

## 1.1. DAE4 Calibration Certificate-1315

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



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Accreditation No.: **SCS 0108**

Client **CIQ - SZ (Auden)**

Certificate No: **DAE4-1315\_Apr18**

### CALIBRATION CERTIFICATE

Object **DAE4 - SD 000 D04 BM - SN: 1315**

Calibration procedure(s) **QA CAL-06.v29**  
**Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **April 18, 2018**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards             | ID #               | Cal Date (Certificate No.) | Scheduled Calibration  |
|-------------------------------|--------------------|----------------------------|------------------------|
| Keithley Multimeter Type 2001 | SN: 0810278        | 31-Aug-17 (No:21092)       | Aug-18                 |
| Secondary Standards           | ID #               | Check Date (in house)      | Scheduled Check        |
| Auto DAE Calibration Unit     | SE UWS 053 AA 1001 | 04-Jan-18 (in house check) | In house check: Jan-19 |
| Calibrator Box V2.1           | SE UMS 006 AA 1002 | 04-Jan-18 (in house check) | In house check: Jan-19 |

|                |                               |                                          |               |
|----------------|-------------------------------|------------------------------------------|---------------|
| Calibrated by: | Name<br><b>Adrian Gehring</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:   | Name<br><b>Sven Kühn</b>      | Function<br><b>Deputy Manager</b>        | Signature<br> |

Issued: April 18, 2018

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Certificate No: DAE4-1315\_Apr18

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### Glossary

**DAE** data acquisition electronics  
**Connector angle** information used in DASY system to align probe sensor X to the robot coordinate system.

### Methods Applied and Interpretation of Parameters

- **DC Voltage Measurement:** Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- **Connector angle:** The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - **DC Voltage Measurement Linearity:** Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - **Common mode sensitivity:** Influence of a positive or negative common mode voltage on the differential measurement.
  - **Channel separation:** Influence of a voltage on the neighbor channels not subject to an input voltage.
  - **AD Converter Values with inputs shorted:** Values on the internal AD converter corresponding to zero input voltage
  - **Input Offset Measurement:** Output voltage and statistical results over a large number of zero voltage measurements.
  - **Input Offset Current:** Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - **Input resistance:** Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - **Low Battery Alarm Voltage:** Typical value for information. Below this voltage, a battery alarm signal is generated.
  - **Power consumption:** Typical value for information. Supply currents in various operating modes.

### DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 $\mu$ V , full range = -100...+300 mV  
 Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

| Calibration Factors | X                         | Y                         | Z                         |
|---------------------|---------------------------|---------------------------|---------------------------|
| High Range          | 405.149 $\pm$ 0.02% (k=2) | 404.986 $\pm$ 0.02% (k=2) | 404.952 $\pm$ 0.02% (k=2) |
| Low Range           | 3.96228 $\pm$ 1.50% (k=2) | 3.98089 $\pm$ 1.50% (k=2) | 4.00126 $\pm$ 1.50% (k=2) |

### Connector Angle

|                                           |                                    |
|-------------------------------------------|------------------------------------|
| Connector Angle to be used in DASY system | 46.0 $^{\circ}$ $\pm$ 1 $^{\circ}$ |
|-------------------------------------------|------------------------------------|

**Appendix (Additional assessments outside the scope of SCS0108)****1. DC Voltage Linearity**

| High Range        | Reading ( $\mu\text{V}$ ) | Difference ( $\mu\text{V}$ ) | Error (%) |
|-------------------|---------------------------|------------------------------|-----------|
| Channel X + Input | 200024.97                 | -8.48                        | -0.00     |
| Channel X + Input | 20005.25                  | -0.13                        | -0.00     |
| Channel X - Input | -20001.75                 | 3.06                         | -0.02     |
| Channel Y + Input | 200025.44                 | -7.86                        | -0.00     |
| Channel Y + Input | 20001.53                  | -3.75                        | -0.02     |
| Channel Y - Input | -20005.79                 | -0.87                        | 0.00      |
| Channel Z + Input | 200027.69                 | -5.60                        | -0.00     |
| Channel Z + Input | 20001.22                  | -3.99                        | -0.02     |
| Channel Z - Input | -20004.11                 | 0.84                         | -0.00     |

| Low Range         | Reading ( $\mu\text{V}$ ) | Difference ( $\mu\text{V}$ ) | Error (%) |
|-------------------|---------------------------|------------------------------|-----------|
| Channel X + Input | 2001.36                   | -0.19                        | -0.01     |
| Channel X + Input | 203.07                    | 1.41                         | 0.70      |
| Channel X - Input | -197.21                   | 1.16                         | -0.58     |
| Channel Y + Input | 2001.51                   | -0.02                        | -0.00     |
| Channel Y + Input | 200.92                    | -0.65                        | -0.32     |
| Channel Y - Input | -199.27                   | -0.92                        | 0.47      |
| Channel Z + Input | 2001.85                   | 0.42                         | 0.02      |
| Channel Z + Input | 200.57                    | -0.90                        | -0.45     |
| Channel Z - Input | -199.46                   | -0.94                        | 0.48      |

**2. Common mode sensitivity**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

|           | Common mode Input Voltage (mV) | High Range Average Reading ( $\mu\text{V}$ ) | Low Range Average Reading ( $\mu\text{V}$ ) |
|-----------|--------------------------------|----------------------------------------------|---------------------------------------------|
| Channel X | 200                            | 0.97                                         | -1.57                                       |
|           | - 200                          | 3.57                                         | 1.64                                        |
| Channel Y | 200                            | -20.06                                       | -20.67                                      |
|           | - 200                          | 20.76                                        | 19.87                                       |
| Channel Z | 200                            | -3.75                                        | -3.80                                       |
|           | - 200                          | 1.78                                         | 1.36                                        |

**3. Channel separation**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

|           | Input Voltage (mV) | Channel X ( $\mu\text{V}$ ) | Channel Y ( $\mu\text{V}$ ) | Channel Z ( $\mu\text{V}$ ) |
|-----------|--------------------|-----------------------------|-----------------------------|-----------------------------|
| Channel X | 200                | -                           | 0.28                        | -3.66                       |
| Channel Y | 200                | 8.07                        | -                           | 2.03                        |
| Channel Z | 200                | 10.36                       | 5.16                        | -                           |

**4. AD-Converter Values with inputs shorted**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

|           | High Range (LSB) | Low Range (LSB) |
|-----------|------------------|-----------------|
| Channel X | 16128            | 16017           |
| Channel Y | 16242            | 15803           |
| Channel Z | 15530            | 15931           |

**5. Input Offset Measurement**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10M $\Omega$ 

|           | Average ( $\mu$ V) | min. Offset ( $\mu$ V) | max. Offset ( $\mu$ V) | Std. Deviation ( $\mu$ V) |
|-----------|--------------------|------------------------|------------------------|---------------------------|
| Channel X | 0.31               | -1.07                  | 1.80                   | 0.46                      |
| Channel Y | -0.35              | -1.30                  | 0.91                   | 0.41                      |
| Channel Z | -0.59              | -1.65                  | 1.20                   | 0.41                      |

**6. Input Offset Current**

Nominal Input circuitry offset current on all channels: &lt;25fA

**7. Input Resistance** (Typical values for information)

|           | Zeroing (kOhm) | Measuring (MOhm) |
|-----------|----------------|------------------|
| Channel X | 200            | 200              |
| Channel Y | 200            | 200              |
| Channel Z | 200            | 200              |

**8. Low Battery Alarm Voltage** (Typical values for information)

| Typical values | Alarm Level (VDC) |
|----------------|-------------------|
| Supply (+ Vcc) | +7.9              |
| Supply (- Vcc) | -7.6              |

**9. Power Consumption** (Typical values for information)

| Typical values | Switched off (mA) | Stand by (mA) | Transmitting (mA) |
|----------------|-------------------|---------------|-------------------|
| Supply (+ Vcc) | +0.01             | +6            | +14               |
| Supply (- Vcc) | -0.01             | -8            | -9                |

## 1.2. Probe Calibration Certificate-7375

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Accreditation No.: **SCS 0108**

Client **Auden**

Certificate No: **EX3-7375\_Dec18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7375**

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: **December 13, 2018**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature  $(22 \pm 3)^{\circ}\text{C}$  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: 55277 (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: MY41499087   | 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 8548C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A    | SN: US41080477   | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

|                                                                                                                 |                         |                                   |               |
|-----------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------|---------------|
| Calibrated by:                                                                                                  | Name<br>Claudio Leubler | Function<br>Laboratory Technician | Signature<br> |
| Approved by:                                                                                                    | Name<br>Katja Pokovic   | Function<br>Technical Manager     | Signature<br> |
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Issued: December 15, 2018

Certificate No: EX3-7375\_Dec18

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#### Glossary:

|                          |                                                                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                      | tissue simulating liquid                                                                                                                                |
| NORM <sub>x,y,z</sub>    | sensitivity in free space                                                                                                                               |
| ConvF                    | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                              |
| DCP                      | diode compression point                                                                                                                                 |
| CF                       | crest factor (1/duty_cycle) of the RF signal                                                                                                            |
| A, B, C, D               | modulation dependent linearization parameters                                                                                                           |
| Polarization $\varphi$   | $\varphi$ rotation around probe axis                                                                                                                    |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

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

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

#### Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* 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.
- DCP<sub>x,y,z</sub>**: 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
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: 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  $f \leq 800$  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 NORM<sub>x,y,z</sub> \* 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  $\pm 50$  MHz to  $\pm 100$  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 NORM<sub>x</sub> (no uncertainty required).

EX3DV4 – SN:7375

December 13, 2018

# Probe EX3DV4

## SN:7375

Manufactured: April 13, 2015  
Calibrated: December 13, 2018

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

EX3DV4- SN:7375

December 13, 2018

**DASY/EASY - Parameters of Probe: EX3DV4 - SN:7375****Basic Calibration Parameters**

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.50     | 0.42     | 0.46     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 99.7     | 99.5     | 99.8     |               |

**Modulation Calibration Parameters**

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>C</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 162.8    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 162.4    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 176.7    |                           |

Note: For details on UID parameters see Appendix.

**Sensor Model Parameters**

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms}\cdot\text{V}^{-2}$ | T2<br>$\text{ms}\cdot\text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|-------------------------------------|-------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 49.17    | 370.4    | 36.49                       | 10.04                               | 0.092                               | 5.100    | 1.852                 | 0.214                 | 1.010 |
| Y | 33.20    | 261.0    | 38.89                       | 2.699                               | 0.121                               | 5.052    | 0.000                 | 0.162                 | 1.015 |
| Z | 41.99    | 314.1    | 35.78                       | 7.410                               | 0.109                               | 5.054    | 1.240                 | 0.205                 | 1.005 |

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%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>C</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

EX3DV4- SN:7375

December 13, 2018

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7375

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.35   | 10.35   | 10.35   | 0.40               | 0.94                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.13   | 10.13   | 10.13   | 0.50               | 0.81                    | ± 12.0 %  |
| 900                  | 41.5                               | 0.97                            | 9.83    | 9.83    | 9.83    | 0.44               | 0.84                    | ± 12.0 %  |
| 1450                 | 40.5                               | 1.20                            | 8.93    | 8.93    | 8.93    | 0.47               | 0.80                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.58    | 8.58    | 8.58    | 0.39               | 0.84                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.26    | 8.26    | 8.26    | 0.34               | 0.85                    | ± 12.0 %  |
| 2000                 | 40.0                               | 1.40                            | 8.19    | 8.19    | 8.19    | 0.33               | 0.84                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.79    | 7.79    | 7.79    | 0.31               | 0.85                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.64    | 7.64    | 7.64    | 0.34               | 0.86                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.42    | 7.42    | 7.42    | 0.36               | 0.85                    | ± 12.0 %  |
| 3500                 | 37.9                               | 2.91                            | 7.20    | 7.20    | 7.20    | 0.28               | 1.20                    | ± 13.1 %  |
| 3700                 | 37.7                               | 3.12                            | 7.06    | 7.06    | 7.06    | 0.25               | 1.20                    | ± 13.1 %  |
| 3900                 | 37.5                               | 3.32                            | 6.96    | 6.96    | 6.96    | 0.25               | 1.80                    | ± 13.1 %  |
| 4600                 | 36.7                               | 4.04                            | 6.74    | 6.74    | 6.74    | 0.25               | 1.80                    | ± 13.1 %  |
| 5250                 | 35.9                               | 4.71                            | 5.29    | 5.29    | 5.29    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.69    | 4.69    | 4.69    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.85    | 4.85    | 4.85    | 0.40               | 1.80                    | ± 13.1 %  |

<sup>C</sup> 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.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) 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 ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> 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.

EX3DV4- SN:7375

December 13, 2018

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7375

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>c</sup> | Relative Permittivity <sup>f</sup> | Conductivity (S/m) <sup>f</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>g</sup> | Depth <sup>h</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 10.52   | 10.52   | 10.52   | 0.47               | 0.80                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.18   | 10.18   | 10.18   | 0.46               | 0.80                    | ± 12.0 %  |
| 900                  | 55.0                               | 1.05                            | 9.93    | 9.93    | 9.93    | 0.45               | 0.81                    | ± 12.0 %  |
| 1450                 | 54.0                               | 1.30                            | 8.75    | 8.75    | 8.75    | 0.38               | 0.80                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.56    | 8.56    | 8.56    | 0.44               | 0.88                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 8.20    | 8.20    | 8.20    | 0.38               | 0.89                    | ± 12.0 %  |
| 2000                 | 53.3                               | 1.52                            | 8.14    | 8.14    | 8.14    | 0.27               | 1.10                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.69    | 7.69    | 7.69    | 0.45               | 0.83                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.81    | 7.81    | 7.81    | 0.34               | 0.92                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.53    | 7.53    | 7.53    | 0.24               | 1.05                    | ± 12.0 %  |
| 3500                 | 51.3                               | 3.31                            | 7.17    | 7.17    | 7.17    | 0.28               | 1.20                    | ± 13.1 %  |
| 3700                 | 51.0                               | 3.55                            | 6.98    | 6.98    | 6.98    | 0.20               | 1.25                    | ± 13.1 %  |
| 3900                 | 51.2                               | 3.78                            | 6.86    | 6.86    | 6.86    | 0.20               | 1.90                    | ± 13.1 %  |
| 4600                 | 49.8                               | 4.60                            | 6.73    | 6.73    | 6.73    | 0.20               | 1.90                    | ± 13.1 %  |
| 5250                 | 48.9                               | 5.36                            | 4.65    | 4.65    | 4.65    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.00    | 4.00    | 4.00    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.27    | 4.27    | 4.27    | 0.50               | 1.90                    | ± 13.1 %  |

<sup>c</sup> 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.

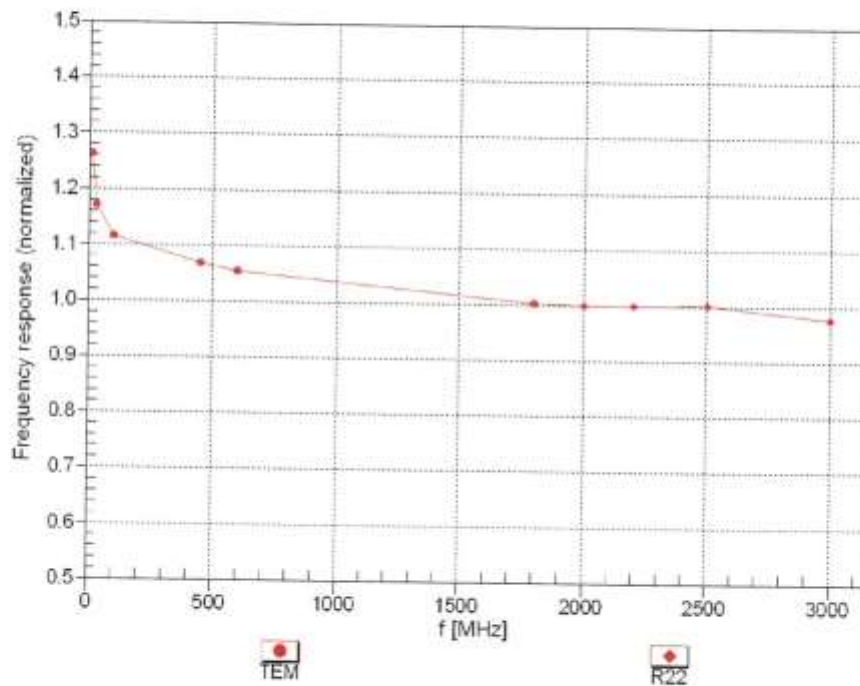
<sup>f</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>g</sup> 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.

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



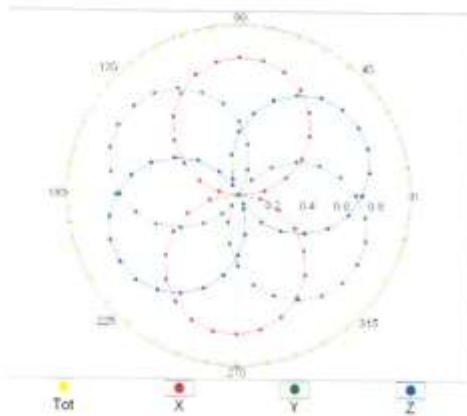
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

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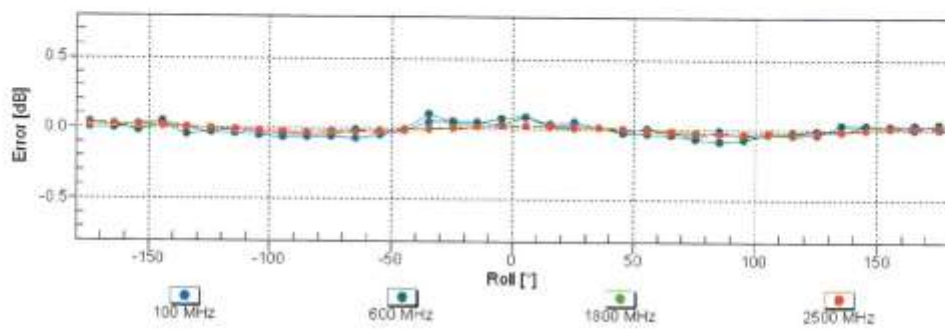
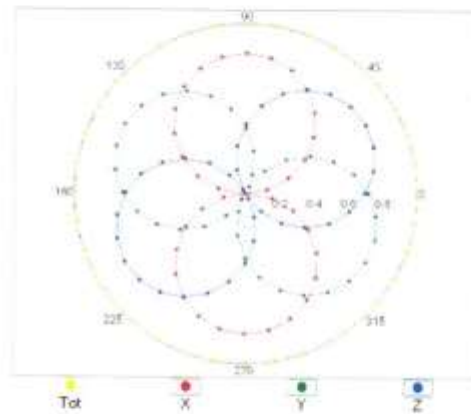
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## Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$

f=600 MHz,TEM



f=1800 MHz,R22

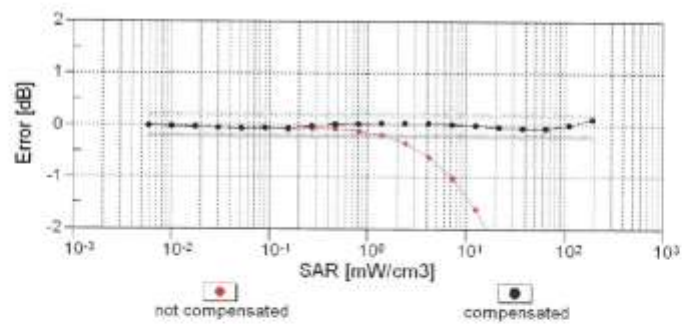
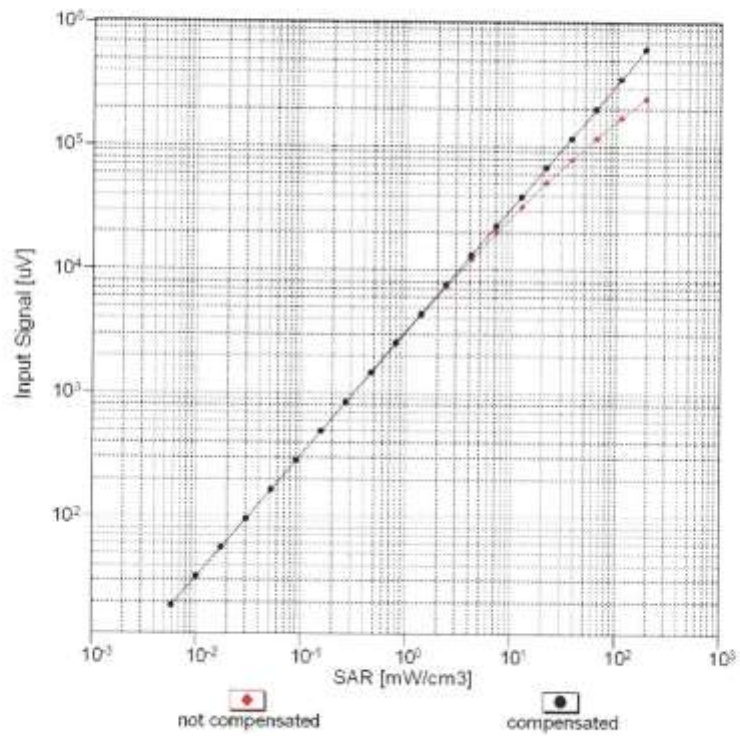


Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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### Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$ )

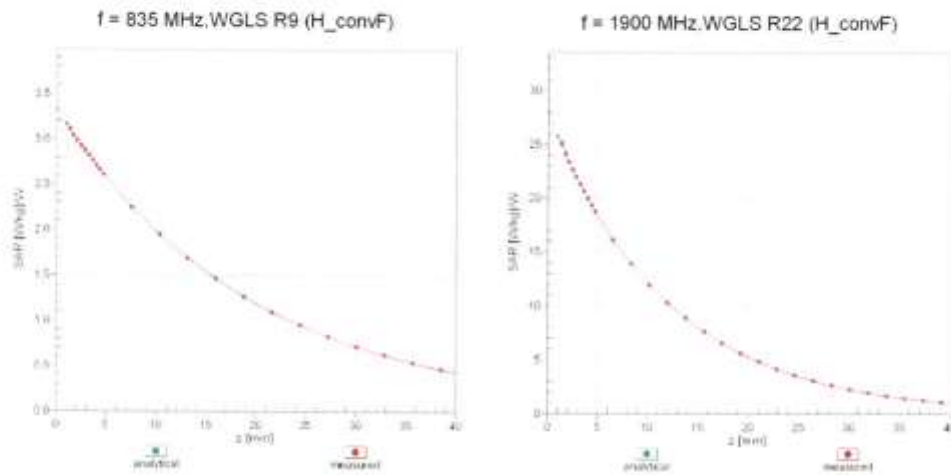


Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

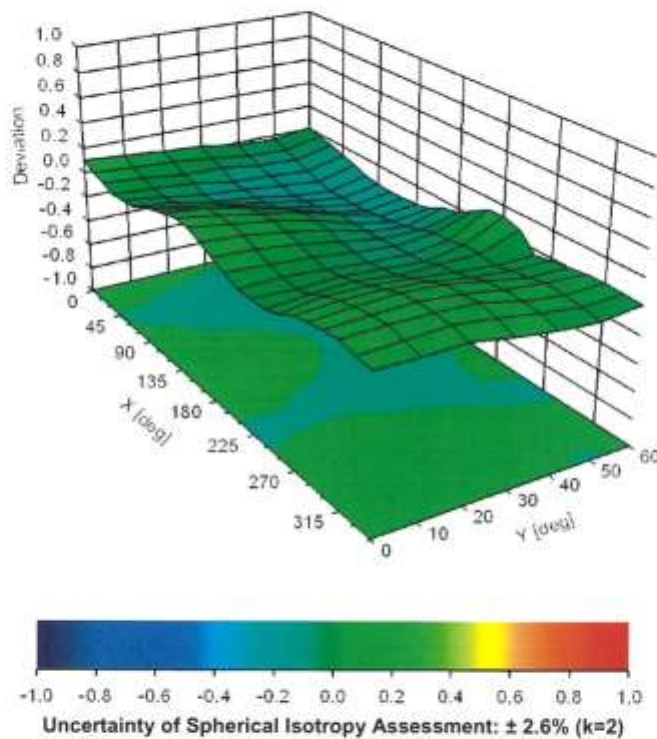
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## Conversion Factor Assessment



## Deviation from Isotropy in Liquid Error ( $\phi, \theta$ ), $f = 900 \text{ MHz}$



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**DASY/EASY - Parameters of Probe: EX3DV4 - SN:7375****Other Probe Parameters**

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 15.4       |
| 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 B: DAE and Probe Calibration Certificate

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### Appendix: Modulation Calibration Parameters

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\mu$ V | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|-----------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00            | 1.00  | 0.00    | 162.8    | $\pm 3.3\%$                      |
|               |                                               | Y | 0.00    | 0.00            | 1.00  |         | 162.4    |                                  |
|               |                                               | Z | 0.00    | 0.00            | 1.00  |         | 176.7    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.91    | 69.50           | 11.48 | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 1.35    | 61.41           | 6.87  |         | 20.0     |                                  |
|               |                                               | Z | 1.64    | 63.37           | 8.27  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.84    | 78.98           | 21.46 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 0.82    | 65.25           | 13.30 |         | 150.0    |                                  |
|               |                                               | Z | 1.06    | 68.85           | 16.02 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.24    | 66.18           | 17.53 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.01    | 62.53           | 14.24 |         | 150.0    |                                  |
|               |                                               | Z | 1.12    | 63.97           | 15.48 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.93    | 67.08           | 17.64 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.56    | 66.44           | 16.91 |         | 150.0    |                                  |
|               |                                               | Z | 4.76    | 66.70           | 17.11 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 116.80          | 28.03 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 104.25          | 21.97 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 108.46          | 24.06 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 115.86          | 27.65 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 27.86   | 91.24           | 18.81 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 107.87          | 23.85 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 124.40          | 30.29 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 102.44          | 19.86 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 110.17          | 23.70 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 7.05    | 92.09           | 38.98 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 3.18    | 64.30           | 23.15 |         | 50.0     |                                  |
|               |                                               | Z | 5.20    | 80.44           | 32.44 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 10.75   | 101.29          | 37.96 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 4.58    | 78.65           | 28.18 |         | 60.0     |                                  |
|               |                                               | Z | 7.14    | 89.57           | 32.76 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 136.39          | 34.55 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 100.53          | 18.19 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 113.90          | 24.50 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 154.91          | 41.33 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 96.11           | 15.71 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 119.88          | 26.26 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 5.71    | 84.43           | 30.09 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 3.25    | 71.14           | 23.56 |         | 80.0     |                                  |
|               |                                               | Z | 4.39    | 77.68           | 26.53 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 126.72          | 30.80 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 98.47           | 17.62 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 109.19          | 22.80 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 204.79          | 58.62 | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 20.70   | 333.07          | 21.03 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 114.13          | 22.48 |         | 100.0    |                                  |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                     |   |         |        |        |       |       |         |
|-----------|-----------------------------------------------------|---|---------|--------|--------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00  | 332.68 | 104.48 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.02    | 110.01 | 6.35   |       | 100.0 |         |
|           |                                                     | Z | 100.00  | 131.38 | 27.95  |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 100.00  | 140.44 | 39.63  | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 4.74    | 82.59  | 20.12  |       | 70.0  |         |
|           |                                                     | Z | 38.53   | 116.47 | 31.52  |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 100.00  | 137.36 | 36.72  | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.09    | 65.96  | 11.42  |       | 100.0 |         |
|           |                                                     | Z | 3.95    | 83.00  | 20.15  |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 93.71   | 135.49 | 35.72  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.84    | 63.91  | 10.00  |       | 100.0 |         |
|           |                                                     | Z | 2.28    | 76.28  | 17.42  |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 100.00  | 141.11 | 39.94  | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 6.85    | 88.04  | 21.99  |       | 70.0  |         |
|           |                                                     | Z | 100.00  | 131.91 | 35.24  |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 100.00  | 137.50 | 36.72  | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.01    | 65.33  | 11.12  |       | 100.0 |         |
|           |                                                     | Z | 3.38    | 81.04  | 19.46  |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 100.00  | 137.56 | 36.40  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.84    | 64.10  | 10.23  |       | 100.0 |         |
|           |                                                     | Z | 2.31    | 76.79  | 17.76  |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 19.34   | 107.07 | 27.68  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.72    | 62.44  | 8.55   |       | 150.0 |         |
|           |                                                     | Z | 2.02    | 74.02  | 15.92  |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00  | 114.63 | 26.27  | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 2.19    | 68.12  | 10.36  |       | 50.0  |         |
|           |                                                     | Z | 100.00  | 105.23 | 21.86  |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00    | 122.73 | 2.62   | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.11    | 121.80 | 11.55  |       | 150.0 |         |
|           |                                                     | Z | 0.01    | 113.49 | 7.34   |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 100.00  | 110.31 | 26.61  | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 5.04    | 69.37  | 13.19  |       | 25.0  |         |
|           |                                                     | Z | 26.95   | 89.52  | 20.10  |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 1017.78 | 139.92 | 31.99  | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 4.91    | 72.32  | 13.17  |       | 40.0  |         |
|           |                                                     | Z | 100.00  | 106.11 | 23.44  |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 100.00  | 130.04 | 36.07  | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 26.70   | 99.76  | 25.13  |       | 50.0  |         |
|           |                                                     | Z | 100.00  | 123.07 | 32.44  |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.32    | 78.02  | 26.46  | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.76    | 68.34  | 21.38  |       | 100.0 |         |
|           |                                                     | Z | 3.52    | 73.12  | 23.61  |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.30    | 67.86  | 18.55  | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.00    | 63.07  | 14.61  |       | 110.0 |         |
|           |                                                     | Z | 1.14    | 64.89  | 16.05  |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00  | 160.04 | 44.97  | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.79    | 82.46  | 21.13  |       | 110.0 |         |
|           |                                                     | Z | 100.00  | 146.44 | 38.81  |       | 110.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                |   |      |        |       |      |       |         |
|-----------|------------------------------------------------|---|------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 9.96 | 110.55 | 34.50 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 1.33 | 71.06  | 18.70 |      | 110.0 |         |
|           |                                                | Z | 2.29 | 79.83  | 22.80 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.75 | 67.15  | 17.08 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.36 | 66.39  | 16.30 |      | 100.0 |         |
|           |                                                | Z | 4.58 | 66.75  | 16.56 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.77 | 67.26  | 17.20 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.37 | 66.48  | 16.40 |      | 100.0 |         |
|           |                                                | Z | 4.59 | 66.82  | 16.65 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.06 | 67.50  | 17.41 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.61 | 66.69  | 16.61 |      | 100.0 |         |
|           |                                                | Z | 4.85 | 67.06  | 16.87 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.92 | 67.40  | 17.53 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.47 | 66.51  | 16.68 |      | 100.0 |         |
|           |                                                | Z | 4.71 | 66.92  | 16.95 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.93 | 67.41  | 17.70 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.48 | 66.48  | 16.82 |      | 100.0 |         |
|           |                                                | Z | 4.72 | 66.91  | 17.11 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.21 | 67.49  | 18.11 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.76 | 66.79  | 17.33 |      | 100.0 |         |
|           |                                                | Z | 5.00 | 67.10  | 17.56 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.25 | 67.55  | 18.35 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.78 | 66.67  | 17.49 |      | 100.0 |         |
|           |                                                | Z | 5.03 | 67.03  | 17.73 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.32 | 67.51  | 18.52 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.84 | 66.70  | 17.68 |      | 100.0 |         |
|           |                                                | Z | 5.10 | 67.06  | 17.93 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.01 | 67.13  | 17.94 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.64 | 66.49  | 17.21 |      | 100.0 |         |
|           |                                                | Z | 4.84 | 66.75  | 17.40 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.99 | 67.49  | 18.20 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.58 | 66.67  | 17.37 |      | 100.0 |         |
|           |                                                | Z | 4.79 | 67.01  | 17.59 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.03 | 67.61  | 18.52 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.63 | 66.82  | 17.70 |      | 100.0 |         |
|           |                                                | Z | 4.84 | 67.13  | 17.90 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.99 | 67.43  | 18.65 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.63 | 66.75  | 17.85 |      | 100.0 |         |
|           |                                                | Z | 4.81 | 66.99  | 18.03 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.02 | 67.53  | 18.98 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.63 | 66.70  | 18.08 |      | 90.0  |         |
|           |                                                | Z | 4.83 | 67.01  | 18.30 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.00 | 67.21  | 19.04 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.67 | 66.57  | 18.25 |      | 90.0  |         |
|           |                                                | Z | 4.84 | 66.80  | 18.43 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.02 | 67.26  | 19.13 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.70 | 66.65  | 18.36 |      | 90.0  |         |
|           |                                                | Z | 4.86 | 66.86  | 18.52 |      | 90.0  |         |

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# Appendix B: DAE and Probe Calibration Certificate

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|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 3.86   | 88.87  | 22.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.39   | 60.00  | 6.46  |      | 150.0 |         |
|           |                                                     | Z | 0.81   | 66.53  | 12.23 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.69   | 65.59  | 5.86  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 10.04  | 60.19  | 1.48  |      | 80.0  |         |
|           |                                                     | Z | 0.56   | 60.00  | 3.36  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 124.42 | 30.32 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 102.56 | 19.93 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 110.21 | 23.74 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 2.27   | 72.27  | 18.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.59   | 66.74  | 14.34 |      | 150.0 |         |
|           |                                                     | Z | 1.87   | 68.75  | 16.12 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 2.23   | 72.34  | 18.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.56   | 66.67  | 14.30 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 68.72  | 16.10 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 10.89  | 101.61 | 38.07 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 4.60   | 78.77  | 28.23 |      | 60.0  |         |
|           |                                                     | Z | 7.21   | 89.78  | 32.83 |      | 60.0  |         |
| 10100-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.77   | 74.04  | 18.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.72   | 68.71  | 15.92 |      | 150.0 |         |
|           |                                                     | Z | 3.14   | 70.85  | 17.03 |      | 150.0 |         |
| 10101-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.46   | 69.06  | 17.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.95   | 66.60  | 15.43 |      | 150.0 |         |
|           |                                                     | Z | 3.19   | 67.71  | 16.09 |      | 150.0 |         |
| 10102-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.55   | 68.89  | 17.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.05   | 66.66  | 15.56 |      | 150.0 |         |
|           |                                                     | Z | 3.30   | 67.68  | 16.17 |      | 150.0 |         |
| 10103-CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 6.76   | 78.84  | 22.54 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.52   | 72.48  | 19.54 |      | 65.0  |         |
|           |                                                     | Z | 5.54   | 75.19  | 20.58 |      | 65.0  |         |
| 10104-CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 6.13   | 74.76  | 21.60 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.52   | 69.83  | 18.98 |      | 65.0  |         |
|           |                                                     | Z | 5.39   | 72.35  | 20.09 |      | 65.0  |         |
| 10105-CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.63   | 72.80  | 21.01 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.49   | 69.37  | 19.06 |      | 65.0  |         |
|           |                                                     | Z | 5.15   | 71.22  | 19.87 |      | 65.0  |         |
| 10108-CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.28   | 73.32  | 18.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.33   | 68.12  | 15.72 |      | 150.0 |         |
|           |                                                     | Z | 2.72   | 70.14  | 16.88 |      | 150.0 |         |
| 10109-CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.13   | 69.19  | 17.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.57   | 66.50  | 15.16 |      | 150.0 |         |
|           |                                                     | Z | 2.85   | 67.67  | 16.00 |      | 150.0 |         |
| 10110-CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.73   | 72.94  | 18.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.82   | 67.19  | 14.96 |      | 150.0 |         |
|           |                                                     | Z | 2.20   | 69.39  | 16.50 |      | 150.0 |         |
| 10111-CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.96   | 70.94  | 17.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.25   | 67.31  | 15.02 |      | 150.0 |         |
|           |                                                     | Z | 2.60   | 68.87  | 16.38 |      | 150.0 |         |

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|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10112-CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.24  | 69.02  | 17.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.70  | 66.62  | 15.28 |      | 150.0 |         |
|           |                                                | Z | 2.97  | 67.67  | 16.06 |      | 150.0 |         |
| 10113-CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 3.10  | 70.86  | 17.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.39  | 67.55  | 15.21 |      | 150.0 |         |
|           |                                                | Z | 2.75  | 69.01  | 16.50 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.21  | 67.66  | 16.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.87  | 66.86  | 16.35 |      | 150.0 |         |
|           |                                                | Z | 5.05  | 67.26  | 16.51 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.51  | 67.77  | 16.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.12  | 66.96  | 16.40 |      | 150.0 |         |
|           |                                                | Z | 5.30  | 67.30  | 16.54 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.32  | 67.88  | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.94  | 67.01  | 16.35 |      | 150.0 |         |
|           |                                                | Z | 5.14  | 67.44  | 16.53 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.17  | 67.51  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.84  | 66.74  | 16.30 |      | 150.0 |         |
|           |                                                | Z | 5.02  | 67.13  | 16.47 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.60  | 68.01  | 17.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.21  | 67.22  | 16.54 |      | 150.0 |         |
|           |                                                | Z | 5.38  | 67.50  | 16.65 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.29  | 67.82  | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.95  | 67.06  | 16.38 |      | 150.0 |         |
|           |                                                | Z | 5.12  | 67.40  | 16.52 |      | 150.0 |         |
| 10140-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.59  | 68.89  | 17.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.07  | 66.68  | 15.46 |      | 150.0 |         |
|           |                                                | Z | 3.33  | 67.69  | 16.09 |      | 150.0 |         |
| 10141-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.70  | 68.89  | 17.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.20  | 66.88  | 15.69 |      | 150.0 |         |
|           |                                                | Z | 3.45  | 67.80  | 16.26 |      | 150.0 |         |
| 10142-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.64  | 74.18  | 18.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.52  | 66.51  | 13.74 |      | 150.0 |         |
|           |                                                | Z | 1.99  | 69.58  | 16.12 |      | 150.0 |         |
| 10143-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 3.08  | 73.19  | 18.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.91  | 66.61  | 13.39 |      | 150.0 |         |
|           |                                                | Z | 2.49  | 69.82  | 16.01 |      | 150.0 |         |
| 10144-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.61  | 69.56  | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.68  | 64.21  | 11.60 |      | 150.0 |         |
|           |                                                | Z | 2.16  | 66.87  | 14.05 |      | 150.0 |         |
| 10145-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 2.17  | 73.67  | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.62  | 60.00  | 6.23  |      | 150.0 |         |
|           |                                                | Z | 1.04  | 64.05  | 10.54 |      | 150.0 |         |
| 10146-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 7.15  | 82.63  | 18.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.82  | 60.00  | 6.21  |      | 150.0 |         |
|           |                                                | Z | 1.41  | 63.26  | 9.17  |      | 150.0 |         |
| 10147-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 35.33 | 102.70 | 24.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.84  | 60.10  | 6.34  |      | 150.0 |         |
|           |                                                | Z | 1.56  | 64.29  | 9.81  |      | 150.0 |         |

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|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.15 | 69.26 | 17.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.58 | 66.56 | 15.21 |      | 150.0 |         |
|           |                                            | Z | 2.86 | 67.73 | 16.05 |      | 150.0 |         |
| 10150-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.25 | 69.09 | 17.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.71 | 66.68 | 15.32 |      | 150.0 |         |
|           |                                            | Z | 2.98 | 67.73 | 16.10 |      | 150.0 |         |
| 10151-CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 7.59 | 82.97 | 24.36 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.43 | 74.29 | 20.34 |      | 65.0  |         |
|           |                                            | Z | 5.79 | 77.86 | 21.79 |      | 65.0  |         |
| 10152-CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.74 | 75.16 | 21.57 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.05 | 69.69 | 18.43 |      | 65.0  |         |
|           |                                            | Z | 4.93 | 72.36 | 19.78 |      | 65.0  |         |
| 10153-CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 6.08 | 75.98 | 22.28 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.37 | 70.81 | 19.35 |      | 65.0  |         |
|           |                                            | Z | 5.27 | 73.34 | 20.59 |      | 65.0  |         |
| 10154-CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.82 | 73.59 | 19.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.85 | 67.52 | 15.17 |      | 150.0 |         |
|           |                                            | Z | 2.25 | 69.83 | 16.77 |      | 150.0 |         |
| 10155-CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.96 | 70.96 | 17.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.26 | 67.36 | 15.06 |      | 150.0 |         |
|           |                                            | Z | 2.60 | 68.90 | 16.40 |      | 150.0 |         |
| 10156-CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.67 | 75.73 | 19.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.30 | 65.63 | 12.70 |      | 150.0 |         |
|           |                                            | Z | 1.84 | 69.72 | 15.85 |      | 150.0 |         |
| 10157-CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.63 | 71.46 | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.43 | 63.75 | 10.81 |      | 150.0 |         |
|           |                                            | Z | 2.01 | 67.49 | 14.04 |      | 150.0 |         |
| 10158-CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 3.11 | 70.94 | 18.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.40 | 67.64 | 15.26 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 69.09 | 16.56 |      | 150.0 |         |
| 10159-CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.80 | 72.11 | 17.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.48 | 63.89 | 10.93 |      | 150.0 |         |
|           |                                            | Z | 2.12 | 67.97 | 14.32 |      | 150.0 |         |
| 10160-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.14 | 71.53 | 18.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.43 | 67.90 | 15.68 |      | 150.0 |         |
|           |                                            | Z | 2.73 | 69.22 | 16.62 |      | 150.0 |         |
| 10161-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.16 | 69.12 | 17.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59 | 66.59 | 15.12 |      | 150.0 |         |
|           |                                            | Z | 2.88 | 67.71 | 16.03 |      | 150.0 |         |
| 10162-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.26 | 69.20 | 17.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.69 | 66.85 | 15.29 |      | 150.0 |         |
|           |                                            | Z | 2.99 | 67.90 | 16.15 |      | 150.0 |         |
| 10166-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.02 | 72.49 | 21.03 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.97 | 68.64 | 19.42 |      | 150.0 |         |
|           |                                            | Z | 3.42 | 69.79 | 19.25 |      | 150.0 |         |
| 10167-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.68 | 78.00 | 22.39 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.24 | 70.90 | 19.70 |      | 150.0 |         |
|           |                                            | Z | 4.27 | 73.34 | 19.93 |      | 150.0 |         |

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|           |                                            |   |        |        |       |      |       |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10168-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.69   | 81.57  | 24.18 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.70   | 74.00  | 21.58 |      | 150.0 |         |
|           |                                            | Z | 4.89   | 76.24  | 21.54 |      | 150.0 |         |
| 10169-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.59   | 73.83  | 21.76 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.23   | 65.86  | 18.24 |      | 150.0 |         |
|           |                                            | Z | 2.78   | 68.99  | 18.95 |      | 150.0 |         |
| 10170-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 7.45   | 87.98  | 26.86 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.49   | 70.05  | 20.38 |      | 150.0 |         |
|           |                                            | Z | 4.05   | 76.56  | 21.98 |      | 150.0 |         |
| 10171-AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 5.07   | 79.51  | 22.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.11   | 66.51  | 17.48 |      | 150.0 |         |
|           |                                            | Z | 3.17   | 71.46  | 18.74 |      | 150.0 |         |
| 10172-CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 20.63  | 116.59 | 38.49 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 2.70   | 75.43  | 24.53 |      | 65.0  |         |
|           |                                            | Z | 5.45   | 86.96  | 27.77 |      | 65.0  |         |
| 10173-CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 100.00 | 139.28 | 41.16 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.11   | 84.66  | 26.69 |      | 65.0  |         |
|           |                                            | Z | 17.44  | 105.14 | 31.28 |      | 65.0  |         |
| 10174-CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 100.00 | 137.03 | 39.96 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.34   | 80.01  | 24.25 |      | 65.0  |         |
|           |                                            | Z | 11.08  | 95.56  | 27.74 |      | 65.0  |         |
| 10175-CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.53   | 73.37  | 21.45 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.21   | 65.61  | 17.99 |      | 150.0 |         |
|           |                                            | Z | 2.75   | 68.68  | 18.69 |      | 150.0 |         |
| 10176-CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 7.47   | 88.03  | 26.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.49   | 70.07  | 20.40 |      | 150.0 |         |
|           |                                            | Z | 4.06   | 76.59  | 21.99 |      | 150.0 |         |
| 10177-CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.57   | 73.59  | 21.56 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.22   | 65.72  | 18.07 |      | 150.0 |         |
|           |                                            | Z | 2.77   | 68.83  | 18.79 |      | 150.0 |         |
| 10178-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 7.30   | 87.53  | 26.67 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48   | 69.94  | 20.31 |      | 150.0 |         |
|           |                                            | Z | 4.01   | 76.36  | 21.87 |      | 150.0 |         |
| 10179-CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 6.13   | 83.53  | 24.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.28   | 68.24  | 18.84 |      | 150.0 |         |
|           |                                            | Z | 3.57   | 73.86  | 20.21 |      | 150.0 |         |
| 10180-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 5.04   | 79.37  | 22.54 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.11   | 66.49  | 17.45 |      | 150.0 |         |
|           |                                            | Z | 3.17   | 71.40  | 18.69 |      | 150.0 |         |
| 10181-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.56   | 73.57  | 21.56 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.22   | 65.70  | 18.06 |      | 150.0 |         |
|           |                                            | Z | 2.77   | 68.81  | 18.78 |      | 150.0 |         |
| 10182-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 7.28   | 87.49  | 26.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48   | 69.91  | 20.29 |      | 150.0 |         |
|           |                                            | Z | 4.00   | 76.33  | 21.85 |      | 150.0 |         |
| 10183-AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 5.03   | 79.32  | 22.52 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.11   | 66.46  | 17.44 |      | 150.0 |         |
|           |                                            | Z | 3.16   | 71.37  | 18.68 |      | 150.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.58 | 73.62 | 21.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.23 | 65.74 | 18.08 |      | 150.0 |         |
|           |                                               | Z | 2.78 | 68.85 | 18.80 |      | 150.0 |         |
| 10185-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 7.33 | 87.62 | 26.71 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.49 | 69.98 | 20.34 |      | 150.0 |         |
|           |                                               | Z | 4.03 | 76.42 | 21.90 |      | 150.0 |         |
| 10186-AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 5.07 | 79.44 | 22.57 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.11 | 66.52 | 17.48 |      | 150.0 |         |
|           |                                               | Z | 3.18 | 71.45 | 18.72 |      | 150.0 |         |
| 10187-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.59 | 73.70 | 21.65 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.23 | 65.81 | 18.17 |      | 150.0 |         |
|           |                                               | Z | 2.79 | 68.92 | 18.88 |      | 150.0 |         |
| 10188-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 7.84 | 89.07 | 27.33 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.55 | 70.51 | 20.70 |      | 150.0 |         |
|           |                                               | Z | 4.18 | 77.21 | 22.33 |      | 150.0 |         |
| 10189-AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 5.28 | 80.27 | 22.99 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.15 | 66.86 | 17.75 |      | 150.0 |         |
|           |                                               | Z | 3.26 | 71.94 | 19.03 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.60 | 67.12 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.24 | 66.43 | 15.93 |      | 150.0 |         |
|           |                                               | Z | 4.44 | 66.76 | 16.21 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.78 | 67.45 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.37 | 66.65 | 16.07 |      | 150.0 |         |
|           |                                               | Z | 4.60 | 67.05 | 16.34 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.82 | 67.47 | 16.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.41 | 66.66 | 16.09 |      | 150.0 |         |
|           |                                               | Z | 4.64 | 67.07 | 16.36 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.61 | 67.20 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 66.41 | 15.91 |      | 150.0 |         |
|           |                                               | Z | 4.44 | 66.80 | 16.22 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.80 | 67.47 | 16.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.38 | 66.65 | 16.08 |      | 150.0 |         |
|           |                                               | Z | 4.61 | 67.06 | 16.35 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.83 | 67.49 | 16.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.40 | 66.66 | 16.09 |      | 150.0 |         |
|           |                                               | Z | 4.64 | 67.09 | 16.37 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.56 | 67.23 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 66.45 | 15.88 |      | 150.0 |         |
|           |                                               | Z | 4.39 | 66.83 | 16.19 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.79 | 67.44 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.37 | 66.61 | 16.07 |      | 150.0 |         |
|           |                                               | Z | 4.61 | 67.02 | 16.34 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.83 | 67.40 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.42 | 66.61 | 16.08 |      | 150.0 |         |
|           |                                               | Z | 4.65 | 67.02 | 16.35 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.15 | 67.53 | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.82 | 66.74 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.99 | 67.13 | 16.46 |      | 150.0 |         |

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|           |                                           |   |        |        |       |      |       |         |
|-----------|-------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.45   | 67.70  | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.07   | 66.92  | 16.40 |      | 150.0 |         |
|           |                                           | Z | 5.29   | 67.36  | 16.59 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.20   | 67.65  | 16.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.86   | 66.87  | 16.28 |      | 150.0 |         |
|           |                                           | Z | 5.03   | 67.24  | 16.44 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.96   | 67.48  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.46   | 65.41  | 14.18 |      | 150.0 |         |
|           |                                           | Z | 2.74   | 66.44  | 15.35 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 100.00 | 139.56 | 41.34 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.38   | 86.04  | 27.32 |      | 65.0  |         |
|           |                                           | Z | 19.68  | 107.54 | 32.08 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 100.00 | 136.06 | 39.56 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.92   | 87.47  | 27.08 |      | 65.0  |         |
|           |                                           | Z | 19.54  | 105.15 | 30.55 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 46.84  | 135.12 | 43.57 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.91   | 77.21  | 25.39 |      | 65.0  |         |
|           |                                           | Z | 6.55   | 90.89  | 29.23 |      | 65.0  |         |
| 10229-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 100.00 | 139.24 | 41.16 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.14   | 84.79  | 26.74 |      | 65.0  |         |
|           |                                           | Z | 17.63  | 105.30 | 31.34 |      | 65.0  |         |
| 10230-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 100.00 | 135.87 | 39.43 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.54   | 85.86  | 26.41 |      | 65.0  |         |
|           |                                           | Z | 17.29  | 102.89 | 29.82 |      | 65.0  |         |
| 10231-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 41.02  | 131.96 | 42.66 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.83   | 76.52  | 25.01 |      | 65.0  |         |
|           |                                           | Z | 6.24   | 89.85  | 28.78 |      | 65.0  |         |
| 10232-CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 100.00 | 139.27 | 41.16 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.13   | 84.75  | 26.73 |      | 65.0  |         |
|           |                                           | Z | 17.59  | 105.28 | 31.33 |      | 65.0  |         |
| 10233-CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 100.00 | 135.90 | 39.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.52   | 85.78  | 26.39 |      | 65.0  |         |
|           |                                           | Z | 17.21  | 102.84 | 29.81 |      | 65.0  |         |
| 10234-CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 37.16  | 129.42 | 41.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.77   | 76.07  | 24.69 |      | 65.0  |         |
|           |                                           | Z | 6.02   | 88.98  | 28.34 |      | 65.0  |         |
| 10235-CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 100.00 | 139.30 | 41.17 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.13   | 84.77  | 26.74 |      | 65.0  |         |
|           |                                           | Z | 17.64  | 105.35 | 31.36 |      | 65.0  |         |
| 10236-CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 100.00 | 135.81 | 39.41 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.59   | 86.04  | 26.47 |      | 65.0  |         |
|           |                                           | Z | 17.60  | 103.17 | 29.89 |      | 65.0  |         |
| 10237-CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 41.71  | 132.40 | 42.78 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.82   | 76.52  | 25.02 |      | 65.0  |         |
|           |                                           | Z | 6.25   | 89.91  | 28.80 |      | 65.0  |         |
| 10238-CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 100.00 | 139.30 | 41.17 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.12   | 84.71  | 26.71 |      | 65.0  |         |
|           |                                           | Z | 17.54  | 105.25 | 31.32 |      | 65.0  |         |

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|           |                                            |   |        |        |       |      |      |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10239-CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 100.00 | 135.94 | 39.46 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.50   | 85.71  | 26.37 |      | 65.0 |         |
|           |                                            | Z | 17.12  | 102.77 | 29.79 |      | 65.0 |         |
| 10240-CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 41.36  | 132.24 | 42.74 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.82   | 76.50  | 25.01 |      | 65.0 |         |
|           |                                            | Z | 6.23   | 89.86  | 28.79 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 9.26   | 86.35  | 28.43 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.20   | 77.08  | 24.74 |      | 65.0 |         |
|           |                                            | Z | 7.01   | 80.65  | 25.45 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.95   | 82.90  | 26.97 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.03   | 76.47  | 24.38 |      | 65.0 |         |
|           |                                            | Z | 6.40   | 78.75  | 24.58 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.87   | 77.11  | 25.49 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.35   | 72.98  | 23.59 |      | 65.0 |         |
|           |                                            | Z | 5.13   | 74.64  | 23.72 |      | 65.0 |         |
| 10244-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 10.98  | 88.44  | 24.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.04   | 69.09  | 14.47 |      | 65.0 |         |
|           |                                            | Z | 4.55   | 73.37  | 16.97 |      | 65.0 |         |
| 10245-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 10.01  | 86.54  | 23.42 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.92   | 68.21  | 13.97 |      | 65.0 |         |
|           |                                            | Z | 4.38   | 72.53  | 16.55 |      | 65.0 |         |
| 10246-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 12.70  | 95.58  | 26.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.31   | 68.28  | 14.11 |      | 65.0 |         |
|           |                                            | Z | 4.73   | 78.16  | 19.56 |      | 65.0 |         |
| 10247-CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 5.74   | 78.40  | 21.42 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.87   | 67.63  | 14.60 |      | 65.0 |         |
|           |                                            | Z | 4.15   | 72.62  | 17.95 |      | 65.0 |         |
| 10248-CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 5.56   | 77.21  | 20.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.86   | 67.09  | 14.31 |      | 65.0 |         |
|           |                                            | Z | 4.11   | 71.89  | 17.59 |      | 65.0 |         |
| 10249-CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 12.90  | 96.74  | 28.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.48   | 74.40  | 18.42 |      | 65.0 |         |
|           |                                            | Z | 6.05   | 82.48  | 22.39 |      | 65.0 |         |
| 10250-CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 6.08   | 78.88  | 23.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.91   | 71.80  | 19.11 |      | 65.0 |         |
|           |                                            | Z | 4.95   | 74.96  | 20.88 |      | 65.0 |         |
| 10251-CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.69   | 76.14  | 21.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.72   | 69.66  | 17.63 |      | 65.0 |         |
|           |                                            | Z | 4.73   | 72.79  | 19.51 |      | 65.0 |         |
| 10252-CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 9.08   | 89.32  | 26.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.19   | 76.24  | 20.90 |      | 65.0 |         |
|           |                                            | Z | 5.96   | 81.15  | 23.07 |      | 65.0 |         |
| 10253-CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.58   | 74.41  | 21.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.01   | 69.42  | 18.16 |      | 65.0 |         |
|           |                                            | Z | 4.85   | 71.89  | 19.52 |      | 65.0 |         |
| 10254-CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.90   | 75.22  | 21.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.28   | 70.37  | 18.93 |      | 65.0 |         |
|           |                                            | Z | 5.15   | 72.78  | 20.23 |      | 65.0 |         |

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|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 6.92 | 81.46 | 24.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.24 | 73.63 | 20.17 |      | 65.0 |         |
|           |                                             | Z | 5.45 | 76.94 | 21.62 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 8.48 | 83.30 | 21.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.95 | 63.46 | 10.11 |      | 65.0 |         |
|           |                                             | Z | 3.11 | 67.90 | 13.25 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 7.37 | 80.66 | 20.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.91 | 62.93 | 9.68  |      | 65.0 |         |
|           |                                             | Z | 3.01 | 67.11 | 12.76 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 8.54 | 87.85 | 23.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.57 | 63.19 | 10.13 |      | 65.0 |         |
|           |                                             | Z | 3.09 | 71.34 | 15.64 |      | 65.0 |         |
| 10259-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 5.88 | 78.57 | 22.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.29 | 69.42 | 16.35 |      | 65.0 |         |
|           |                                             | Z | 4.50 | 73.65 | 19.08 |      | 65.0 |         |
| 10260-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 5.83 | 77.97 | 21.80 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.32 | 69.17 | 16.22 |      | 65.0 |         |
|           |                                             | Z | 4.51 | 73.30 | 18.91 |      | 65.0 |         |
| 10261-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 9.56 | 90.98 | 26.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.66 | 74.63 | 19.18 |      | 65.0 |         |
|           |                                             | Z | 5.61 | 80.76 | 22.24 |      | 65.0 |         |
| 10262-CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 6.07 | 78.84 | 23.21 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.90 | 71.72 | 19.05 |      | 65.0 |         |
|           |                                             | Z | 4.94 | 74.90 | 20.83 |      | 65.0 |         |
| 10263-CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.68 | 76.11 | 21.66 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.72 | 69.64 | 17.63 |      | 65.0 |         |
|           |                                             | Z | 4.72 | 72.77 | 19.50 |      | 65.0 |         |
| 10264-CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 8.96 | 89.03 | 26.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.15 | 76.02 | 20.78 |      | 65.0 |         |
|           |                                             | Z | 5.89 | 80.92 | 22.95 |      | 65.0 |         |
| 10265-CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.74 | 75.16 | 21.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.05 | 69.70 | 18.44 |      | 65.0 |         |
|           |                                             | Z | 4.93 | 72.36 | 19.79 |      | 65.0 |         |
| 10266-CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 6.07 | 75.96 | 22.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.36 | 70.80 | 19.33 |      | 65.0 |         |
|           |                                             | Z | 5.27 | 73.32 | 20.58 |      | 65.0 |         |
| 10267-CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 7.57 | 82.90 | 24.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.42 | 74.25 | 20.32 |      | 65.0 |         |
|           |                                             | Z | 5.78 | 77.81 | 21.77 |      | 65.0 |         |
| 10268-CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.23 | 74.36 | 21.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.70 | 69.94 | 19.09 |      | 65.0 |         |
|           |                                             | Z | 5.54 | 72.23 | 20.13 |      | 65.0 |         |
| 10269-CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.16 | 73.76 | 21.30 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.73 | 69.66 | 18.98 |      | 65.0 |         |
|           |                                             | Z | 5.53 | 71.82 | 19.98 |      | 65.0 |         |
| 10270-CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.69 | 77.84 | 22.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.63 | 72.13 | 19.66 |      | 65.0 |         |
|           |                                             | Z | 5.65 | 74.75 | 20.60 |      | 65.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                    |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.79   | 68.29  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.30   | 65.91  | 14.18 |      | 150.0 |         |
|           |                                                                    | Z | 2.56   | 67.00  | 15.38 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 2.20   | 74.21  | 19.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.32   | 66.26  | 13.99 |      | 150.0 |         |
|           |                                                                    | Z | 1.63   | 68.95  | 16.04 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.76   | 61.10  | 6.62  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.23   | 58.19  | 3.48  |      | 50.0  |         |
|           |                                                                    | Z | 1.53   | 59.90  | 5.31  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 23.74  | 97.78  | 24.59 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.25   | 63.55  | 9.25  |      | 50.0  |         |
|           |                                                                    | Z | 3.64   | 69.93  | 13.54 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 23.81  | 97.87  | 24.70 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.31   | 63.77  | 9.44  |      | 50.0  |         |
|           |                                                                    | Z | 3.79   | 70.36  | 13.81 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 5.23   | 87.73  | 21.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.63   | 61.20  | 7.58  |      | 150.0 |         |
|           |                                                                    | Z | 1.38   | 69.04  | 13.52 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 3.44   | 87.25  | 21.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.39   | 60.00  | 6.44  |      | 150.0 |         |
|           |                                                                    | Z | 0.79   | 66.25  | 12.07 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 100.00 | 139.14 | 35.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.42   | 61.08  | 7.36  |      | 150.0 |         |
|           |                                                                    | Z | 1.33   | 73.76  | 15.80 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 100.00 | 143.64 | 37.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.55   | 63.44  | 9.08  |      | 150.0 |         |
|           |                                                                    | Z | 4.87   | 91.37  | 22.35 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 22.10  | 105.22 | 31.52 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 43.43  | 105.27 | 27.35 |      | 50.0  |         |
|           |                                                                    | Z | 14.28  | 93.54  | 26.18 |      | 50.0  |         |
| 10297-AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.31   | 73.46  | 18.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.34   | 68.22  | 15.79 |      | 150.0 |         |
|           |                                                                    | Z | 2.73   | 70.25  | 16.95 |      | 150.0 |         |
| 10298-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 2.72   | 76.88  | 18.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.85   | 62.02  | 8.98  |      | 150.0 |         |
|           |                                                                    | Z | 1.47   | 67.80  | 13.69 |      | 150.0 |         |
| 10299-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 9.96   | 88.44  | 21.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.34   | 63.96  | 9.96  |      | 150.0 |         |
|           |                                                                    | Z | 2.19   | 67.76  | 12.59 |      | 150.0 |         |
| 10300-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 3.10   | 71.22  | 14.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.04   | 60.86  | 7.46  |      | 150.0 |         |
|           |                                                                    | Z | 1.60   | 63.48  | 9.75  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.91   | 68.32  | 18.17 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.19   | 64.68  | 16.72 |      | 50.0  |         |
|           |                                                                    | Z | 4.61   | 65.67  | 17.54 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.30   | 66.55  | 18.67 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.70   | 65.59  | 17.66 |      | 50.0  |         |
|           |                                                                    | Z | 4.99   | 65.82  | 17.99 |      | 50.0  |         |

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# Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                     |   |       |        |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.03  | 66.16  | 18.50 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.45  | 65.22  | 17.43 |       | 50.0  |         |
|           |                                                                     | Z | 4.72  | 65.39  | 17.77 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.86  | 66.10  | 18.02 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.25  | 64.84  | 16.74 |       | 50.0  |         |
|           |                                                                     | Z | 4.56  | 65.36  | 17.32 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.36  | 67.65  | 20.04 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.71  | 65.74  | 17.66 |       | 35.0  |         |
|           |                                                                     | Z | 4.01  | 66.34  | 18.79 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.71  | 66.74  | 19.61 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.13  | 65.41  | 17.86 |       | 35.0  |         |
|           |                                                                     | Z | 4.40  | 65.78  | 18.63 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.60  | 66.90  | 19.58 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.99  | 65.33  | 17.70 |       | 35.0  |         |
|           |                                                                     | Z | 4.28  | 65.80  | 18.53 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.58  | 67.10  | 19.72 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.96  | 65.49  | 17.83 |       | 35.0  |         |
|           |                                                                     | Z | 4.25  | 65.98  | 18.67 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.78  | 67.00  | 19.78 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.14  | 65.47  | 17.95 |       | 35.0  |         |
|           |                                                                     | Z | 4.44  | 65.95  | 18.76 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.66  | 66.79  | 19.58 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.07  | 65.44  | 17.84 |       | 35.0  |         |
|           |                                                                     | Z | 4.34  | 65.81  | 18.59 |       | 35.0  |         |
| 10311-AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.69  | 72.32  | 18.21 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.69  | 67.47  | 15.53 |       | 150.0 |         |
|           |                                                                     | Z | 3.10  | 69.44  | 16.56 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 21.53 | 102.95 | 26.76 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 1.66  | 67.75  | 13.97 |       | 70.0  |         |
|           |                                                                     | Z | 3.11  | 74.65  | 16.98 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 93.96 | 137.13 | 39.06 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 3.71  | 79.50  | 21.57 |       | 30.0  |         |
|           |                                                                     | Z | 6.39  | 88.00  | 24.81 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.16  | 66.35  | 17.62 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.94  | 62.56  | 14.16 |       | 150.0 |         |
|           |                                                                     | Z | 1.05  | 64.02  | 15.47 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.66  | 67.18  | 16.86 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26  | 66.36  | 16.04 |       | 150.0 |         |
|           |                                                                     | Z | 4.48  | 66.76  | 16.34 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.66  | 67.18  | 16.86 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26  | 66.36  | 16.04 |       | 150.0 |         |
|           |                                                                     | Z | 4.48  | 66.76  | 16.34 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.78  | 67.52  | 16.82 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.32  | 66.63  | 16.04 |       | 150.0 |         |
|           |                                                                     | Z | 4.58  | 67.09  | 16.34 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.47  | 67.61  | 16.91 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.01  | 66.46  | 16.12 |       | 150.0 |         |
|           |                                                                     | Z | 5.29  | 67.17  | 16.47 |       | 150.0 |         |

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|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.72   | 67.86  | 16.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.38   | 67.07  | 16.33 |      | 150.0 |         |
|           |                                                                                 | Z | 5.55   | 67.47  | 16.48 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 5.23   | 87.73  | 21.79 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.63   | 61.20  | 7.58  |      | 115.0 |         |
|           |                                                                                 | Z | 1.38   | 69.04  | 13.52 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 5.23   | 87.73  | 21.79 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.63   | 61.20  | 7.58  |      | 115.0 |         |
|           |                                                                                 | Z | 1.38   | 69.04  | 13.52 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 122.17 | 30.62 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 133.89 | 33.91 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 117.21 | 27.74 |      | 100.0 |         |
| 10410-AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 100.00 | 133.43 | 35.33 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 146.48 | 39.53 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 125.14 | 30.88 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 1.08   | 65.43  | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.91   | 62.17  | 13.76 |      | 150.0 |         |
|           |                                                                                 | Z | 1.00   | 63.43  | 14.99 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.61   | 67.17  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.23   | 66.40  | 16.00 |      | 150.0 |         |
|           |                                                                                 | Z | 4.44   | 66.79  | 16.29 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.61   | 67.17  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.23   | 66.40  | 16.00 |      | 150.0 |         |
|           |                                                                                 | Z | 4.44   | 66.79  | 16.29 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.60   | 67.36  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.22   | 66.61  | 16.06 |      | 150.0 |         |
|           |                                                                                 | Z | 4.44   | 66.98  | 16.33 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.62   | 67.29  | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.24   | 66.54  | 16.05 |      | 150.0 |         |
|           |                                                                                 | Z | 4.46   | 66.91  | 16.32 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.74   | 67.26  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.35   | 66.52  | 16.07 |      | 150.0 |         |
|           |                                                                                 | Z | 4.57   | 66.89  | 16.33 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.91   | 67.58  | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.46   | 66.77  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.71   | 67.18  | 16.43 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.83   | 67.55  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.39   | 66.71  | 16.13 |      | 150.0 |         |
|           |                                                                                 | Z | 4.64   | 67.14  | 16.41 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.43   | 67.78  | 16.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.06   | 66.98  | 16.41 |      | 150.0 |         |
|           |                                                                                 | Z | 5.24   | 67.35  | 16.56 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.44   | 67.81  | 17.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.11   | 67.18  | 16.51 |      | 150.0 |         |
|           |                                                                                 | Z | 5.26   | 67.42  | 16.59 |      | 150.0 |         |

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|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.44   | 67.77  | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.04   | 66.86  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 5.26   | 67.33  | 16.54 |      | 150.0 |         |
| 10430-AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.55   | 72.49  | 19.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.98   | 71.49  | 17.70 |      | 150.0 |         |
|           |                                                                | Z | 4.28   | 71.80  | 18.47 |      | 150.0 |         |
| 10431-AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.33   | 67.96  | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.80   | 66.88  | 15.72 |      | 150.0 |         |
|           |                                                                | Z | 4.10   | 67.41  | 16.26 |      | 150.0 |         |
| 10432-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.61   | 67.68  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.15   | 66.79  | 16.00 |      | 150.0 |         |
|           |                                                                | Z | 4.41   | 67.23  | 16.35 |      | 150.0 |         |
| 10433-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.84   | 67.58  | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.41   | 66.75  | 16.15 |      | 150.0 |         |
|           |                                                                | Z | 4.66   | 67.17  | 16.42 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.80   | 73.85  | 19.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.93   | 71.70  | 17.10 |      | 150.0 |         |
|           |                                                                | Z | 4.43   | 72.85  | 18.44 |      | 150.0 |         |
| 10435-AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 133.19 | 35.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 146.06 | 39.34 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 124.85 | 30.74 |      | 80.0  |         |
| 10447-AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.69   | 68.46  | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.96   | 66.21  | 14.11 |      | 150.0 |         |
|           |                                                                | Z | 3.39   | 67.45  | 15.44 |      | 150.0 |         |
| 10448-AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.17   | 67.76  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.68   | 66.67  | 15.59 |      | 150.0 |         |
|           |                                                                | Z | 3.95   | 67.20  | 16.13 |      | 150.0 |         |
| 10449-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.42   | 67.54  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.99   | 66.60  | 15.89 |      | 150.0 |         |
|           |                                                                | Z | 4.23   | 67.06  | 16.26 |      | 150.0 |         |
| 10450-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.61   | 67.38  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.22   | 66.51  | 15.99 |      | 150.0 |         |
|           |                                                                | Z | 4.44   | 66.95  | 16.29 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.63   | 68.88  | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.71   | 65.63  | 13.10 |      | 150.0 |         |
|           |                                                                | Z | 3.25   | 67.50  | 14.92 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.28   | 68.22  | 17.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.05   | 67.63  | 16.65 |      | 150.0 |         |
|           |                                                                | Z | 6.16   | 67.95  | 16.74 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.84   | 65.77  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.62   | 65.20  | 15.73 |      | 150.0 |         |
|           |                                                                | Z | 3.74   | 65.46  | 16.00 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 4.44   | 73.25  | 18.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.15   | 68.70  | 14.96 |      | 150.0 |         |
|           |                                                                | Z | 4.01   | 71.87  | 17.60 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 5.23   | 69.15  | 18.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.68   | 68.78  | 17.44 |      | 150.0 |         |
|           |                                                                | Z | 5.01   | 68.98  | 18.21 |      | 150.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 2.00   | 84.84  | 24.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.71   | 65.89  | 13.95 |      | 150.0 |         |
|           |                                                                   | Z | 0.96   | 70.29  | 17.20 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 145.46 | 40.71 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 152.33 | 42.34 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 131.21 | 33.70 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 116.29 | 27.16 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.18   | 68.35  | 11.90 |      | 80.0  |         |
|           |                                                                   | Z | 0.87   | 61.67  | 8.58  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 109.31 | 24.00 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.48   | 60.00  | 7.21  |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.10  |      | 80.0  |         |
| 10464-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 143.32 | 39.48 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 149.20 | 40.60 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 127.41 | 31.78 |      | 80.0  |         |
| 10465-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 115.14 | 26.63 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.64   | 62.86  | 9.55  |      | 80.0  |         |
|           |                                                                   | Z | 0.79   | 60.86  | 8.11  |      | 80.0  |         |
| 10466-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 108.27 | 23.54 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.49   | 60.00  | 7.14  |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.04  |      | 80.0  |         |
| 10467-AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 143.75 | 39.67 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 149.95 | 40.92 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 127.85 | 31.97 |      | 80.0  |         |
| 10468-AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 115.51 | 26.79 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.73   | 64.05  | 10.12 |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 61.08  | 8.24  |      | 80.0  |         |
| 10469-AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 108.31 | 23.55 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.49   | 60.00  | 7.14  |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.04  |      | 80.0  |         |
| 10470-AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 143.87 | 39.71 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 150.09 | 40.97 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 127.88 | 31.97 |      | 80.0  |         |
| 10471-AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 115.41 | 26.74 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.71   | 63.78  | 9.99  |      | 80.0  |         |
|           |                                                                   | Z | 0.80   | 61.01  | 8.19  |      | 80.0  |         |
| 10472-AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 108.18 | 23.49 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.49   | 60.00  | 7.11  |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.02  |      | 80.0  |         |
| 10473-AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 143.83 | 39.69 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 150.04 | 40.94 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 127.83 | 31.95 |      | 80.0  |         |
| 10474-AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 115.43 | 26.75 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.70   | 63.68  | 9.94  |      | 80.0  |         |
|           |                                                                   | Z | 0.80   | 60.98  | 8.17  |      | 80.0  |         |
| 10475-AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 108.21 | 23.50 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.48   | 60.00  | 7.12  |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.02  |      | 80.0  |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 115.09 | 26.59 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.64   | 62.78  | 9.49  |      | 80.0 |         |
|           |                                                                     | Z | 0.78   | 60.78  | 8.04  |      | 80.0 |         |
| 10478-AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 108.09 | 23.44 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.48   | 60.00  | 7.10  |      | 80.0 |         |
|           |                                                                     | Z | 0.74   | 60.00  | 7.01  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 134.28 | 37.66 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 134.96 | 36.66 |      | 80.0 |         |
|           |                                                                     | Z | 10.59  | 93.44  | 25.13 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 121.12 | 31.46 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 117.31 | 28.30 |      | 80.0 |         |
|           |                                                                     | Z | 8.05   | 82.87  | 19.34 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 118.71 | 30.27 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 113.05 | 26.28 |      | 80.0 |         |
|           |                                                                     | Z | 4.84   | 75.86  | 16.56 |      | 80.0 |         |
| 10482-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 16.39  | 100.29 | 27.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10   | 61.84  | 10.40 |      | 80.0 |         |
|           |                                                                     | Z | 2.67   | 72.27  | 16.65 |      | 80.0 |         |
| 10483-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 120.52 | 31.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.05   | 66.25  | 12.36 |      | 80.0 |         |
|           |                                                                     | Z | 3.08   | 69.96  | 14.77 |      | 80.0 |         |
| 10484-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 47.89  | 109.67 | 28.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.83   | 64.72  | 11.64 |      | 80.0 |         |
|           |                                                                     | Z | 2.85   | 68.75  | 14.27 |      | 80.0 |         |
| 10485-AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 8.21   | 90.82  | 25.73 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.78   | 67.16  | 14.70 |      | 80.0 |         |
|           |                                                                     | Z | 3.07   | 74.27  | 18.73 |      | 80.0 |         |
| 10486-AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.99   | 78.05  | 20.50 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.71   | 63.18  | 11.82 |      | 80.0 |         |
|           |                                                                     | Z | 2.83   | 69.19  | 15.84 |      | 80.0 |         |
| 10487-AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.75   | 76.83  | 20.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.72   | 62.89  | 11.64 |      | 80.0 |         |
|           |                                                                     | Z | 2.81   | 68.66  | 15.58 |      | 80.0 |         |
| 10488-AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.25   | 81.13  | 23.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.33   | 68.54  | 16.86 |      | 80.0 |         |
|           |                                                                     | Z | 3.19   | 72.50  | 18.92 |      | 80.0 |         |
| 10489-AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.99   | 72.82  | 19.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.52   | 66.29  | 15.56 |      | 80.0 |         |
|           |                                                                     | Z | 3.12   | 68.77  | 17.19 |      | 80.0 |         |
| 10490-AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.03   | 72.30  | 19.46 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.60   | 66.20  | 15.50 |      | 80.0 |         |
|           |                                                                     | Z | 3.21   | 68.58  | 17.11 |      | 80.0 |         |
| 10491-AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.68   | 76.17  | 21.18 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.68   | 67.75  | 16.83 |      | 80.0 |         |
|           |                                                                     | Z | 3.40   | 70.71  | 18.30 |      | 80.0 |         |
| 10492-AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.07   | 70.57  | 18.95 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.93   | 66.01  | 16.02 |      | 80.0 |         |
|           |                                                                     | Z | 3.44   | 67.84  | 17.13 |      | 80.0 |         |

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|           |                                                                      |   |       |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10493-AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.12  | 70.28 | 18.81 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.99  | 65.93 | 15.97 |      | 80.0 |         |
|           |                                                                      | Z | 3.51  | 67.70 | 17.07 |      | 80.0 |         |
| 10494-AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.56  | 79.35 | 22.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.83  | 68.79 | 17.22 |      | 80.0 |         |
|           |                                                                      | Z | 3.70  | 72.31 | 18.84 |      | 80.0 |         |
| 10495-AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.14  | 71.14 | 19.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.95  | 66.21 | 16.25 |      | 80.0 |         |
|           |                                                                      | Z | 3.47  | 68.15 | 17.33 |      | 80.0 |         |
| 10496-AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.17  | 70.57 | 18.99 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.04  | 66.09 | 16.22 |      | 80.0 |         |
|           |                                                                      | Z | 3.54  | 67.89 | 17.24 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 18.91 | 99.42 | 25.52 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.87  | 60.00 | 7.72  |      | 80.0 |         |
|           |                                                                      | Z | 1.60  | 65.51 | 12.43 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.93  | 70.03 | 14.47 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.06  | 60.00 | 6.46  |      | 80.0 |         |
|           |                                                                      | Z | 1.19  | 60.00 | 8.40  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.53  | 67.90 | 13.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.09  | 60.00 | 6.29  |      | 80.0 |         |
|           |                                                                      | Z | 1.21  | 60.00 | 8.23  |      | 80.0 |         |
| 10500-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.08  | 84.90 | 24.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.01  | 67.91 | 15.66 |      | 80.0 |         |
|           |                                                                      | Z | 3.06  | 73.22 | 18.69 |      | 80.0 |         |
| 10501-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.43  | 75.51 | 20.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.08  | 64.88 | 13.49 |      | 80.0 |         |
|           |                                                                      | Z | 2.99  | 69.23 | 16.45 |      | 80.0 |         |
| 10502-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.45  | 75.10 | 19.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.11  | 64.69 | 13.30 |      | 80.0 |         |
|           |                                                                      | Z | 3.04  | 69.04 | 16.29 |      | 80.0 |         |
| 10503-AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.15  | 80.81 | 22.94 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.30  | 68.35 | 16.75 |      | 80.0 |         |
|           |                                                                      | Z | 3.15  | 72.29 | 18.82 |      | 80.0 |         |
| 10504-AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.97  | 72.71 | 19.63 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.50  | 66.19 | 15.49 |      | 80.0 |         |
|           |                                                                      | Z | 3.11  | 68.67 | 17.13 |      | 80.0 |         |
| 10505-AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.00  | 72.19 | 19.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.58  | 66.11 | 15.44 |      | 80.0 |         |
|           |                                                                      | Z | 3.19  | 68.49 | 17.05 |      | 80.0 |         |
| 10506-AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.50  | 79.13 | 22.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.81  | 68.67 | 17.15 |      | 80.0 |         |
|           |                                                                      | Z | 3.67  | 72.16 | 18.76 |      | 80.0 |         |
| 10507-AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.13  | 71.07 | 19.19 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.94  | 66.15 | 16.21 |      | 80.0 |         |
|           |                                                                      | Z | 3.45  | 68.09 | 17.30 |      | 80.0 |         |

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|           |                                                                     |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10508-AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.15   | 70.49  | 18.94 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.03   | 66.02  | 16.18 |      | 80.0  |         |
|           |                                                                     | Z | 3.53   | 67.82  | 17.20 |      | 80.0  |         |
| 10509-AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 5.27   | 75.46  | 20.59 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.27   | 68.09  | 16.96 |      | 80.0  |         |
|           |                                                                     | Z | 4.01   | 70.80  | 18.16 |      | 80.0  |         |
| 10510-AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.50   | 70.07  | 18.75 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.42   | 66.05  | 16.40 |      | 80.0  |         |
|           |                                                                     | Z | 3.92   | 67.76  | 17.25 |      | 80.0  |         |
| 10511-AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.52   | 69.62  | 18.58 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.50   | 65.94  | 16.38 |      | 80.0  |         |
|           |                                                                     | Z | 3.98   | 67.52  | 17.18 |      | 80.0  |         |
| 10512-AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.10   | 78.88  | 21.78 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.27   | 68.98  | 17.21 |      | 80.0  |         |
|           |                                                                     | Z | 4.20   | 72.44  | 18.71 |      | 80.0  |         |
| 10513-AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.43   | 70.60  | 19.00 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.31   | 66.10  | 16.44 |      | 80.0  |         |
|           |                                                                     | Z | 3.81   | 67.97  | 17.35 |      | 80.0  |         |
| 10514-AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.40   | 69.88  | 18.73 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.37   | 65.85  | 16.37 |      | 80.0  |         |
|           |                                                                     | Z | 3.84   | 67.57  | 17.22 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.05   | 65.92  | 17.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87   | 62.29  | 13.76 |      | 150.0 |         |
|           |                                                                     | Z | 0.96   | 63.66  | 15.08 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 100.00 | 175.58 | 49.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.45   | 67.25  | 14.31 |      | 150.0 |         |
|           |                                                                     | Z | 0.73   | 75.28  | 19.67 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 1.05   | 71.62  | 19.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.69   | 63.59  | 13.90 |      | 150.0 |         |
|           |                                                                     | Z | 0.82   | 66.03  | 15.97 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.60   | 67.26  | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.22   | 66.51  | 15.99 |      | 150.0 |         |
|           |                                                                     | Z | 4.44   | 66.88  | 16.27 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.79   | 67.48  | 16.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.36   | 66.67  | 16.08 |      | 150.0 |         |
|           |                                                                     | Z | 4.60   | 67.07  | 16.37 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.65   | 67.48  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.21   | 66.58  | 15.99 |      | 150.0 |         |
|           |                                                                     | Z | 4.46   | 67.03  | 16.30 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.58   | 67.49  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.15   | 66.53  | 15.95 |      | 150.0 |         |
|           |                                                                     | Z | 4.39   | 67.01  | 16.28 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.64   | 67.58  | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.19   | 66.64  | 16.04 |      | 150.0 |         |
|           |                                                                     | Z | 4.45   | 67.14  | 16.38 |      | 150.0 |         |

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|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.53 | 67.47 | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.13 | 66.69 | 15.99 |      | 150.0 |         |
|           |                                                            | Z | 4.35 | 67.06 | 16.26 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.58 | 67.50 | 16.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.15 | 66.63 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 4.39 | 67.07 | 16.35 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.58 | 66.55 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.19 | 65.75 | 15.69 |      | 150.0 |         |
|           |                                                            | Z | 4.41 | 66.15 | 15.96 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.75 | 66.93 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.30 | 65.99 | 15.79 |      | 150.0 |         |
|           |                                                            | Z | 4.55 | 66.47 | 16.09 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.68 | 66.91 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.23 | 65.96 | 15.73 |      | 150.0 |         |
|           |                                                            | Z | 4.48 | 66.44 | 16.04 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.69 | 66.93 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 65.98 | 15.76 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.45 | 16.07 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.69 | 66.93 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 65.98 | 15.76 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.45 | 16.07 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.69 | 67.05 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.20 | 65.97 | 15.72 |      | 150.0 |         |
|           |                                                            | Z | 4.47 | 66.52 | 16.06 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.55 | 66.92 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.09 | 65.82 | 15.65 |      | 150.0 |         |
|           |                                                            | Z | 4.34 | 66.38 | 16.00 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.71 | 66.99 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 66.06 | 15.76 |      | 150.0 |         |
|           |                                                            | Z | 4.50 | 66.52 | 16.07 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.21 | 66.89 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.84 | 66.03 | 15.91 |      | 150.0 |         |
|           |                                                            | Z | 5.04 | 66.48 | 16.11 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.28 | 67.09 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.87 | 66.14 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 5.09 | 66.65 | 16.19 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.16 | 67.06 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.76 | 66.10 | 15.92 |      | 150.0 |         |
|           |                                                            | Z | 4.98 | 66.62 | 16.16 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.21 | 67.01 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.85 | 66.20 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 5.03 | 66.57 | 16.13 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.30 | 67.00 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.90 | 66.11 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 5.11 | 66.56 | 16.17 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.24 | 67.05 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.82 | 66.05 | 15.96 |      | 150.0 |         |
|           |                                                            | Z | 5.04 | 66.55 | 16.18 |      | 150.0 |         |

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|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 5.20 | 66.89 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.81 | 65.97 | 15.90 |      | 150.0 |         |
|           |                                                    | Z | 5.02 | 66.45 | 16.12 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.35 | 66.94 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.97 | 66.09 | 15.98 |      | 150.0 |         |
|           |                                                    | Z | 5.17 | 66.53 | 16.17 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.43 | 66.96 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.06 | 66.27 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.23 | 66.54 | 16.20 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.52 | 66.95 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.20 | 66.08 | 15.91 |      | 150.0 |         |
|           |                                                    | Z | 5.36 | 66.56 | 16.09 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.72 | 67.40 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.40 | 66.63 | 16.15 |      | 150.0 |         |
|           |                                                    | Z | 5.54 | 66.98 | 16.26 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.59 | 67.18 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.23 | 66.20 | 15.94 |      | 150.0 |         |
|           |                                                    | Z | 5.41 | 66.72 | 16.14 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.66 | 67.21 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.36 | 66.48 | 16.08 |      | 150.0 |         |
|           |                                                    | Z | 5.48 | 66.78 | 16.16 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.94 | 68.26 | 17.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.47 | 67.02 | 16.32 |      | 150.0 |         |
|           |                                                    | Z | 5.67 | 67.55 | 16.52 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.62 | 67.20 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.35 | 66.61 | 16.16 |      | 150.0 |         |
|           |                                                    | Z | 5.45 | 66.81 | 16.20 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.62 | 67.24 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.21 | 66.13 | 15.88 |      | 150.0 |         |
|           |                                                    | Z | 5.43 | 66.76 | 16.13 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.53 | 67.03 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.20 | 66.19 | 15.91 |      | 150.0 |         |
|           |                                                    | Z | 5.37 | 66.65 | 16.08 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.61 | 67.04 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.25 | 66.13 | 15.91 |      | 150.0 |         |
|           |                                                    | Z | 5.44 | 66.64 | 16.11 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.93 | 67.28 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.65 | 66.45 | 16.01 |      | 150.0 |         |
|           |                                                    | Z | 5.78 | 66.90 | 16.17 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.06 | 67.60 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.74 | 66.68 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.89 | 67.17 | 16.29 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.08 | 67.66 | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.80 | 66.87 | 16.20 |      | 150.0 |         |
|           |                                                    | Z | 5.92 | 67.24 | 16.31 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.04 | 67.54 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.72 | 66.63 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.87 | 67.12 | 16.27 |      | 150.0 |         |

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|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 6.10   | 67.72  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.70   | 66.62  | 16.11 |      | 150.0 |         |
|           |                                                                 | Z | 5.91   | 67.27  | 16.36 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 6.08   | 67.54  | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.74   | 66.60  | 16.14 |      | 150.0 |         |
|           |                                                                 | Z | 5.91   | 67.13  | 16.33 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 6.01   | 67.53  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.68   | 66.60  | 16.17 |      | 150.0 |         |
|           |                                                                 | Z | 5.84   | 67.11  | 16.36 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 6.14   | 67.93  | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.71   | 66.71  | 16.22 |      | 150.0 |         |
|           |                                                                 | Z | 5.93   | 67.38  | 16.49 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 6.35   | 68.17  | 17.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.85   | 66.83  | 16.25 |      | 150.0 |         |
|           |                                                                 | Z | 6.00   | 67.26  | 16.39 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.92   | 67.26  | 16.86 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.54   | 66.54  | 16.15 |      | 150.0 |         |
|           |                                                                 | Z | 4.75   | 66.91  | 16.40 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.15   | 67.70  | 17.17 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.72   | 66.96  | 16.48 |      | 150.0 |         |
|           |                                                                 | Z | 4.96   | 67.33  | 16.72 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.99   | 67.58  | 17.01 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56   | 66.75  | 16.26 |      | 150.0 |         |
|           |                                                                 | Z | 4.80   | 67.16  | 16.53 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.02   | 68.00  | 17.38 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.60   | 67.15  | 16.65 |      | 150.0 |         |
|           |                                                                 | Z | 4.83   | 67.57  | 16.90 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.90   | 67.37  | 16.79 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.44   | 66.42  | 15.96 |      | 150.0 |         |
|           |                                                                 | Z | 4.71   | 66.93  | 16.30 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.98   | 68.11  | 17.46 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.59   | 67.42  | 16.81 |      | 150.0 |         |
|           |                                                                 | Z | 4.80   | 67.73  | 17.00 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.01   | 67.93  | 17.37 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58   | 67.17  | 16.68 |      | 150.0 |         |
|           |                                                                 | Z | 4.82   | 67.54  | 16.91 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.23   | 66.89  | 17.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.97   | 62.66  | 14.30 |      | 130.0 |         |
|           |                                                                 | Z | 1.10   | 64.30  | 15.66 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.26   | 67.79  | 18.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.98   | 63.10  | 14.60 |      | 130.0 |         |
|           |                                                                 | Z | 1.11   | 64.87  | 16.04 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 100.00 | 170.73 | 48.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.77   | 72.86  | 17.64 |      | 130.0 |         |
|           |                                                                 | Z | 2.32   | 91.29  | 25.82 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.80   | 80.11  | 24.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.95   | 67.17  | 16.84 |      | 130.0 |         |
|           |                                                                 | Z | 1.21   | 71.01  | 19.29 |      | 130.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.70 | 67.06 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.28 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.66 | 16.43 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.73 | 67.25 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 66.50 | 16.24 |      | 130.0 |         |
|           |                                                                 | Z | 4.55 | 66.85 | 16.51 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.93 | 67.53 | 17.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.73 | 16.39 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 67.10 | 16.66 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.84 | 67.72 | 17.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.86 | 16.50 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 67.26 | 16.77 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.60 | 67.00 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.15 | 65.97 | 15.69 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 66.48 | 16.04 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.64 | 67.04 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.02 | 15.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.55 | 16.08 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.74 | 67.80 | 17.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.95 | 16.48 |      | 130.0 |         |
|           |                                                                 | Z | 4.54 | 67.32 | 16.73 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.54 | 66.76 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.07 | 65.74 | 15.46 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.25 | 15.83 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.70 | 67.06 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.28 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.66 | 16.43 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.73 | 67.25 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 66.50 | 16.24 |      | 130.0 |         |
|           |                                                                 | Z | 4.55 | 66.85 | 16.51 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.93 | 67.53 | 17.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.73 | 16.39 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 67.10 | 16.66 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.84 | 67.72 | 17.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.86 | 16.50 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 67.26 | 16.77 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.60 | 67.00 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.15 | 65.97 | 15.69 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 66.48 | 16.04 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.64 | 67.04 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.02 | 15.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.55 | 16.08 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.74 | 67.80 | 17.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.95 | 16.48 |      | 130.0 |         |
|           |                                                                 | Z | 4.54 | 67.32 | 16.73 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.54 | 66.76 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.07 | 65.74 | 15.46 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.25 | 15.83 |      | 130.0 |         |

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|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.85 | 67.09 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.47 | 66.40 | 16.30 |      | 130.0 |         |
|           |                                                       | Z | 4.68 | 66.73 | 16.54 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.01 | 67.44 | 17.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.58 | 66.67 | 16.42 |      | 130.0 |         |
|           |                                                       | Z | 4.82 | 67.05 | 16.67 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.93 | 67.36 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.50 | 66.54 | 16.27 |      | 130.0 |         |
|           |                                                       | Z | 4.73 | 66.93 | 16.53 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.98 | 67.53 | 17.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.55 | 66.72 | 16.44 |      | 130.0 |         |
|           |                                                       | Z | 4.79 | 67.11 | 16.70 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.95 | 67.49 | 17.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.51 | 66.70 | 16.35 |      | 130.0 |         |
|           |                                                       | Z | 4.76 | 67.07 | 16.60 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.89 | 67.51 | 17.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.44 | 66.64 | 16.33 |      | 130.0 |         |
|           |                                                       | Z | 4.69 | 67.06 | 16.60 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.84 | 67.41 | 17.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.39 | 66.49 | 16.16 |      | 130.0 |         |
|           |                                                       | Z | 4.64 | 66.94 | 16.46 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.82 | 67.66 | 17.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.39 | 66.74 | 16.45 |      | 130.0 |         |
|           |                                                       | Z | 4.63 | 67.17 | 16.73 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.53 | 67.60 | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.21 | 67.01 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 5.34 | 67.18 | 16.73 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.67 | 68.05 | 17.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.35 | 67.51 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.46 | 67.57 | 16.90 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.55 | 67.78 | 17.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.23 | 67.21 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 5.36 | 67.35 | 16.81 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.65 | 67.81 | 17.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.32 | 67.26 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.49 | 67.52 | 16.81 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.73 | 68.11 | 17.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.35 | 67.43 | 16.95 |      | 130.0 |         |
|           |                                                       | Z | 5.55 | 67.77 | 17.07 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.53 | 67.57 | 17.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.20 | 66.91 | 16.65 |      | 130.0 |         |
|           |                                                       | Z | 5.43 | 67.43 | 16.89 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.65 | 67.93 | 17.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.29 | 67.21 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.46 | 67.51 | 16.92 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.38 | 67.22 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.10 | 66.72 | 16.41 |      | 130.0 |         |
|           |                                                       | Z | 5.21 | 66.81 | 16.43 |      | 130.0 |         |

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|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.71 | 66.50 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.32 | 65.73 | 15.94 |      | 130.0 |         |
|           |                                                   | Z | 4.53 | 66.09 | 16.19 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.90 | 66.93 | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.44 | 66.03 | 16.07 |      | 130.0 |         |
|           |                                                   | Z | 4.69 | 66.46 | 16.35 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.79 | 66.79 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.34 | 65.85 | 15.88 |      | 130.0 |         |
|           |                                                   | Z | 4.58 | 66.30 | 16.18 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.84 | 66.95 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.39 | 66.03 | 16.06 |      | 130.0 |         |
|           |                                                   | Z | 4.63 | 66.46 | 16.34 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.76 | 66.75 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.30 | 65.81 | 15.89 |      | 130.0 |         |
|           |                                                   | Z | 4.55 | 66.26 | 16.19 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.77 | 66.94 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.28 | 65.91 | 15.92 |      | 130.0 |         |
|           |                                                   | Z | 4.55 | 66.41 | 16.23 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.77 | 66.81 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.28 | 65.72 | 15.75 |      | 130.0 |         |
|           |                                                   | Z | 4.55 | 66.25 | 16.09 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.72 | 67.01 | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.26 | 65.96 | 16.02 |      | 130.0 |         |
|           |                                                   | Z | 4.50 | 66.46 | 16.34 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.76 | 66.59 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.29 | 65.63 | 15.64 |      | 130.0 |         |
|           |                                                   | Z | 4.54 | 66.09 | 15.96 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.36 | 66.90 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.07 | 16.19 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.46 | 16.36 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.43 | 67.11 | 16.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.02 | 66.19 | 16.23 |      | 130.0 |         |
|           |                                                   | Z | 5.24 | 66.65 | 16.43 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.32 | 67.12 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.92 | 66.20 | 16.25 |      | 130.0 |         |
|           |                                                   | Z | 5.13 | 66.69 | 16.46 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.33 | 66.92 | 16.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.19 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 5.14 | 66.46 | 16.28 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.42 | 66.94 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.03 | 66.09 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 5.22 | 66.48 | 16.34 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.42 | 67.06 | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.03 | 66.17 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 5.23 | 66.63 | 16.54 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.44 | 67.26 | 17.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.02 | 66.27 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 5.24 | 66.76 | 16.60 |      | 130.0 |         |

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|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.31 | 66.76 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.91 | 65.83 | 16.02 |      | 130.0 |         |
|           |                                                    | Z | 5.12 | 66.29 | 16.23 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.50 | 66.93 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.11 | 66.11 | 16.23 |      | 130.0 |         |
|           |                                                    | Z | 5.31 | 66.51 | 16.40 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.88 | 67.97 | 17.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.23 | 66.37 | 16.43 |      | 130.0 |         |
|           |                                                    | Z | 5.53 | 67.07 | 16.73 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.65 | 66.91 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.33 | 66.07 | 16.15 |      | 130.0 |         |
|           |                                                    | Z | 5.49 | 66.51 | 16.31 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.91 | 67.53 | 17.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.61 | 66.87 | 16.53 |      | 130.0 |         |
|           |                                                    | Z | 5.72 | 67.09 | 16.57 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.69 | 67.03 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.05 | 16.04 |      | 130.0 |         |
|           |                                                    | Z | 5.50 | 66.53 | 16.22 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.77 | 67.08 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 66.49 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.58 | 66.63 | 16.26 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 6.26 | 68.76 | 17.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.69 | 67.28 | 16.66 |      | 130.0 |         |
|           |                                                    | Z | 5.90 | 67.81 | 16.86 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 6.12 | 68.44 | 17.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.63 | 67.20 | 16.82 |      | 130.0 |         |
|           |                                                    | Z | 5.85 | 67.76 | 17.02 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.87 | 67.57 | 17.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.65 | 67.18 | 16.83 |      | 130.0 |         |
|           |                                                    | Z | 5.70 | 67.19 | 16.76 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.75 | 67.18 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.33 | 66.09 | 16.10 |      | 130.0 |         |
|           |                                                    | Z | 5.57 | 66.75 | 16.36 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.73 | 67.21 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 66.31 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.55 | 66.77 | 16.43 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.61 | 66.53 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.23 | 65.54 | 15.59 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.06 | 15.81 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.07 | 67.26 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.79 | 66.47 | 16.27 |      | 130.0 |         |
|           |                                                    | Z | 5.92 | 66.87 | 16.40 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.23 | 67.67 | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.92 | 66.81 | 16.43 |      | 130.0 |         |
|           |                                                    | Z | 6.05 | 67.23 | 16.56 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.23 | 67.64 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.96 | 66.91 | 16.46 |      | 130.0 |         |
|           |                                                    | Z | 6.06 | 67.22 | 16.53 |      | 130.0 |         |

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|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 6.21   | 67.58  | 16.96 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.88   | 66.69  | 16.39 |       | 130.0 |         |
|           |                                                        | Z | 6.03   | 67.14  | 16.54 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 6.21   | 67.60  | 16.92 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.81   | 66.50  | 16.23 |       | 130.0 |         |
|           |                                                        | Z | 6.02   | 67.13  | 16.48 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.26   | 67.49  | 16.88 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.97   | 66.77  | 16.39 |       | 130.0 |         |
|           |                                                        | Z | 6.09   | 67.10  | 16.48 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.29   | 67.73  | 17.16 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.95   | 66.83  | 16.60 |       | 130.0 |         |
|           |                                                        | Z | 6.12   | 67.32  | 16.75 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 6.13   | 67.44  | 16.92 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.81   | 66.54  | 16.33 |       | 130.0 |         |
|           |                                                        | Z | 5.96   | 67.02  | 16.50 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.30   | 67.96  | 17.20 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.84   | 66.66  | 16.41 |       | 130.0 |         |
|           |                                                        | Z | 6.06   | 67.34  | 16.68 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.64   | 68.55  | 17.45 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.03   | 66.94  | 16.52 |       | 130.0 |         |
|           |                                                        | Z | 6.18   | 67.35  | 16.65 |       | 130.0 |         |
| 10646-AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 57.48  | 146.10 | 49.99 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.72   | 84.89  | 30.72 |       | 60.0  |         |
|           |                                                        | Z | 12.01  | 104.85 | 36.81 |       | 60.0  |         |
| 10647-AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 38.82  | 136.91 | 47.78 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.25   | 82.62  | 29.91 |       | 60.0  |         |
|           |                                                        | Z | 9.95   | 100.92 | 35.66 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 1.29   | 73.02  | 15.88 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.37   | 60.00  | 5.92  |       | 150.0 |         |
|           |                                                        | Z | 0.60   | 63.17  | 9.90  |       | 150.0 |         |
| 10652-AAD | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.78   | 68.49  | 17.89 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 2.93   | 65.29  | 15.35 |       | 80.0  |         |
|           |                                                        | Z | 3.35   | 66.65  | 16.43 |       | 80.0  |         |
| 10653-AAD | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 4.18   | 67.03  | 17.56 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.53   | 64.87  | 15.90 |       | 80.0  |         |
|           |                                                        | Z | 3.86   | 65.85  | 16.55 |       | 80.0  |         |
| 10654-AAD | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 4.13   | 66.54  | 17.49 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.57   | 64.50  | 15.97 |       | 80.0  |         |
|           |                                                        | Z | 3.86   | 65.45  | 16.55 |       | 80.0  |         |
| 10655-AAE | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 4.18   | 66.49  | 17.50 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.66   | 64.42  | 16.03 |       | 80.0  |         |
|           |                                                        | Z | 3.92   | 65.40  | 16.58 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 100.00 | 111.76 | 26.06 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 3.37   | 68.78  | 11.57 |       | 50.0  |         |
|           |                                                        | Z | 25.16  | 91.00  | 19.47 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 100.00 | 115.13 | 26.48 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 1.83   | 66.81  | 9.62  |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 104.60 | 21.50 |       | 60.0  |         |

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|               |                             |   |        |        |        |      |       |         |
|---------------|-----------------------------|---|--------|--------|--------|------|-------|---------|
| 10660-<br>AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 129.28 | 31.07  | 3.98 | 80.0  | ± 9.6 % |
|               |                             | Y | 0.39   | 60.07  | 5.04   |      | 80.0  |         |
|               |                             | Z | 100.00 | 105.54 | 20.62  |      | 80.0  |         |
| 10661-<br>AAA | Pulse Waveform (200Hz, 60%) | X | 100.00 | 168.20 | 45.08  | 2.22 | 100.0 | ± 9.6 % |
|               |                             | Y | 0.23   | 60.00  | 3.29   |      | 100.0 |         |
|               |                             | Z | 100.00 | 106.69 | 19.98  |      | 100.0 |         |
| 10662-<br>AAA | Pulse Waveform (200Hz, 80%) | X | 100.00 | 422.37 | 135.84 | 0.97 | 120.0 | ± 9.6 % |
|               |                             | Y | 0.02   | 113.24 | 6.85   |      | 120.0 |         |
|               |                             | Z | 100.00 | 91.28  | 12.79  |      | 120.0 |         |
| 10670-<br>AAA | Bluetooth Low Energy        | X | 100.00 | 162.98 | 43.70  | 2.19 | 100.0 | ± 9.6 % |
|               |                             | Y | 0.19   | 60.00  | 4.21   |      | 100.0 |         |
|               |                             | Z | 100.00 | 120.82 | 25.98  |      | 100.0 |         |

<sup>c</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.