 | 68.36 | 17.82 | | 150.0 | |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) | X | 4.44 | 66.44 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.56 | 67.09 | 16.36 | | 150.0 | |
| | | Z | 4.68 | 68.44 | 17.82 | | 150.0 | |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) | X | 4.37 | 66.42 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.49 | 67.09 | 16.35 | | 150.0 | |
| | | Z | 4.62 | 68.48 | 17.84 | | 150.0 | |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) | X | 4.43 | 66.53 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.55 | 67.18 | 16.44 | | 150.0 | |
| | | Z | 4.69 | 68.60 | 17.93 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.31 | 66.38 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.43 | 67.06 | 16.29 | | 150.0 | |
| | | Z | 4.58 | 68.52 | 17.81 | | 150.0 | |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.37 | 66.44 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.49 | 67.10 | 16.40 | | 150.0 | |
| | | Z | 4.63 | 68.53 | 17.91 | | 150.0 | |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle) | X | 4.36 | 65.49 | 15.50 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.48 | 66.16 | 16.00 | | 150.0 | |
| | | Z | 4.63 | 67.54 | 17.48 | | 150.0 | |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) | X | 4.52 | 65.84 | 15.64 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.65 | 66.52 | 16.14 | | 150.0 | |
| | | Z | 4.82 | 67.95 | 17.63 | | 150.0 | |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) | X | 4.44 | 65.78 | 15.57 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.58 | 66.49 | 16.09 | | 150.0 | |
| | | Z | 4.75 | 67.97 | 17.61 | | 150.0 | |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) | X | 4.46 | 65.80 | 15.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.59 | 66.51 | 16.12 | | 150.0 | |
| | | Z | 4.76 | 67.98 | 17.63 | | 150.0 | |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) | X | 4.46 | 65.80 | 15.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.59 | 66.51 | 16.12 | | 150.0 | |
| | | Z | 4.76 | 67.98 | 17.63 | | 150.0 | |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle) | X | 4.44 | 65.88 | 15.61 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.58 | 66.62 | 16.14 | | 150.0 | |
| | | Z | 4.77 | 68.16 | 17.68 | | 150.0 | |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle) | X | 4.31 | 65.73 | 15.53 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.45 | 66.48 | 16.08 | | 150.0 | |
| | | Z | 4.63 | 68.06 | 17.66 | | 150.0 | |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle) | X | 4.47 | 65.85 | 15.60 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 4.60 | 66.56 | 16.12 | | 150.0 | |
| | | Z | 4.78 | 68.07 | 17.64 | | 150.0 | |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle) | X | 5.01 | 65.98 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.12 | 66.56 | 16.15 | | 150.0 | |
| | | Z | 5.27 | 67.65 | 17.43 | | 150.0 | |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) | X | 5.08 | 66.16 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.18 | 66.73 | 16.22 | | 150.0 | |
| | | Z | 5.37 | 67.96 | 17.57 | | 150.0 | |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) | X | 4.94 | 66.09 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.05 | 66.70 | 16.19 | | 150.0 | |
| | | Z | 5.24 | 67.93 | 17.55 | | 150.0 | |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle) | X | 5.00 | 66.06 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.11 | 66.66 | 16.17 | | 150.0 | |
| | | Z | 5.28 | 67.82 | 17.49 | | 150.0 | |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle) | X | 5.09 | 66.09 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.20 | 66.67 | 16.22 | | 150.0 | |
| | | Z | 5.35 | 67.77 | 17.50 | | 150.0 | |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle) | X | 5.03 | 66.12 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.13 | 66.69 | 16.24 | | 150.0 | |
| | | Z | 5.31 | 67.87 | 17.57 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle) | X | 5.00 | 65.97 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.10 | 66.56 | 16.17 | | 150.0 | |
| | | Z | 5.26 | 67.66 | 17.46 | | 150.0 | |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle) | X | 5.15 | 66.06 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.26 | 66.62 | 16.21 | | 150.0 | |
| | | Z | 5.40 | 67.65 | 17.46 | | 150.0 | |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle) | X | 5.23 | 66.11 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.33 | 66.64 | 16.24 | | 150.0 | |
| | | Z | 5.48 | 67.68 | 17.49 | | 150.0 | |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle) | X | 5.33 | 66.11 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.42 | 66.66 | 16.13 | | 150.0 | |
| | | Z | 5.56 | 67.54 | 17.28 | | 150.0 | |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle) | X | 5.52 | 66.54 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.61 | 67.05 | 16.27 | | 150.0 | |
| | | Z | 5.85 | 68.25 | 17.57 | | 150.0 | |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle) | X | 5.39 | 66.30 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.49 | 66.87 | 16.20 | | 150.0 | |
| | | Z | 5.65 | 67.81 | 17.38 | | 150.0 | |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle) | X | 5.46 | 66.35 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.56 | 66.90 | 16.20 | | 150.0 | |
| | | Z | 5.73 | 67.87 | 17.39 | | 150.0 | |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle) | X | 5.70 | 67.27 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.79 | 67.77 | 16.61 | | 150.0 | |
| | | Z | 6.27 | 69.70 | 18.24 | | 150.0 | |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle) | X | 5.42 | 66.35 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.51 | 66.88 | 16.21 | | 150.0 | |
| | | Z | 5.72 | 67.99 | 17.48 | | 150.0 | |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle) | X | 5.42 | 66.37 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.52 | 66.93 | 16.20 | | 150.0 | |
| | | Z | 5.67 | 67.83 | 17.36 | | 150.0 | |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle) | X | 5.34 | 66.17 | 15.72 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.44 | 66.74 | 16.11 | | 150.0 | |
| | | Z | 5.57 | 67.60 | 17.25 | | 150.0 | |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle) | X | 5.42 | 66.21 | 15.77 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.52 | 66.76 | 16.15 | | 150.0 | |
| | | Z | 5.64 | 67.57 | 17.26 | | 150.0 | |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.74 | 66.49 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.83 | 67.00 | 16.20 | | 150.0 | |
| | | Z | 5.99 | 67.81 | 17.29 | | 150.0 | |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.86 | 66.79 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.95 | 67.29 | 16.33 | | 150.0 | |
| | | Z | 6.17 | 68.28 | 17.49 | | 150.0 | |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.89 | 66.84 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.97 | 67.34 | 16.34 | | 150.0 | |
| | | Z | 6.18 | 68.28 | 17.48 | | 150.0 | |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.85 | 66.73 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.94 | 67.25 | 16.32 | | 150.0 | |
| | | Z | 6.11 | 68.10 | 17.42 | | 150.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle) | X | 5.89 | 66.89 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.99 | 67.41 | 16.41 | | 150.0 | |
| | | Z | 6.18 | 68.32 | 17.54 | | 150.0 | |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle) | X | 5.89 | 66.74 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.99 | 67.27 | 16.38 | | 150.0 | |
| | | Z | 6.14 | 68.07 | 17.45 | | 150.0 | |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle) | X | 5.82 | 66.72 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 5.91 | 67.23 | 16.40 | | 150.0 | |
| | | Z | 6.09 | 68.15 | 17.54 | | 150.0 | |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle) | X | 5.93 | 67.07 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 6.02 | 67.60 | 16.58 | | 150.0 | |
| | | Z | 6.23 | 68.56 | 17.73 | | 150.0 | |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle) | X | 6.10 | 67.21 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 6.23 | 67.82 | 16.65 | | 150.0 | |
| | | Z | 6.42 | 68.72 | 17.77 | | 150.0 | |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle) | X | 4.74 | 66.37 | 16.01 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.84 | 66.94 | 16.46 | | 150.0 | |
| | | Z | 4.93 | 67.97 | 17.70 | | 150.0 | |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.96 | 66.82 | 16.35 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 5.07 | 67.39 | 16.78 | | 150.0 | |
| | | Z | 5.16 | 68.45 | 18.03 | | 150.0 | |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.79 | 66.64 | 16.14 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.90 | 67.24 | 16.60 | | 150.0 | |
| | | Z | 5.00 | 68.35 | 17.89 | | 150.0 | |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.82 | 67.04 | 16.51 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.94 | 67.66 | 16.97 | | 150.0 | |
| | | Z | 5.06 | 68.91 | 18.35 | | 150.0 | |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.70 | 66.40 | 15.89 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.82 | 67.00 | 16.36 | | 150.0 | |
| | | Z | 4.91 | 68.11 | 17.64 | | 150.0 | |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.78 | 67.14 | 16.57 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.90 | 67.77 | 17.04 | | 150.0 | |
| | | Z | 5.04 | 69.13 | 18.50 | | 150.0 | |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.81 | 66.98 | 16.50 | 0.46 | 150.0 | ± 9.6 % |
| | | Y | 4.93 | 67.59 | 16.96 | | 150.0 | |
| | | Z | 5.05 | 68.87 | 18.36 | | 150.0 | |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) | X | 1.04 | 62.79 | 14.08 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 1.18 | 65.50 | 16.40 | | 130.0 | |
| | | Z | 2.04 | 82.50 | 26.88 | | 130.0 | |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) | X | 1.04 | 63.21 | 14.35 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 1.20 | 66.22 | 16.84 | | 130.0 | |
| | | Z | 2.48 | 87.58 | 29.01 | | 130.0 | |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) | X | 0.84 | 70.94 | 15.96 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 25.46 | 129.84 | 35.99 | | 130.0 | |
| | | Z | 100.00 | 217.49 | 66.83 | | 130.0 | |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) | X | 1.03 | 66.98 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 1.48 | 74.48 | 20.89 | | 130.0 | |
| | | Z | 100.00 | 181.51 | 55.51 | | 130.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) | X | 4.52 | 66.13 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.63 | 66.75 | 16.53 | | 130.0 | |
| | | Z | 4.72 | 67.89 | 17.87 | | 130.0 | |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) | X | 4.54 | 66.29 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.66 | 66.92 | 16.60 | | 130.0 | |
| | | Z | 4.76 | 68.14 | 17.98 | | 130.0 | |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.74 | 66.59 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.86 | 67.21 | 16.77 | | 130.0 | |
| | | Z | 4.96 | 68.39 | 18.11 | | 130.0 | |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.64 | 66.73 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.76 | 67.39 | 16.88 | | 130.0 | |
| | | Z | 4.89 | 68.74 | 18.33 | | 130.0 | |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.40 | 65.97 | 15.63 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.52 | 66.65 | 16.18 | | 130.0 | |
| | | Z | 4.62 | 67.82 | 17.52 | | 130.0 | |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.44 | 66.02 | 15.66 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.57 | 66.69 | 16.20 | | 130.0 | |
| | | Z | 4.67 | 67.87 | 17.53 | | 130.0 | |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.53 | 66.73 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.66 | 67.45 | 16.84 | | 130.0 | |
| | | Z | 4.81 | 68.92 | 18.36 | | 130.0 | |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.34 | 65.73 | 15.42 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.46 | 66.39 | 15.96 | | 130.0 | |
| | | Z | 4.55 | 67.53 | 17.26 | | 130.0 | |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) | X | 4.52 | 66.13 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.63 | 66.75 | 16.53 | | 130.0 | |
| | | Z | 4.72 | 67.89 | 17.87 | | 130.0 | |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) | X | 4.54 | 66.29 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.66 | 66.92 | 16.60 | | 130.0 | |
| | | Z | 4.76 | 68.14 | 17.98 | | 130.0 | |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) | X | 4.74 | 66.59 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.86 | 67.21 | 16.77 | | 130.0 | |
| | | Z | 4.96 | 68.39 | 18.11 | | 130.0 | |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) | X | 4.64 | 66.73 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.76 | 67.39 | 16.88 | | 130.0 | |
| | | Z | 4.89 | 68.74 | 18.33 | | 130.0 | |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle) | X | 4.40 | 65.97 | 15.63 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.52 | 66.65 | 16.18 | | 130.0 | |
| | | Z | 4.62 | 67.82 | 17.52 | | 130.0 | |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | X | 4.44 | 66.02 | 15.66 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.57 | 66.69 | 16.20 | | 130.0 | |
| | | Z | 4.67 | 67.87 | 17.53 | | 130.0 | |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | X | 4.53 | 66.73 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.66 | 67.45 | 16.84 | | 130.0 | |
| | | Z | 4.81 | 68.92 | 18.36 | | 130.0 | |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | X | 4.34 | 65.73 | 15.42 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.46 | 66.39 | 15.96 | | 130.0 | |
| | | Z | 4.55 | 67.53 | 17.26 | | 130.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.67 | 66.22 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.78 | 66.80 | 16.62 | | 130.0 | |
| | | Z | 4.86 | 67.85 | 17.91 | | 130.0 | |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.82 | 66.55 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.93 | 67.14 | 16.76 | | 130.0 | |
| | | Z | 5.02 | 68.23 | 18.05 | | 130.0 | |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.74 | 66.43 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.86 | 67.05 | 16.64 | | 130.0 | |
| | | Z | 4.95 | 68.15 | 17.94 | | 130.0 | |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.79 | 66.61 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.91 | 67.22 | 16.80 | | 130.0 | |
| | | Z | 5.01 | 68.36 | 18.12 | | 130.0 | |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.76 | 66.55 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.88 | 67.17 | 16.69 | | 130.0 | |
| | | Z | 4.98 | 68.34 | 18.02 | | 130.0 | |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.69 | 66.53 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.81 | 67.18 | 16.70 | | 130.0 | |
| | | Z | 4.92 | 68.37 | 18.06 | | 130.0 | |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.64 | 66.42 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.76 | 67.08 | 16.58 | | 130.0 | |
| | | Z | 4.87 | 68.26 | 17.92 | | 130.0 | |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.62 | 66.66 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.75 | 67.33 | 16.85 | | 130.0 | |
| | | Z | 4.87 | 68.62 | 18.28 | | 130.0 | |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.36 | 66.82 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.45 | 67.32 | 16.81 | | 130.0 | |
| | | Z | 5.56 | 68.24 | 17.99 | | 130.0 | |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.49 | 67.26 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.56 | 67.67 | 16.95 | | 130.0 | |
| | | Z | 5.87 | 69.29 | 18.48 | | 130.0 | |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.37 | 66.98 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.46 | 67.46 | 16.87 | | 130.0 | |
| | | Z | 5.65 | 68.68 | 18.20 | | 130.0 | |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.48 | 67.04 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.55 | 67.48 | 16.79 | | 130.0 | |
| | | Z | 5.78 | 68.80 | 18.16 | | 130.0 | |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.55 | 67.32 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.64 | 67.79 | 17.08 | | 130.0 | |
| | | Z | 5.82 | 68.99 | 18.40 | | 130.0 | |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.38 | 66.84 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.45 | 67.29 | 16.82 | | 130.0 | |
| | | Z | 5.58 | 68.28 | 18.03 | | 130.0 | |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.48 | 67.13 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.55 | 67.58 | 16.96 | | 130.0 | |
| | | Z | 5.79 | 68.96 | 18.37 | | 130.0 | |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.21 | 66.41 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.31 | 66.95 | 16.51 | | 130.0 | |
| | | Z | 5.39 | 67.75 | 17.62 | | 130.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.50 | 65.48 | 15.75 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.63 | 66.16 | 16.27 | | 130.0 | |
| | | Z | 4.76 | 67.43 | 17.68 | | 130.0 | |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.68 | 65.87 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.81 | 66.57 | 16.44 | | 130.0 | |
| | | Z | 4.96 | 67.88 | 17.86 | | 130.0 | |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.57 | 65.70 | 15.73 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.70 | 66.42 | 16.28 | | 130.0 | |
| | | Z | 4.85 | 67.75 | 17.71 | | 130.0 | |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.62 | 65.87 | 15.90 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.75 | 66.58 | 16.44 | | 130.0 | |
| | | Z | 4.91 | 67.95 | 17.90 | | 130.0 | |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.53 | 65.67 | 15.74 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.67 | 66.38 | 16.29 | | 130.0 | |
| | | Z | 4.82 | 67.73 | 17.74 | | 130.0 | |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.53 | 65.80 | 15.77 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.68 | 66.54 | 16.34 | | 130.0 | |
| | | Z | 4.84 | 67.98 | 17.83 | | 130.0 | |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.54 | 65.68 | 15.65 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.68 | 66.42 | 16.21 | | 130.0 | |
| | | Z | 4.83 | 67.77 | 17.65 | | 130.0 | |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.48 | 65.87 | 15.89 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.63 | 66.62 | 16.46 | | 130.0 | |
| | | Z | 4.80 | 68.12 | 17.99 | | 130.0 | |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.53 | 65.49 | 15.51 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 4.67 | 66.20 | 16.06 | | 130.0 | |
| | | Z | 4.81 | 67.48 | 17.45 | | 130.0 | |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.16 | 66.01 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.27 | 66.60 | 16.44 | | 130.0 | |
| | | Z | 5.41 | 67.63 | 17.68 | | 130.0 | |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.23 | 66.20 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.34 | 66.76 | 16.49 | | 130.0 | |
| | | Z | 5.54 | 68.02 | 17.85 | | 130.0 | |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.11 | 66.18 | 16.07 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.22 | 66.79 | 16.52 | | 130.0 | |
| | | Z | 5.41 | 68.02 | 17.88 | | 130.0 | |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.13 | 65.99 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.24 | 66.58 | 16.35 | | 130.0 | |
| | | Z | 5.42 | 67.75 | 17.67 | | 130.0 | |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.22 | 66.04 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.33 | 66.62 | 16.42 | | 130.0 | |
| | | Z | 5.49 | 67.70 | 17.69 | | 130.0 | |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.22 | 66.19 | 16.18 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.33 | 66.76 | 16.61 | | 130.0 | |
| | | Z | 5.49 | 67.85 | 17.90 | | 130.0 | |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.23 | 66.34 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.34 | 66.92 | 16.68 | | 130.0 | |
| | | Z | 5.55 | 68.18 | 18.05 | | 130.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle) | X | 5.11 | 65.86 | 15.88 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.22 | 66.44 | 16.31 | | 130.0 | |
| | | Z | 5.37 | 67.49 | 17.57 | | 130.0 | |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle) | X | 5.30 | 66.08 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.41 | 66.63 | 16.47 | | 130.0 | |
| | | Z | 5.56 | 67.66 | 17.71 | | 130.0 | |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle) | X | 5.65 | 67.00 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.76 | 67.56 | 16.98 | | 130.0 | |
| | | Z | 6.03 | 68.97 | 18.39 | | 130.0 | |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle) | X | 5.46 | 66.10 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.56 | 66.64 | 16.38 | | 130.0 | |
| | | Z | 5.69 | 67.48 | 17.50 | | 130.0 | |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle) | X | 5.71 | 66.69 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.79 | 67.17 | 16.60 | | 130.0 | |
| | | Z | 6.06 | 68.44 | 17.93 | | 130.0 | |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle) | X | 5.49 | 66.16 | 15.90 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.59 | 66.72 | 16.32 | | 130.0 | |
| | | Z | 5.75 | 67.65 | 17.48 | | 130.0 | |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle) | X | 5.56 | 66.22 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.67 | 66.77 | 16.33 | | 130.0 | |
| | | Z | 5.83 | 67.71 | 17.50 | | 130.0 | |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle) | X | 6.00 | 67.72 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.07 | 68.17 | 17.03 | | 130.0 | |
| | | Z | 6.71 | 70.51 | 18.84 | | 130.0 | |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle) | X | 5.89 | 67.50 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.00 | 68.06 | 17.17 | | 130.0 | |
| | | Z | 6.28 | 69.41 | 18.54 | | 130.0 | |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle) | X | 5.68 | 66.76 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.77 | 67.25 | 16.78 | | 130.0 | |
| | | Z | 6.03 | 68.55 | 18.14 | | 130.0 | |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle) | X | 5.55 | 66.32 | 16.02 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.66 | 66.90 | 16.43 | | 130.0 | |
| | | Z | 5.78 | 67.69 | 17.53 | | 130.0 | |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle) | X | 5.53 | 66.36 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.65 | 66.93 | 16.51 | | 130.0 | |
| | | Z | 5.77 | 67.77 | 17.64 | | 130.0 | |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle) | X | 5.42 | 65.68 | 15.48 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.52 | 66.24 | 15.90 | | 130.0 | |
| | | Z | 5.61 | 66.90 | 16.91 | | 130.0 | |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.88 | 66.48 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 5.97 | 66.99 | 16.45 | | 130.0 | |
| | | Z | 6.13 | 67.79 | 17.53 | | 130.0 | |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.04 | 66.87 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.12 | 67.36 | 16.62 | | 130.0 | |
| | | Z | 6.37 | 68.41 | 17.81 | | 130.0 | |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.03 | 66.83 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.13 | 67.34 | 16.59 | | 130.0 | |
| | | Z | 6.36 | 68.36 | 17.76 | | 130.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle) | X | 6.01 | 66.77 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.11 | 67.30 | 16.61 | | 130.0 | |
| | | Z | 6.28 | 68.13 | 17.70 | | 130.0 | |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle) | X | 6.01 | 66.77 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.11 | 67.30 | 16.55 | | 130.0 | |
| | | Z | 6.29 | 68.15 | 17.64 | | 130.0 | |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle) | X | 6.07 | 66.72 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.15 | 67.20 | 16.52 | | 130.0 | |
| | | Z | 6.35 | 68.09 | 17.63 | | 130.0 | |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle) | X | 6.10 | 66.96 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.20 | 67.47 | 16.82 | | 130.0 | |
| | | Z | 6.37 | 68.31 | 17.92 | | 130.0 | |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle) | X | 5.94 | 66.64 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.03 | 67.14 | 16.56 | | 130.0 | |
| | | Z | 6.23 | 68.06 | 17.69 | | 130.0 | |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle) | X | 6.08 | 67.08 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.19 | 67.63 | 16.82 | | 130.0 | |
| | | Z | 6.38 | 68.53 | 17.94 | | 130.0 | |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle) | X | 6.34 | 67.46 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
| | | Y | 6.49 | 68.13 | 17.03 | | 130.0 | |
| | | Z | 6.73 | 69.17 | 18.21 | | 130.0 | |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) | X | 12.72 | 99.19 | 33.35 | 9.30 | 60.0 | ± 9.6 % |
| | | Y | 38.29 | 127.59 | 42.90 | | 60.0 | |
| | | Z | 100.00 | 156.53 | 52.24 | | 60.0 | |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 11.53 | 97.66 | 32.97 | 9.30 | 60.0 | ± 9.6 % |
| | | Y | 31.46 | 123.83 | 42.04 | | 60.0 | |
| | | Z | 100.00 | 158.04 | 52.90 | | 60.0 | |
| 10648-AAA | CDMA2000 (1x Advanced) | X | 0.53 | 61.07 | 8.36 | 0.00 | 150.0 | ± 9.6 % |
| | | Y | 0.71 | 64.63 | 11.33 | | 150.0 | |
| | | Z | 100.00 | 131.33 | 31.12 | | 150.0 | |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) | X | 3.34 | 65.47 | 15.58 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 3.79 | 67.90 | 17.18 | | 80.0 | |
| | | Z | 5.08 | 74.52 | 20.94 | | 80.0 | |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) | X | 3.92 | 65.25 | 16.00 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.24 | 66.88 | 17.11 | | 80.0 | |
| | | Z | 4.81 | 70.18 | 19.49 | | 80.0 | |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) | X | 3.92 | 64.97 | 16.04 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.20 | 66.47 | 17.09 | | 80.0 | |
| | | Z | 4.67 | 69.32 | 19.28 | | 80.0 | |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | X | 3.99 | 64.97 | 16.10 | 2.23 | 80.0 | ± 9.6 % |
| | | Y | 4.26 | 66.44 | 17.11 | | 80.0 | |
| | | Z | 4.70 | 69.09 | 19.22 | | 80.0 | |
| 10658-AAA | Pulse Waveform (200Hz, 10%) | X | 6.09 | 75.48 | 15.93 | 10.00 | 50.0 | ± 9.6 % |
| | | Y | 100.00 | 113.01 | 27.29 | | 50.0 | |
| | | Z | 100.00 | 113.66 | 27.93 | | 50.0 | |
| 10659-AAA | Pulse Waveform (200Hz, 20%) | X | 7.36 | 78.97 | 15.80 | 6.99 | 60.0 | ± 9.6 % |
| | | Y | 100.00 | 111.38 | 25.51 | | 60.0 | |
| | | Z | 100.00 | 111.00 | 25.55 | | 60.0 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 8.43 | 80.82 | 14.63 | 3.98 | 80.0 | ± 9.6 % |
| | | Y | 100.00 | 111.85 | 24.40 | | 80.0 | |
| | | Z | 100.00 | 110.00 | 23.61 | | 80.0 | |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 1.23 | 67.24 | 8.82 | 2.22 | 100.0 | ± 9.6 % |
| | | Y | 100.00 | 114.58 | 24.29 | | 100.0 | |
| | | Z | 100.00 | 106.40 | 20.63 | | 100.0 | |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 0.20 | 60.00 | 3.70 | 0.97 | 120.0 | ± 9.6 % |
| | | Y | 100.00 | 118.12 | 23.89 | | 120.0 | |
| | | Z | 0.04 | 60.00 | 57467.54 | | 120.0 | |

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

# DIPOLE CALIBRATION CERTIFICATES

## NCL CALIBRATION LABORATORIES

Calibration File No: DC-1748
Project Number: 5822

**Client.: BACL Corp.**
Address: 6/F, the 3rd Phase of Wan Li Industrial Bldg., Shihua Rd.,
FuTian Free Trade Zone, Shenzhen, China

## CERTIFICATE OF CALIBRATION

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Validation Dipole (Head & Body)

Manufacturer: APREL Laboratories
Part number: ALS-D-1900-S-2
Frequency: 1900 MHz
Serial No: 210-00710

Calibrated: 20th September 2017
Released on: 27th September 2017

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By:

Art Brennan, Quality Manager

**NCL** CALIBRATION LABORATORIES
Suite 102, 303 Terry Fox Dr.
Kanata, ONTARIO
CANADA. K2K 3J1
Division of APREL Lab.
TEL: (613) 435-8300
FAX: (613)435-8306

## Conditions

Dipole 210-00710 was a re-calibration.

| | |
|---|---|
| **Ambient Temperature of the Laboratory:** | 21 °C +/- 0.5°C |
| **Temperature of the Tissue:** | 21 °C +/- 0.5°C |

**Attestation**

The below named signatories have conducted the calibration and review of the data which is presented in this calibration report.

**We the undersigned attest that to the best of our knowledge the calibration of this system has been accurately conducted and that all information contained within this report has been reviewed for accuracy.**

**Art Brennan QM**

**Maryna Nesterova R&D Engineer**

**Primary Measurement Standards**

| Instrument | Serial Number | Cal due date |
|---|---|---|
| Tektronix USB Power Meter | 11C940 | April 13, 2019 |
| Network Analyzer Anritsu 37347C | 002106 | Jan. 26, 2019 |
| Agilent Signal Generator | MY45094463 | Dec. 11, 2017 |

## Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

**Mechanical Dimensions**

| Length | Height | Diameter |
|---|---|---|
| 67.5 mm | 39.5 mm | 3.6 mm |

**Tissue Validation**

| Tissue | Frequency | Dielectric constant, εr | Conductivity, σ [S/m] |
|---|---|---|---|
| Head | 1900 MHz | 39.44 | 1.41 |
| Body | 1900 MHz | 52.70 | 1.57 |

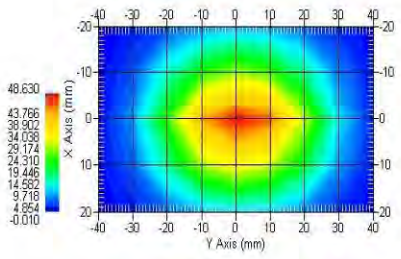
**Electrical Specification**

| Tissue | Frequency | Return Loss | SWR | Impedance |
|---|---|---|---|---|
| Head | 1900 MHz | -28.662 dB | 1.077 U | 52.368 Ω |
| Body | 1900 MHz | -22.498 dB | 1.162 U | 55.211 Ω |

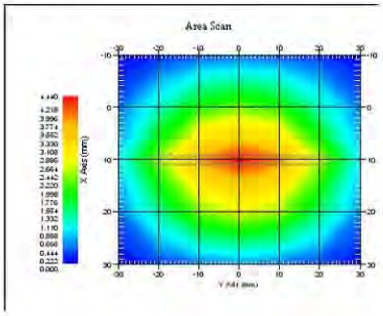
**System Validation Results**

| Tissue | Frequency | 1 Gram, W/kg | 10 Gram, W/kg |
|---|---|---|---|
| Head | 1900 MHz | 42.14 | 21.89 |
| Body | 1900 MHz | 42.11 | 22.12 |

**Head**




**Body**



## Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 210-00710. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 30 MHz to 6 GHz E-Field Probe Serial Number 225.

## References

- IEEE Standard 1528:2013
  IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
- EN 62209-1:2006
  Human Exposure to RF Fields from hand-held and body-mounted wireless communication devices - Human models. instrumentation, and procedures - Part 1: Procedure to measure the Specific Absorption Rate (SAR) for hand-held mobile wireless devices
- IEC 62209-2:2010
  Human exposure to RF fields from hand-held and body-mounted wireless devices - Human models, instrumentation, and procedures - Part 2: specific absorption rate (SAR) for wireless communication devices (30 MHz - 6 GHz)
- D22-012-Tissue dielectric tissue calibration procedure
- D28-002-Dipole procedure for validation of SAR system using a dipole
- IEEE 1309 Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9 kHz to 40 GHz

## Conditions

**Ambient Temperature of the Laboratory:** 21 °C +/- 0.5°C
**Temperature of the Tissue:** 21 °C +/- 0.5°C

## Dipole Calibration uncertainty

The calibration uncertainty for the dipole is made up of various parameters presented below.

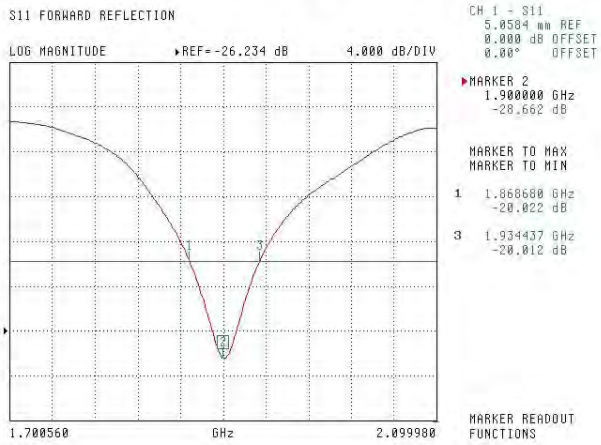
| | |
|---|---|
| **Mechanical** | 1% |
| **Positioning Error** | 1.22% |
| **Electrical** | 1.7% |
| **Tissue** | 2.2% |
| **Dipole Validation** | 2.2% |
| **Combined Standard Uncertainty** | **3.88% (7.76% K=2)** |

The Following Graphs are the results as displayed on the Vector Network Analyzer.

## S11 Parameter Return Loss

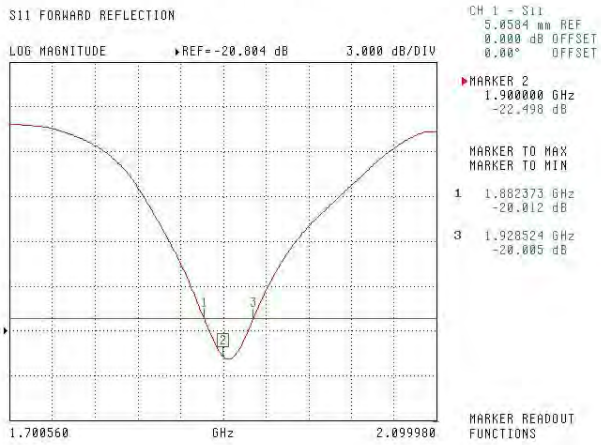
### Head

Frequency Range 1868.68 MHz to 1934.44 MHz



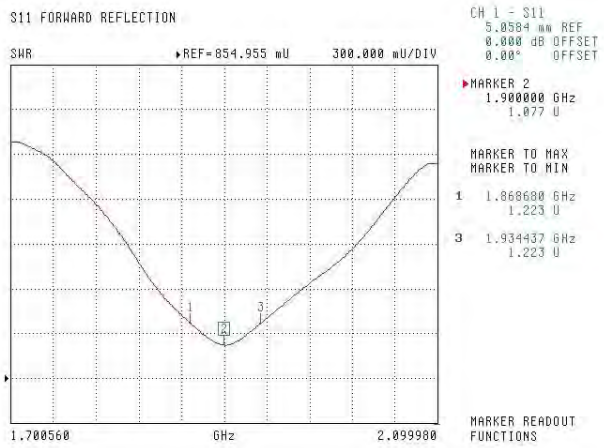

### Body

Frequency Range 1882.37 MHz to 1928.52 MHz

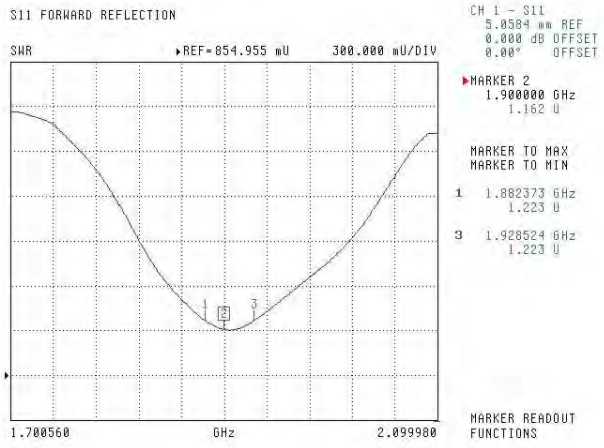


## SWR

### Head

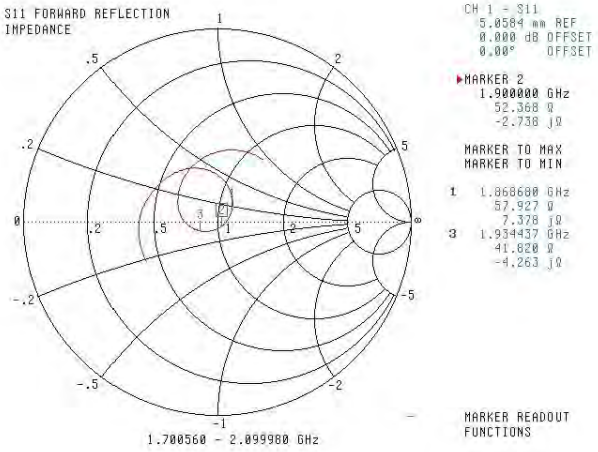


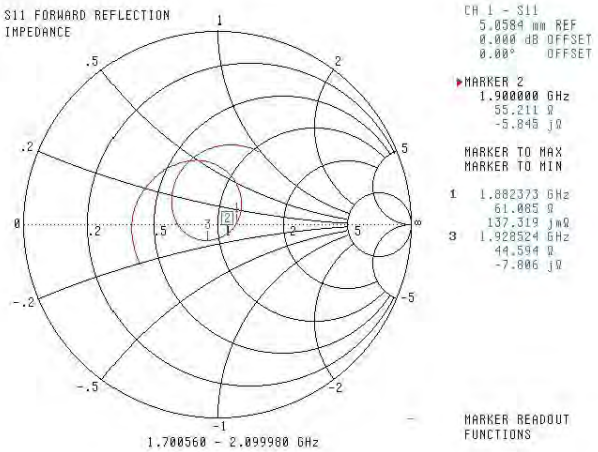

### Body



# Smith Chart Dipole Impedance

## Head




## Body