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Client **PC Test**

Certificate No: **EX3-3914\_Feb18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3914**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v4, QA CAL-23.v5,  
 QA CAL-25.v6  
 Calibration procedure for dosimetric E-field probes**

Calibration date: **February 14, 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 ( $22 \pm 3$ )°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-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-17 (No. 217-02525)         | Apr-18                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| 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-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |

|                                                                                                                 | Name           | Function              | Signature |
|-----------------------------------------------------------------------------------------------------------------|----------------|-----------------------|-----------|
| Calibrated by:                                                                                                  | Jeton Kastrati | Laboratory Technician |           |
| Approved by:                                                                                                    | Katja Pokovic  | Technical Manager     |           |
| Issued: February 14, 2018                                                                                       |                |                       |           |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                |                       |           |



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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 $\phi$      | $\phi$ 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).

# Probe EX3DV4

## SN:3914

Manufactured: December 18, 2012  
Calibrated: February 14, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.47     | 0.41     | 0.44     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 98.1     | 103.5    | 99.1     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB/ $\mu\text{V}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                    | 1.0 | 0.00    | 157.3    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                    | 1.0 |         | 143.4    |                           |
|     |                           | Z | 0.0     | 0.0                    | 1.0 |         | 153.1    |                           |

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 | 44.52    | 338.7    | 36.78                       | 11.30                                 | 0.699                                 | 5.054    | 0.000                 | 0.544                 | 1.006 |
| Y | 43.63    | 317.9    | 34.18                       | 13.04                                 | 0.623                                 | 5.031    | 2.000                 | 0.164                 | 1.007 |
| Z | 41.48    | 314.2    | 36.51                       | 10.96                                 | 0.847                                 | 5.054    | 0.251                 | 0.494                 | 1.008 |

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

### 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) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 6                    | 55.5                               | 0.75                            | 21.06   | 21.06   | 21.06   | 0.00               | 1.00                    | ± 13.3 %  |
| 13                   | 55.5                               | 0.75                            | 17.97   | 17.97   | 17.97   | 0.00               | 1.00                    | ± 13.3 %  |
| 750                  | 41.9                               | 0.89                            | 10.18   | 10.18   | 10.18   | 0.58               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.70    | 9.70    | 9.70    | 0.52               | 0.80                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.34    | 8.34    | 8.34    | 0.40               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 7.98    | 7.98    | 7.98    | 0.41               | 0.84                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.58    | 7.58    | 7.58    | 0.37               | 0.87                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.26    | 7.26    | 7.26    | 0.43               | 0.84                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.04    | 7.04    | 7.04    | 0.29               | 0.86                    | ± 12.0 %  |
| 3500                 | 37.9                               | 2.91                            | 6.99    | 6.99    | 6.99    | 0.25               | 1.20                    | ± 13.1 %  |
| 3700                 | 37.7                               | 3.12                            | 6.72    | 6.72    | 6.72    | 0.23               | 1.20                    | ± 13.1 %  |
| 5250                 | 35.9                               | 4.71                            | 5.41    | 5.41    | 5.41    | 0.30               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.79    | 4.79    | 4.79    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.78    | 4.78    | 4.78    | 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. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<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.

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

### 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>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 9.75    | 9.75    | 9.75    | 0.47               | 0.80                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.57    | 9.57    | 9.57    | 0.44               | 0.89                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 7.91    | 7.91    | 7.91    | 0.37               | 0.80                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.62    | 7.62    | 7.62    | 0.29               | 1.01                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.46    | 7.46    | 7.46    | 0.40               | 0.88                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.39    | 7.39    | 7.39    | 0.39               | 0.86                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.05    | 7.05    | 7.05    | 0.28               | 1.05                    | ± 12.0 %  |
| 3500                 | 51.3                               | 3.31                            | 6.81    | 6.81    | 6.81    | 0.30               | 1.25                    | ± 13.1 %  |
| 3700                 | 51.0                               | 3.55                            | 6.64    | 6.64    | 6.64    | 0.30               | 1.25                    | ± 13.1 %  |
| 5250                 | 48.9                               | 5.36                            | 4.81    | 4.81    | 4.81    | 0.35               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.09    | 4.09    | 4.09    | 0.40               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.22    | 4.22    | 4.22    | 0.40               | 1.90                    | ± 13.1 %  |

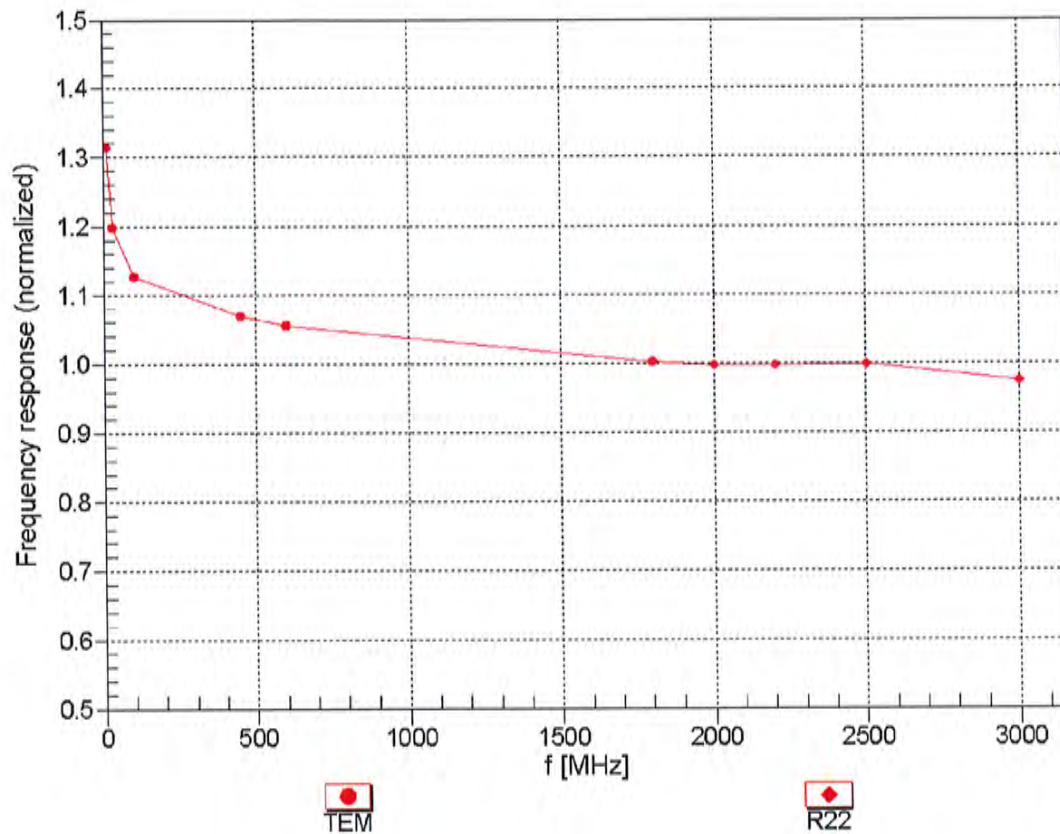
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 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.

## Frequency Response of E-Field

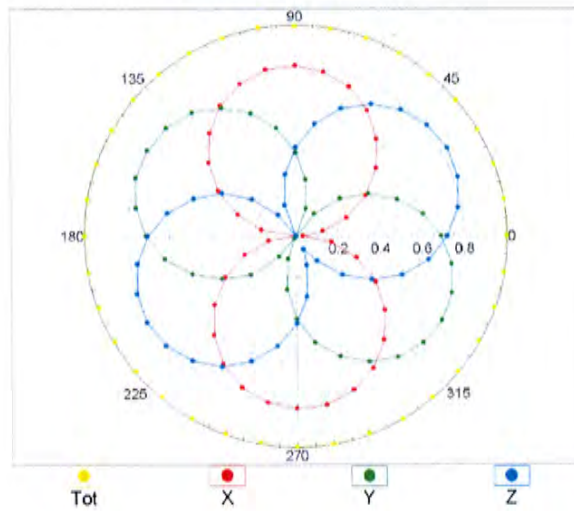
(TEM-Cell:ifi110 EXX, Waveguide: R22)



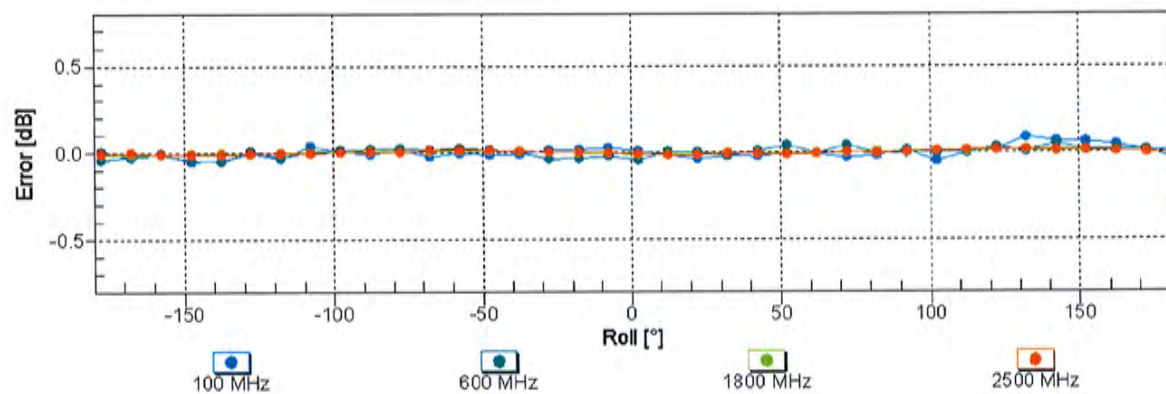
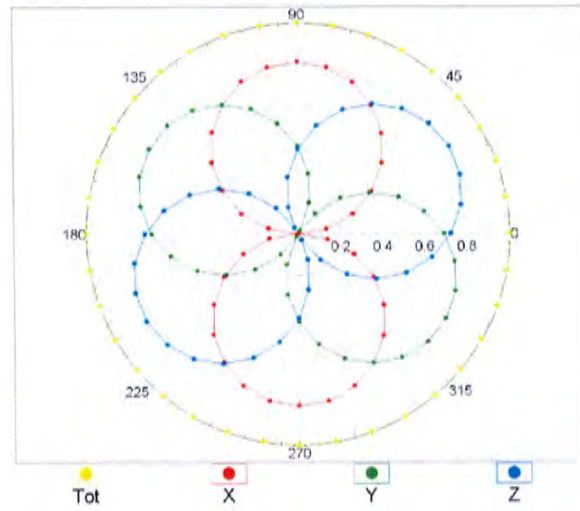
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

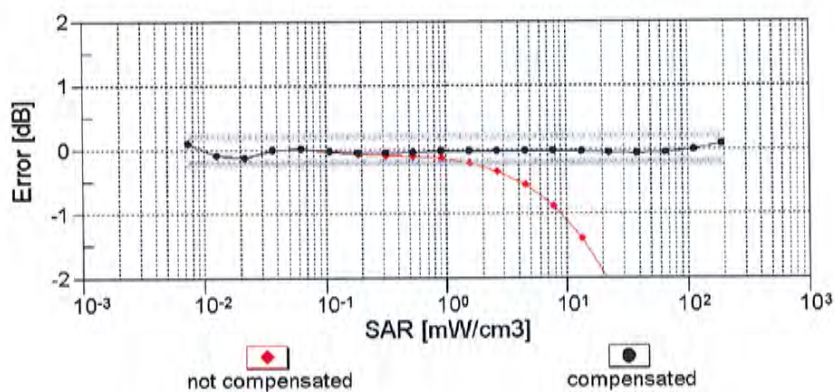
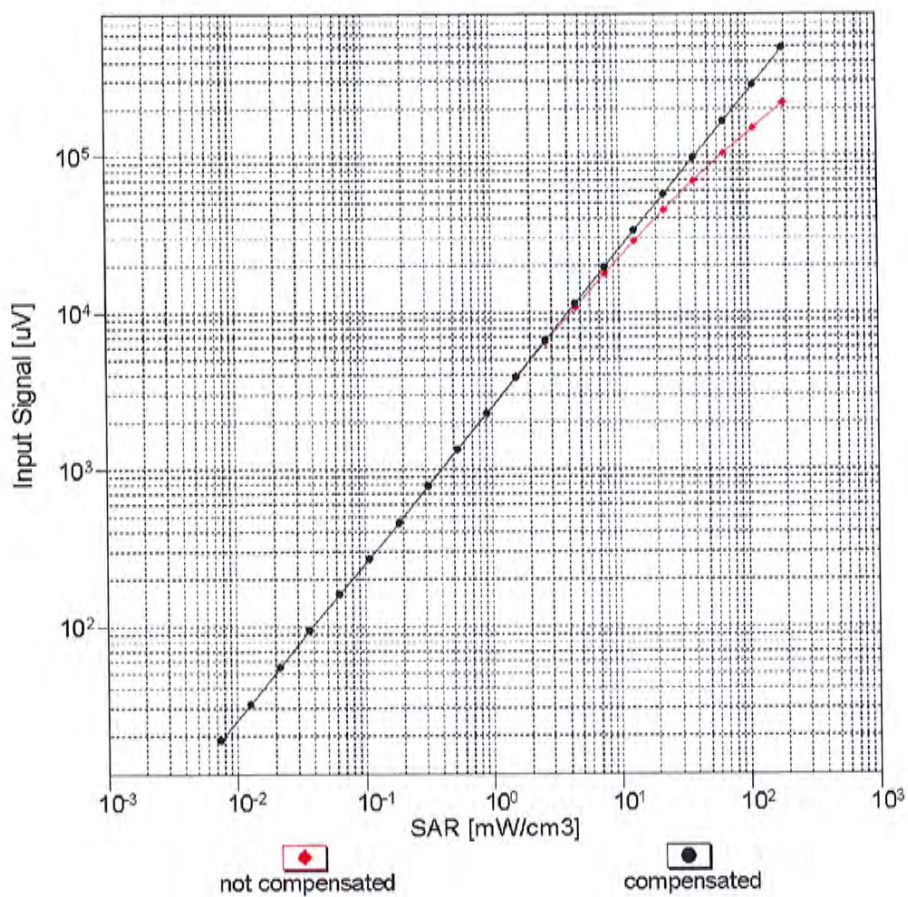


f=1800 MHz,R22



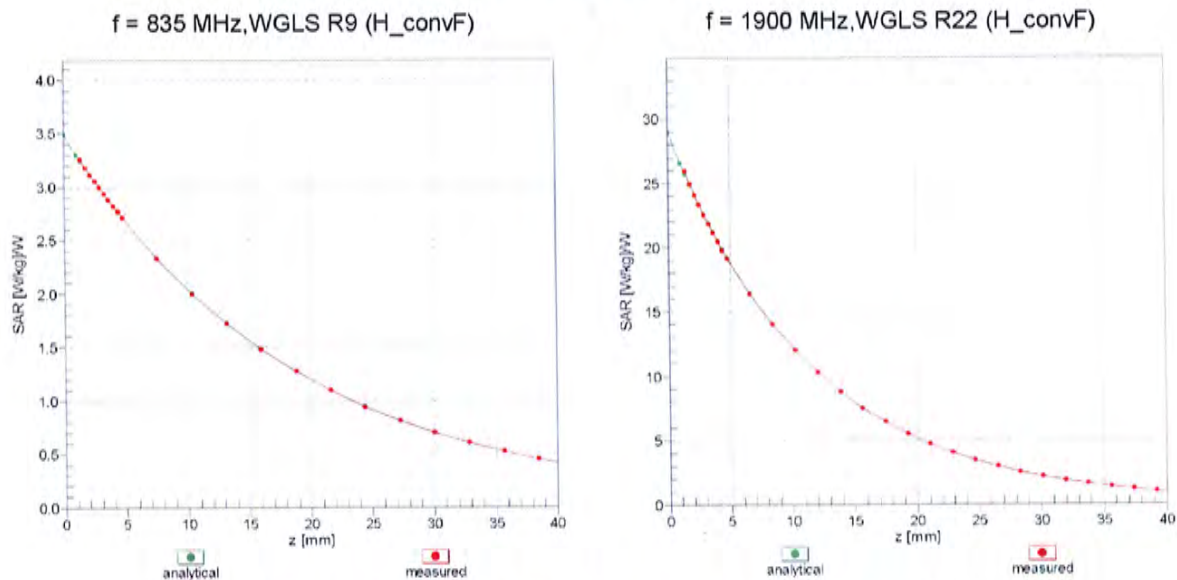
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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

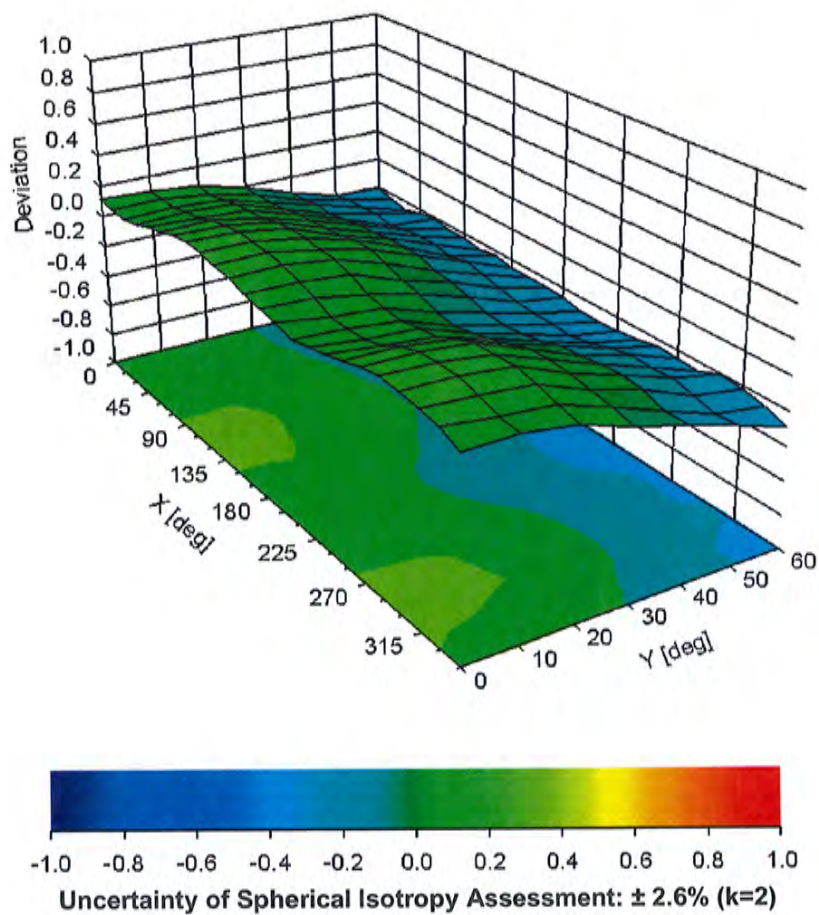


Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

# Conversion Factor Assessment



## Deviation from Isotropy in Liquid Error ( $\phi, \vartheta$ ), f = 900 MHz



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 132.3      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: Modulation Calibration Parameters**

| UID       | Communication System Name                     |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | 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    | 157.3    | $\pm 3.5 \%$                     |
|           |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 143.4    |                                  |
|           |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 153.1    |                                  |
| 10010-CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.02    | 63.97                  | 9.10  | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 2.59    | 66.85                  | 10.84 |         | 20.0     |                                  |
|           |                                               | Z | 2.31    | 65.14                  | 9.98  |         | 20.0     |                                  |
| 10011-CAB | UMTS-FDD (WCDMA)                              | X | 0.89    | 66.39                  | 14.20 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|           |                                               | Y | 1.06    | 68.74                  | 16.01 |         | 150.0    |                                  |
|           |                                               | Z | 0.90    | 66.80                  | 14.44 |         | 150.0    |                                  |
| 10012-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.06    | 63.38                  | 14.79 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|           |                                               | Y | 1.17    | 64.37                  | 15.54 |         | 150.0    |                                  |
|           |                                               | Z | 1.07    | 63.61                  | 14.94 |         | 150.0    |                                  |
| 10013-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.75    | 66.53                  | 16.97 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|           |                                               | Y | 4.80    | 66.78                  | 17.02 |         | 150.0    |                                  |
|           |                                               | Z | 4.73    | 66.65                  | 17.01 |         | 150.0    |                                  |
| 10021-DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 110.09                 | 25.45 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 112.00                 | 26.43 |         | 50.0     |                                  |
|           |                                               | Z | 100.00  | 111.93                 | 26.50 |         | 50.0     |                                  |
| 10023-DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 109.83                 | 25.39 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 111.69                 | 26.33 |         | 50.0     |                                  |
|           |                                               | Z | 100.00  | 111.63                 | 26.42 |         | 50.0     |                                  |
| 10024-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 107.43                 | 23.14 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 110.61                 | 24.77 |         | 60.0     |                                  |
|           |                                               | Z | 100.00  | 109.57                 | 24.26 |         | 60.0     |                                  |
| 10025-DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 4.03    | 68.96                  | 25.05 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 5.30    | 77.15                  | 29.41 |         | 50.0     |                                  |
|           |                                               | Z | 4.06    | 68.52                  | 24.65 |         | 50.0     |                                  |
| 10026-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 8.87    | 91.28                  | 32.17 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 10.08   | 94.25                  | 33.27 |         | 60.0     |                                  |
|           |                                               | Z | 8.65    | 90.32                  | 31.77 |         | 60.0     |                                  |
| 10027-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 105.82                 | 21.66 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 111.09                 | 24.24 |         | 80.0     |                                  |
|           |                                               | Z | 100.00  | 108.42                 | 22.93 |         | 80.0     |                                  |
| 10028-DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 104.11                 | 20.26 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 112.84                 | 24.34 |         | 100.0    |                                  |
|           |                                               | Z | 100.00  | 107.37                 | 21.76 |         | 100.0    |                                  |
| 10029-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 5.57    | 80.93                  | 27.02 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 6.11    | 82.68                  | 27.69 |         | 80.0     |                                  |
|           |                                               | Z | 5.53    | 80.55                  | 26.85 |         | 80.0     |                                  |
| 10030-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 104.99                 | 21.59 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 109.04                 | 23.62 |         | 70.0     |                                  |
|           |                                               | Z | 100.00  | 107.17                 | 22.68 |         | 70.0     |                                  |
| 10031-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 0.46    | 62.47                  | 6.17  | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|           |                                               | Y | 100.00  | 111.97                 | 22.67 |         | 100.0    |                                  |
|           |                                               | Z | 100.00  | 95.35                  | 15.52 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 0.19   | 60.00  | 3.78  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 120.03 | 24.95 |       | 100.0 |         |
|           |                                                     | Z | 0.19   | 60.00  | 4.15  |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 13.55  | 95.45  | 24.90 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 18.76  | 100.49 | 26.60 |       | 70.0  |         |
|           |                                                     | Z | 13.36  | 94.67  | 24.55 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 2.70   | 75.51  | 16.71 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.49   | 82.47  | 19.70 |       | 100.0 |         |
|           |                                                     | Z | 2.90   | 76.09  | 16.70 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 1.71   | 70.85  | 14.56 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.70   | 76.95  | 17.56 |       | 100.0 |         |
|           |                                                     | Z | 1.78   | 71.24  | 14.48 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 22.62  | 103.29 | 27.18 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 32.35  | 108.98 | 28.96 |       | 70.0  |         |
|           |                                                     | Z | 21.86  | 102.15 | 26.73 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 2.48   | 74.51  | 16.30 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.96   | 80.90  | 19.14 |       | 100.0 |         |
|           |                                                     | Z | 2.61   | 74.90  | 16.23 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.74   | 71.34  | 14.88 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.75   | 77.52  | 17.90 |       | 100.0 |         |
|           |                                                     | Z | 1.82   | 71.77  | 14.82 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 1.34   | 68.49  | 13.13 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.27   | 75.66  | 16.89 |       | 150.0 |         |
|           |                                                     | Z | 1.29   | 68.35  | 12.80 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 34.99  | 94.66  | 19.93 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 108.11 | 23.89 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 107.01 | 23.40 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.17   | 126.30 | 3.13  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 107.81 | 5.46  |       | 150.0 |         |
|           |                                                     | Z | 0.15   | 126.17 | 2.27  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 10.11  | 79.88  | 18.52 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 23.48  | 91.75  | 22.45 |       | 25.0  |         |
|           |                                                     | Z | 12.25  | 82.71  | 19.92 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 11.72  | 83.69  | 18.67 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 40.84  | 100.05 | 23.71 |       | 40.0  |         |
|           |                                                     | Z | 15.78  | 87.97  | 20.48 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 18.86  | 95.31  | 25.05 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 26.98  | 101.35 | 27.04 |       | 50.0  |         |
|           |                                                     | Z | 17.19  | 93.67  | 24.60 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.30   | 76.01  | 24.21 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.66   | 77.31  | 24.71 |       | 100.0 |         |
|           |                                                     | Z | 4.30   | 75.85  | 24.15 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.10   | 64.51  | 15.41 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.22   | 65.59  | 16.19 |       | 110.0 |         |
|           |                                                     | Z | 1.11   | 64.78  | 15.58 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 40.70  | 121.16 | 30.62 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 138.01 | 35.59 |       | 110.0 |         |
|           |                                                     | Z | 76.47  | 130.66 | 32.92 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 2.97 | 81.68 | 22.34 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 3.52 | 84.01 | 23.42 |      | 110.0 |         |
|           |                                                | Z | 3.16 | 82.63 | 22.73 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.54 | 66.50 | 16.38 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.60 | 66.81 | 16.49 |      | 100.0 |         |
|           |                                                | Z | 4.51 | 66.59 | 16.41 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.56 | 66.59 | 16.48 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.62 | 66.89 | 16.58 |      | 100.0 |         |
|           |                                                | Z | 4.53 | 66.70 | 16.52 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.84 | 66.85 | 16.71 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.89 | 67.12 | 16.79 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 66.93 | 16.74 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.71 | 66.74 | 16.80 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.76 | 67.01 | 16.87 |      | 100.0 |         |
|           |                                                | Z | 4.67 | 66.83 | 16.83 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.72 | 66.77 | 16.97 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.77 | 67.02 | 17.03 |      | 100.0 |         |
|           |                                                | Z | 4.69 | 66.86 | 17.00 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.02 | 66.97 | 17.43 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.06 | 67.18 | 17.45 |      | 100.0 |         |
|           |                                                | Z | 4.99 | 67.10 | 17.47 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.06 | 66.99 | 17.64 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.10 | 67.19 | 17.65 |      | 100.0 |         |
|           |                                                | Z | 5.03 | 67.09 | 17.67 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.14 | 67.01 | 17.83 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.18 | 67.19 | 17.83 |      | 100.0 |         |
|           |                                                | Z | 5.11 | 67.11 | 17.86 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.84 | 66.62 | 17.27 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.89 | 66.85 | 17.31 |      | 100.0 |         |
|           |                                                | Z | 4.83 | 66.75 | 17.32 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.82 | 66.93 | 17.48 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.86 | 67.16 | 17.51 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 67.06 | 17.53 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.88 | 67.11 | 17.81 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.92 | 67.32 | 17.83 |      | 100.0 |         |
|           |                                                | Z | 4.87 | 67.25 | 17.87 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.87 | 67.01 | 17.95 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.91 | 67.22 | 17.97 |      | 100.0 |         |
|           |                                                | Z | 4.87 | 67.19 | 18.02 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.90 | 67.11 | 18.25 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.95 | 67.32 | 18.26 |      | 90.0  |         |
|           |                                                | Z | 4.91 | 67.27 | 18.31 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.92 | 66.92 | 18.38 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.97 | 67.13 | 18.38 |      | 90.0  |         |
|           |                                                | Z | 4.94 | 67.11 | 18.46 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.95 | 66.99 | 18.48 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.00 | 67.21 | 18.49 |      | 90.0  |         |
|           |                                                | Z | 4.97 | 67.20 | 18.56 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.61   | 63.26  | 9.90  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.87   | 67.43  | 13.01 |      | 150.0 |         |
|           |                                                     | Z | 0.58   | 63.10  | 9.56  |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.50   | 65.17  | 5.97  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.75   | 60.00  | 4.55  |      | 80.0  |         |
|           |                                                     | Z | 0.72   | 60.00  | 4.31  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 107.54 | 23.21 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 110.64 | 24.80 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 109.67 | 24.33 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.69   | 67.19  | 15.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.88   | 68.79  | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 1.71   | 67.59  | 15.23 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.65   | 67.13  | 15.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.84   | 68.75  | 16.15 |      | 150.0 |         |
|           |                                                     | Z | 1.67   | 67.53  | 15.19 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 8.93   | 91.41  | 32.21 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 10.16  | 94.39  | 33.31 |      | 60.0  |         |
|           |                                                     | Z | 8.70   | 90.44  | 31.80 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.94   | 69.72  | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.18   | 71.08  | 17.07 |      | 150.0 |         |
|           |                                                     | Z | 2.94   | 69.89  | 16.39 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.09   | 67.13  | 15.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.21   | 67.85  | 16.08 |      | 150.0 |         |
|           |                                                     | Z | 3.07   | 67.21  | 15.70 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.20   | 67.14  | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.32   | 67.82  | 16.17 |      | 150.0 |         |
|           |                                                     | Z | 3.18   | 67.23  | 15.82 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 5.93   | 75.11  | 20.17 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.63   | 76.82  | 20.78 |      | 65.0  |         |
|           |                                                     | Z | 5.91   | 75.14  | 20.21 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 5.89   | 73.03  | 20.08 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.25   | 73.91  | 20.36 |      | 65.0  |         |
|           |                                                     | Z | 5.90   | 73.09  | 20.11 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.51   | 71.58  | 19.75 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.10   | 73.31  | 20.41 |      | 65.0  |         |
|           |                                                     | Z | 5.86   | 72.81  | 20.30 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.55   | 69.01  | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.75   | 70.30  | 16.89 |      | 150.0 |         |
|           |                                                     | Z | 2.54   | 69.20  | 16.22 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.74   | 66.99  | 15.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.87   | 67.79  | 16.01 |      | 150.0 |         |
|           |                                                     | Z | 2.72   | 67.11  | 15.56 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.04   | 68.09  | 15.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.23   | 69.47  | 16.51 |      | 150.0 |         |
|           |                                                     | Z | 2.03   | 68.32  | 15.72 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.46   | 67.87  | 15.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.64   | 69.03  | 16.47 |      | 150.0 |         |
|           |                                                     | Z | 2.45   | 68.15  | 15.81 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.87 | 67.02 | 15.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.00 | 67.79 | 16.07 |      | 150.0 |         |
|           |                                                | Z | 2.85 | 67.16 | 15.65 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.61 | 68.07 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.79 | 69.17 | 16.59 |      | 150.0 |         |
|           |                                                | Z | 2.61 | 68.36 | 15.98 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.01 | 67.03 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.06 | 67.33 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 4.97 | 67.05 | 16.35 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.27 | 67.10 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.32 | 67.38 | 16.48 |      | 150.0 |         |
|           |                                                | Z | 5.22 | 67.11 | 16.39 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.09 | 67.20 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.14 | 67.50 | 16.46 |      | 150.0 |         |
|           |                                                | Z | 5.06 | 67.23 | 16.37 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.97 | 66.87 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.03 | 67.20 | 16.40 |      | 150.0 |         |
|           |                                                | Z | 4.94 | 66.93 | 16.31 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.35 | 67.31 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.39 | 67.55 | 16.57 |      | 150.0 |         |
|           |                                                | Z | 5.30 | 67.32 | 16.50 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.08 | 67.16 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.12 | 67.45 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 5.04 | 67.20 | 16.36 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.23 | 67.13 | 15.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.35 | 67.82 | 16.08 |      | 150.0 |         |
|           |                                                | Z | 3.21 | 67.22 | 15.73 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.36 | 67.28 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.48 | 67.94 | 16.26 |      | 150.0 |         |
|           |                                                | Z | 3.34 | 67.38 | 15.93 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.80 | 67.92 | 15.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.02 | 69.71 | 16.23 |      | 150.0 |         |
|           |                                                | Z | 1.78 | 68.19 | 15.11 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.28 | 68.33 | 15.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.56 | 70.16 | 16.27 |      | 150.0 |         |
|           |                                                | Z | 2.27 | 68.61 | 15.13 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.03 | 65.81 | 13.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.22 | 67.14 | 14.29 |      | 150.0 |         |
|           |                                                | Z | 1.98 | 65.83 | 13.22 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 0.92 | 62.55 | 9.46  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.17 | 65.32 | 11.54 |      | 150.0 |         |
|           |                                                | Z | 0.84 | 61.98 | 8.80  |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.39 | 62.93 | 9.23  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.99 | 66.57 | 11.19 |      | 150.0 |         |
|           |                                                | Z | 1.31 | 62.53 | 8.72  |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 1.52 | 63.83 | 9.83  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.52 | 69.22 | 12.51 |      | 150.0 |         |
|           |                                                | Z | 1.42 | 63.36 | 9.28  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.75 | 67.05 | 15.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.88 | 67.86 | 16.07 |      | 150.0 |         |
|           |                                            | Z | 2.73 | 67.18 | 15.62 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.88 | 67.08 | 15.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.01 | 67.85 | 16.12 |      | 150.0 |         |
|           |                                            | Z | 2.86 | 67.22 | 15.70 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 6.32 | 77.90 | 21.36 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.91 | 79.14 | 21.77 |      | 65.0  |         |
|           |                                            | Z | 6.41 | 78.22 | 21.50 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.42 | 72.95 | 19.71 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.78 | 73.88 | 20.03 |      | 65.0  |         |
|           |                                            | Z | 5.43 | 73.04 | 19.72 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 5.81 | 74.06 | 20.59 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.20 | 74.97 | 20.87 |      | 65.0  |         |
|           |                                            | Z | 5.84 | 74.21 | 20.62 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.09 | 68.53 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.29 | 69.96 | 16.81 |      | 150.0 |         |
|           |                                            | Z | 2.08 | 68.78 | 15.99 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.46 | 67.89 | 15.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.64 | 69.05 | 16.49 |      | 150.0 |         |
|           |                                            | Z | 2.46 | 68.18 | 15.84 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.63 | 67.76 | 14.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.89 | 69.98 | 16.07 |      | 150.0 |         |
|           |                                            | Z | 1.61 | 67.98 | 14.61 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.84 | 66.10 | 13.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.08 | 67.93 | 14.40 |      | 150.0 |         |
|           |                                            | Z | 1.79 | 66.07 | 12.96 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.62 | 68.14 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.80 | 69.25 | 16.65 |      | 150.0 |         |
|           |                                            | Z | 2.62 | 68.44 | 16.04 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.94 | 66.53 | 13.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.21 | 68.50 | 14.73 |      | 150.0 |         |
|           |                                            | Z | 1.88 | 66.49 | 13.23 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.59 | 68.31 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.73 | 69.19 | 16.57 |      | 150.0 |         |
|           |                                            | Z | 2.58 | 68.51 | 16.08 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.77 | 67.03 | 15.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.91 | 67.84 | 16.05 |      | 150.0 |         |
|           |                                            | Z | 2.75 | 67.18 | 15.60 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.88 | 67.21 | 15.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.02 | 68.01 | 16.17 |      | 150.0 |         |
|           |                                            | Z | 2.86 | 67.38 | 15.74 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.37 | 69.04 | 18.77 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.72 | 71.09 | 19.82 |      | 150.0 |         |
|           |                                            | Z | 3.38 | 69.53 | 19.11 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.04 | 71.49 | 19.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.05 | 75.77 | 20.88 |      | 150.0 |         |
|           |                                            | Z | 4.12 | 72.30 | 19.44 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.56  | 74.09  | 20.53 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.99  | 79.40  | 22.74 |      | 150.0 |         |
|           |                                            | Z | 4.72  | 75.27  | 21.13 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.74  | 67.94  | 18.26 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.25  | 71.55  | 20.05 |      | 150.0 |         |
|           |                                            | Z | 2.77  | 68.38  | 18.59 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.65  | 73.29  | 20.42 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.00  | 83.03  | 24.31 |      | 150.0 |         |
|           |                                            | Z | 3.81  | 74.44  | 21.04 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.98  | 69.09  | 17.51 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.17  | 75.40  | 20.24 |      | 150.0 |         |
|           |                                            | Z | 3.05  | 69.77  | 17.92 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 6.26  | 85.95  | 26.48 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 13.49 | 101.43 | 31.66 |      | 65.0  |         |
|           |                                            | Z | 6.07  | 85.72  | 26.58 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 11.36 | 93.09  | 26.93 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 61.90 | 122.46 | 34.86 |      | 65.0  |         |
|           |                                            | Z | 13.00 | 96.00  | 28.02 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 8.36  | 86.77  | 24.30 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 35.10 | 110.72 | 31.17 |      | 65.0  |         |
|           |                                            | Z | 8.86  | 88.32  | 24.99 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.71  | 67.63  | 18.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.19  | 71.11  | 19.75 |      | 150.0 |         |
|           |                                            | Z | 2.74  | 68.04  | 18.32 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.66  | 73.32  | 20.43 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.01  | 83.07  | 24.33 |      | 150.0 |         |
|           |                                            | Z | 3.81  | 74.46  | 21.05 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.73  | 67.78  | 18.10 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.23  | 71.31  | 19.86 |      | 150.0 |         |
|           |                                            | Z | 2.76  | 68.20  | 18.41 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.63  | 73.10  | 20.31 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.90  | 82.67  | 24.15 |      | 150.0 |         |
|           |                                            | Z | 3.78  | 74.24  | 20.93 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.28  | 71.01  | 18.80 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.94  | 78.87  | 22.07 |      | 150.0 |         |
|           |                                            | Z | 3.38  | 71.91  | 19.31 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.98  | 69.03  | 17.47 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.15  | 75.28  | 20.17 |      | 150.0 |         |
|           |                                            | Z | 3.04  | 69.71  | 17.88 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.73  | 67.76  | 18.09 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.22  | 71.29  | 19.85 |      | 150.0 |         |
|           |                                            | Z | 2.75  | 68.18  | 18.41 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.62  | 73.08  | 20.30 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.88  | 82.63  | 24.13 |      | 150.0 |         |
|           |                                            | Z | 3.77  | 74.21  | 20.92 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.97  | 69.01  | 17.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.14  | 75.24  | 20.16 |      | 150.0 |         |
|           |                                            | Z | 3.04  | 69.68  | 17.87 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.74 | 67.80 | 18.11 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.24 | 71.35 | 19.88 |      | 150.0 |         |
|           |                                               | Z | 2.77 | 68.22 | 18.43 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.64 | 73.15 | 20.34 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.93 | 82.75 | 24.19 |      | 150.0 |         |
|           |                                               | Z | 3.79 | 74.29 | 20.96 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.99 | 69.07 | 17.49 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.16 | 75.34 | 20.20 |      | 150.0 |         |
|           |                                               | Z | 3.05 | 69.75 | 17.90 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.75 | 67.86 | 18.18 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.25 | 71.43 | 19.96 |      | 150.0 |         |
|           |                                               | Z | 2.78 | 68.29 | 18.51 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.76 | 73.83 | 20.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.30 | 84.02 | 24.77 |      | 150.0 |         |
|           |                                               | Z | 3.92 | 75.04 | 21.38 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 3.05 | 69.47 | 17.77 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.32 | 76.05 | 20.59 |      | 150.0 |         |
|           |                                               | Z | 3.12 | 70.18 | 18.19 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.39 | 66.44 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.46 | 66.83 | 16.18 |      | 150.0 |         |
|           |                                               | Z | 4.36 | 66.53 | 16.02 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.55 | 66.74 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.63 | 67.12 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.51 | 66.81 | 16.16 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.59 | 66.77 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.67 | 67.15 | 16.32 |      | 150.0 |         |
|           |                                               | Z | 4.55 | 66.84 | 16.18 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.39 | 66.48 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.46 | 66.87 | 16.19 |      | 150.0 |         |
|           |                                               | Z | 4.35 | 66.57 | 16.03 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.56 | 66.75 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.64 | 67.14 | 16.31 |      | 150.0 |         |
|           |                                               | Z | 4.53 | 66.83 | 16.17 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.59 | 66.78 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.67 | 67.16 | 16.33 |      | 150.0 |         |
|           |                                               | Z | 4.55 | 66.85 | 16.19 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.34 | 66.50 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.41 | 66.90 | 16.15 |      | 150.0 |         |
|           |                                               | Z | 4.30 | 66.59 | 15.99 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.56 | 66.72 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.63 | 67.10 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.52 | 66.79 | 16.15 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.60 | 66.71 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.67 | 67.09 | 16.31 |      | 150.0 |         |
|           |                                               | Z | 4.56 | 66.79 | 16.17 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.94 | 66.87 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.00 | 67.20 | 16.40 |      | 150.0 |         |
|           |                                               | Z | 4.91 | 66.93 | 16.30 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.26  | 67.15  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.29  | 67.39  | 16.51 |      | 150.0 |         |
|           |                                           | Z | 5.21  | 67.16  | 16.44 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.98  | 66.98  | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.05  | 67.32  | 16.38 |      | 150.0 |         |
|           |                                           | Z | 4.95  | 67.03  | 16.28 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.65  | 65.82  | 14.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.77  | 66.54  | 15.42 |      | 150.0 |         |
|           |                                           | Z | 2.63  | 65.96  | 14.93 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 12.29 | 94.61  | 27.52 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 76.74 | 126.49 | 35.96 |      | 65.0  |         |
|           |                                           | Z | 14.23 | 97.75  | 28.67 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 11.60 | 92.16  | 26.09 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 58.51 | 119.10 | 33.33 |      | 65.0  |         |
|           |                                           | Z | 13.58 | 95.42  | 27.28 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 8.07  | 91.29  | 28.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.98 | 103.75 | 32.45 |      | 65.0  |         |
|           |                                           | Z | 8.37  | 92.43  | 29.01 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 11.46 | 93.21  | 26.98 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 62.74 | 122.68 | 34.92 |      | 65.0  |         |
|           |                                           | Z | 13.11 | 96.13  | 28.07 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 10.78 | 90.84  | 25.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 48.68 | 115.84 | 32.42 |      | 65.0  |         |
|           |                                           | Z | 12.46 | 93.85  | 26.71 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 7.66  | 90.18  | 27.97 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 13.86 | 102.08 | 31.86 |      | 65.0  |         |
|           |                                           | Z | 7.92  | 91.24  | 28.52 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 11.44 | 93.19  | 26.97 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 62.67 | 122.68 | 34.92 |      | 65.0  |         |
|           |                                           | Z | 13.08 | 96.11  | 28.07 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 10.75 | 90.81  | 25.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 48.50 | 115.79 | 32.41 |      | 65.0  |         |
|           |                                           | Z | 12.42 | 93.82  | 26.70 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 7.34  | 89.19  | 27.51 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 12.98 | 100.59 | 31.27 |      | 65.0  |         |
|           |                                           | Z | 7.57  | 90.21  | 28.04 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 11.45 | 93.23  | 26.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 63.03 | 122.79 | 34.95 |      | 65.0  |         |
|           |                                           | Z | 13.11 | 96.15  | 28.08 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 10.87 | 90.96  | 25.62 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 49.65 | 116.13 | 32.49 |      | 65.0  |         |
|           |                                           | Z | 12.57 | 93.99  | 26.75 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 7.67  | 90.24  | 28.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 13.91 | 102.19 | 31.90 |      | 65.0  |         |
|           |                                           | Z | 7.93  | 91.30  | 28.54 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 11.41 | 93.16  | 26.96 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 62.56 | 122.66 | 34.91 |      | 65.0  |         |
|           |                                           | Z | 13.06 | 96.08  | 28.06 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 10.72 | 90.78  | 25.57 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 48.29 | 115.74 | 32.40 |      | 65.0 |         |
|           |                                            | Z | 12.38 | 93.78  | 26.69 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 7.65  | 90.20  | 27.98 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 13.86 | 102.14 | 31.88 |      | 65.0 |         |
|           |                                            | Z | 7.91  | 91.26  | 28.53 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 7.49  | 79.94  | 24.73 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.15  | 84.52  | 26.53 |      | 65.0 |         |
|           |                                            | Z | 7.78  | 81.10  | 25.24 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.76  | 77.82  | 23.76 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.56  | 83.16  | 25.93 |      | 65.0 |         |
|           |                                            | Z | 7.57  | 80.56  | 24.94 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.55  | 74.73  | 23.33 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.44  | 78.27  | 24.91 |      | 65.0 |         |
|           |                                            | Z | 5.56  | 75.03  | 23.50 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 4.91  | 73.06  | 16.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.23  | 76.34  | 18.14 |      | 65.0 |         |
|           |                                            | Z | 4.96  | 73.17  | 16.71 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 4.78  | 72.39  | 16.50 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.96  | 75.43  | 17.72 |      | 65.0 |         |
|           |                                            | Z | 4.79  | 72.41  | 16.32 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 4.86  | 76.58  | 18.54 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.74  | 78.81  | 19.49 |      | 65.0 |         |
|           |                                            | Z | 4.75  | 76.10  | 18.16 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 4.54  | 72.63  | 17.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.00  | 73.89  | 18.23 |      | 65.0 |         |
|           |                                            | Z | 4.50  | 72.44  | 17.41 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 4.51  | 72.01  | 17.39 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.93  | 73.18  | 17.90 |      | 65.0 |         |
|           |                                            | Z | 4.45  | 71.77  | 17.09 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 6.38  | 81.20  | 21.41 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.34  | 83.11  | 22.13 |      | 65.0 |         |
|           |                                            | Z | 6.46  | 81.34  | 21.34 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 5.54  | 75.67  | 20.83 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.99  | 76.71  | 21.17 |      | 65.0 |         |
|           |                                            | Z | 5.60  | 75.87  | 20.83 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.22  | 73.28  | 19.41 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.60  | 74.26  | 19.76 |      | 65.0 |         |
|           |                                            | Z | 5.22  | 73.35  | 19.34 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 6.60  | 81.03  | 22.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.35  | 82.49  | 22.99 |      | 65.0 |         |
|           |                                            | Z | 6.74  | 81.46  | 22.63 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.32  | 72.45  | 19.46 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.67  | 73.38  | 19.78 |      | 65.0 |         |
|           |                                            | Z | 5.34  | 72.58  | 19.46 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.67  | 73.46  | 20.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.04  | 74.36  | 20.52 |      | 65.0 |         |
|           |                                            | Z | 5.70  | 73.62  | 20.25 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 6.00 | 77.17 | 21.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.54 | 78.36 | 21.67 |      | 65.0 |         |
|           |                                             | Z | 6.09 | 77.51 | 21.41 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 3.55 | 68.31 | 13.56 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.31 | 70.70 | 14.63 |      | 65.0 |         |
|           |                                             | Z | 3.47 | 67.95 | 13.18 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 3.46 | 67.65 | 13.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.12 | 69.78 | 14.12 |      | 65.0 |         |
|           |                                             | Z | 3.37 | 67.24 | 12.73 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 3.31 | 70.56 | 15.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.93 | 72.68 | 16.08 |      | 65.0 |         |
|           |                                             | Z | 3.14 | 69.68 | 14.40 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 4.95 | 73.85 | 18.86 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.40 | 75.01 | 19.32 |      | 65.0 |         |
|           |                                             | Z | 4.95 | 73.84 | 18.70 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 4.97 | 73.54 | 18.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.40 | 74.66 | 19.18 |      | 65.0 |         |
|           |                                             | Z | 4.96 | 73.50 | 18.55 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 6.09 | 80.15 | 21.50 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.88 | 81.79 | 22.11 |      | 65.0 |         |
|           |                                             | Z | 6.20 | 80.42 | 21.51 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 5.53 | 75.60 | 20.77 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.97 | 76.64 | 21.12 |      | 65.0 |         |
|           |                                             | Z | 5.58 | 75.79 | 20.77 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.21 | 73.26 | 19.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.59 | 74.24 | 19.76 |      | 65.0 |         |
|           |                                             | Z | 5.21 | 73.32 | 19.33 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 6.52 | 80.79 | 22.38 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.26 | 82.25 | 22.87 |      | 65.0 |         |
|           |                                             | Z | 6.65 | 81.20 | 22.51 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.42 | 72.95 | 19.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.78 | 73.89 | 20.03 |      | 65.0 |         |
|           |                                             | Z | 5.43 | 73.04 | 19.72 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 5.81 | 74.04 | 20.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.19 | 74.96 | 20.86 |      | 65.0 |         |
|           |                                             | Z | 5.84 | 74.19 | 20.60 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 6.31 | 77.85 | 21.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.90 | 79.09 | 21.75 |      | 65.0 |         |
|           |                                             | Z | 6.39 | 78.16 | 21.48 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.05 | 72.91 | 20.14 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.40 | 73.76 | 20.40 |      | 65.0 |         |
|           |                                             | Z | 6.06 | 73.00 | 20.17 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.03 | 72.50 | 20.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.37 | 73.34 | 20.27 |      | 65.0 |         |
|           |                                             | Z | 6.05 | 72.60 | 20.04 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.14 | 75.03 | 20.36 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.59 | 76.06 | 20.69 |      | 65.0 |         |
|           |                                             | Z | 6.19 | 75.26 | 20.47 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.45  | 66.18 | 14.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.58  | 67.05 | 15.42 |      | 150.0 |         |
|           |                                                                    | Z | 2.44  | 66.39 | 14.86 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.45  | 67.15 | 14.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.65  | 68.98 | 16.07 |      | 150.0 |         |
|           |                                                                    | Z | 1.46  | 67.49 | 14.94 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 2.05  | 60.99 | 6.61  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.14  | 61.42 | 6.98  |      | 50.0  |         |
|           |                                                                    | Z | 2.15  | 61.21 | 6.84  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 3.88  | 69.24 | 13.58 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.38  | 71.00 | 14.54 |      | 50.0  |         |
|           |                                                                    | Z | 3.84  | 68.69 | 13.30 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 4.00  | 69.55 | 13.78 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.51  | 71.31 | 14.73 |      | 50.0  |         |
|           |                                                                    | Z | 3.94  | 68.96 | 13.47 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.07  | 65.69 | 11.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.53  | 70.26 | 14.37 |      | 150.0 |         |
|           |                                                                    | Z | 1.01  | 65.37 | 11.10 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.60  | 63.10 | 9.79  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.85  | 67.12 | 12.84 |      | 150.0 |         |
|           |                                                                    | Z | 0.57  | 62.93 | 9.45  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.74  | 66.24 | 11.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.46  | 75.17 | 16.76 |      | 150.0 |         |
|           |                                                                    | Z | 0.73  | 66.36 | 11.54 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 1.24  | 72.67 | 15.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 5.17  | 93.05 | 23.35 |      | 150.0 |         |
|           |                                                                    | Z | 1.42  | 74.33 | 15.45 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 9.92  | 85.20 | 23.12 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.50  | 84.91 | 23.23 |      | 50.0  |         |
|           |                                                                    | Z | 10.83 | 86.02 | 23.20 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.57  | 69.12 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.77  | 70.42 | 16.97 |      | 150.0 |         |
|           |                                                                    | Z | 2.55  | 69.32 | 16.30 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.27  | 65.66 | 12.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.58  | 68.64 | 14.32 |      | 150.0 |         |
|           |                                                                    | Z | 1.21  | 65.43 | 11.98 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 2.00  | 66.49 | 12.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.31  | 72.57 | 14.96 |      | 150.0 |         |
|           |                                                                    | Z | 1.99  | 66.70 | 12.06 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.58  | 63.09 | 9.74  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.99  | 65.54 | 11.08 |      | 150.0 |         |
|           |                                                                    | Z | 1.51  | 62.92 | 9.42  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.69  | 65.76 | 17.48 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.64  | 65.55 | 17.37 |      | 50.0  |         |
|           |                                                                    | Z | 4.67  | 65.93 | 17.49 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.09  | 65.93 | 17.93 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.12  | 66.18 | 18.09 |      | 50.0  |         |
|           |                                                                    | Z | 5.09  | 66.17 | 17.98 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.84 | 65.58 | 17.76 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.88 | 65.83 | 17.92 |       | 50.0  |         |
|           |                                                                     | Z | 4.85 | 65.84 | 17.81 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.65 | 65.44 | 17.26 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.69 | 65.73 | 17.44 |       | 50.0  |         |
|           |                                                                     | Z | 4.65 | 65.69 | 17.31 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.44 | 68.14 | 19.56 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.41 | 68.01 | 19.60 |       | 35.0  |         |
|           |                                                                     | Z | 4.62 | 69.17 | 19.86 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.68 | 66.85 | 19.08 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.67 | 66.81 | 19.12 |       | 35.0  |         |
|           |                                                                     | Z | 4.77 | 67.53 | 19.30 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.59 | 67.04 | 19.05 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 66.99 | 19.09 |       | 35.0  |         |
|           |                                                                     | Z | 4.69 | 67.75 | 19.27 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.57 | 67.28 | 19.21 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.56 | 67.23 | 19.25 |       | 35.0  |         |
|           |                                                                     | Z | 4.69 | 68.04 | 19.45 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.73 | 67.04 | 19.22 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.72 | 66.99 | 19.24 |       | 35.0  |         |
|           |                                                                     | Z | 4.82 | 67.69 | 19.42 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.63 | 66.94 | 19.07 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.63 | 66.90 | 19.11 |       | 35.0  |         |
|           |                                                                     | Z | 4.74 | 67.65 | 19.30 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.92 | 68.38 | 15.85 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.14 | 69.67 | 16.60 |       | 150.0 |         |
|           |                                                                     | Z | 2.91 | 68.56 | 15.97 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 2.95 | 70.69 | 14.66 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 3.98 | 74.43 | 16.48 |       | 70.0  |         |
|           |                                                                     | Z | 3.15 | 71.48 | 15.14 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 5.04 | 79.92 | 21.00 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 6.78 | 84.92 | 23.16 |       | 30.0  |         |
|           |                                                                     | Z | 5.73 | 81.64 | 21.73 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 0.97 | 63.25 | 14.68 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.08 | 64.33 | 15.52 |       | 150.0 |         |
|           |                                                                     | Z | 0.98 | 63.49 | 14.85 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.44 | 66.48 | 16.13 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.51 | 66.82 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 4.41 | 66.56 | 16.16 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.44 | 66.48 | 16.13 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.51 | 66.82 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 4.41 | 66.56 | 16.16 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.53 | 66.78 | 16.11 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.61 | 67.15 | 16.28 |       | 150.0 |         |
|           |                                                                     | Z | 4.49 | 66.84 | 16.14 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.27 | 67.03 | 16.34 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.28 | 67.17 | 16.36 |       | 150.0 |         |
|           |                                                                     | Z | 5.22 | 67.01 | 16.33 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.50   | 67.24  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.56   | 67.57  | 16.43 |      | 150.0 |         |
|           |                                                                                 | Z | 5.47   | 67.27  | 16.33 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 1.07   | 65.69  | 11.52 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.53   | 70.26  | 14.37 |      | 115.0 |         |
|           |                                                                                 | Z | 1.01   | 65.37  | 11.10 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 1.07   | 65.69  | 11.52 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.53   | 70.26  | 14.37 |      | 115.0 |         |
|           |                                                                                 | Z | 1.01   | 65.37  | 11.10 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 23.46  | 102.23 | 25.39 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 115.29 | 27.21 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 120.73 | 29.57 |      | 100.0 |         |
| 10410-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 55.06  | 113.36 | 27.76 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 120.25 | 29.20 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 122.59 | 30.17 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 0.91   | 62.47  | 14.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.00   | 63.52  | 14.99 |      | 150.0 |         |
|           |                                                                                 | Z | 0.91   | 62.68  | 14.27 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.39   | 66.47  | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.46   | 66.85  | 16.24 |      | 150.0 |         |
|           |                                                                                 | Z | 4.36   | 66.56  | 16.10 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.39   | 66.47  | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.46   | 66.85  | 16.24 |      | 150.0 |         |
|           |                                                                                 | Z | 4.36   | 66.56  | 16.10 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.38   | 66.64  | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.46   | 67.04  | 16.28 |      | 150.0 |         |
|           |                                                                                 | Z | 4.35   | 66.74  | 16.14 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.40   | 66.59  | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.48   | 66.98  | 16.27 |      | 150.0 |         |
|           |                                                                                 | Z | 4.37   | 66.68  | 16.13 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.51   | 66.58  | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.59   | 66.96  | 16.28 |      | 150.0 |         |
|           |                                                                                 | Z | 4.48   | 66.67  | 16.14 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.67   | 66.88  | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.74   | 67.25  | 16.38 |      | 150.0 |         |
|           |                                                                                 | Z | 4.62   | 66.95  | 16.24 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.59   | 66.83  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.67   | 67.21  | 16.36 |      | 150.0 |         |
|           |                                                                                 | Z | 4.55   | 66.90  | 16.22 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.20   | 67.12  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.25   | 67.39  | 16.48 |      | 150.0 |         |
|           |                                                                                 | Z | 5.17   | 67.16  | 16.41 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.23   | 67.21  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.26   | 67.44  | 16.50 |      | 150.0 |         |
|           |                                                                                 | Z | 5.19   | 67.25  | 16.45 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.23   | 67.14  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.27   | 67.40  | 16.48 |      | 150.0 |         |
|           |                                                                | Z | 5.18   | 67.14  | 16.40 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.20   | 71.33  | 18.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.38   | 72.12  | 18.67 |      | 150.0 |         |
|           |                                                                | Z | 4.24   | 71.88  | 18.40 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.04   | 67.01  | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.14   | 67.47  | 16.25 |      | 150.0 |         |
|           |                                                                | Z | 4.00   | 67.12  | 16.01 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.35   | 66.89  | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.44   | 67.29  | 16.32 |      | 150.0 |         |
|           |                                                                | Z | 4.31   | 66.97  | 16.15 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.61   | 66.86  | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.68   | 67.24  | 16.38 |      | 150.0 |         |
|           |                                                                | Z | 4.57   | 66.94  | 16.24 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.31   | 72.22  | 18.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.57   | 73.29  | 18.72 |      | 150.0 |         |
|           |                                                                | Z | 4.37   | 72.83  | 18.28 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 46.38  | 110.94 | 27.14 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 119.98 | 29.08 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 122.32 | 30.05 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.31   | 66.87  | 15.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.44   | 67.57  | 15.54 |      | 150.0 |         |
|           |                                                                | Z | 3.26   | 66.97  | 15.03 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.89   | 66.79  | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.98   | 67.27  | 16.12 |      | 150.0 |         |
|           |                                                                | Z | 3.85   | 66.90  | 15.88 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.17   | 66.71  | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.26   | 67.14  | 16.23 |      | 150.0 |         |
|           |                                                                | Z | 4.14   | 66.80  | 16.04 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.38   | 66.63  | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.46   | 67.03  | 16.25 |      | 150.0 |         |
|           |                                                                | Z | 4.35   | 66.71  | 16.09 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.16   | 66.87  | 14.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.31   | 67.71  | 15.09 |      | 150.0 |         |
|           |                                                                | Z | 3.09   | 66.88  | 14.41 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.10   | 67.71  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.13   | 67.95  | 16.63 |      | 150.0 |         |
|           |                                                                | Z | 6.10   | 67.81  | 16.63 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.68   | 65.12  | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.75   | 65.52  | 15.96 |      | 150.0 |         |
|           |                                                                | Z | 3.67   | 65.23  | 15.81 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.88   | 71.11  | 17.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.15   | 72.36  | 17.96 |      | 150.0 |         |
|           |                                                                | Z | 3.88   | 71.47  | 17.22 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 5.03   | 68.93  | 18.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.12   | 69.27  | 18.40 |      | 150.0 |         |
|           |                                                                | Z | 5.02   | 69.28  | 18.31 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.76   | 67.21  | 14.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.95   | 70.10  | 17.17 |      | 150.0 |         |
|           |                                                                   | Z | 0.78   | 67.84  | 15.35 |      | 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 | 124.22 | 31.05 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 126.59 | 32.12 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 126.67 | 32.13 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.13   | 62.20  | 9.29  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.76   | 66.14  | 10.65 |      | 80.0  |         |
|           |                                                                   | Z | 1.32   | 63.88  | 10.13 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.91   | 60.00  | 7.67  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.95   | 60.52  | 7.63  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 60.00  | 7.73  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 47.59  | 111.65 | 27.34 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 123.29 | 30.45 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.26 | 30.40 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.05   | 61.52  | 8.89  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.46   | 64.47  | 9.90  |      | 80.0  |         |
|           |                                                                   | Z | 1.18   | 62.83  | 9.59  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.91   | 60.00  | 7.62  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.90   | 60.08  | 7.36  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 60.00  | 7.68  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 72.09  | 117.06 | 28.59 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 123.66 | 30.60 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.63 | 30.56 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.07   | 61.70  | 9.00  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.53   | 64.89  | 10.09 |      | 80.0  |         |
|           |                                                                   | Z | 1.22   | 63.12  | 9.74  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.91   | 60.00  | 7.62  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.90   | 60.09  | 7.36  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 60.00  | 7.68  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 74.02  | 117.39 | 28.66 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 123.68 | 30.61 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.65 | 30.56 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.07   | 61.65  | 8.96  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.51   | 64.78  | 10.03 |      | 80.0  |         |
|           |                                                                   | Z | 1.21   | 63.05  | 9.70  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.91   | 60.00  | 7.61  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.89   | 60.04  | 7.32  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 60.00  | 7.66  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 72.58  | 117.11 | 28.59 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 123.64 | 30.59 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.61 | 30.54 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.06   | 61.62  | 8.95  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.50   | 64.73  | 10.01 |      | 80.0  |         |
|           |                                                                   | Z | 1.20   | 63.02  | 9.68  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.91   | 60.00  | 7.61  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.89   | 60.02  | 7.32  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 60.00  | 7.66  |      | 80.0  |         |

|           |                                                                     |   |       |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 1.04  | 61.46  | 8.85  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.44  | 64.36  | 9.83  |      | 80.0 |         |
|           |                                                                     | Z | 1.17  | 62.77  | 9.54  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.91  | 60.00  | 7.60  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.89  | 60.00  | 7.29  |      | 80.0 |         |
|           |                                                                     | Z | 0.89  | 60.00  | 7.65  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 8.21  | 87.49  | 22.94 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 20.18 | 101.14 | 27.13 |      | 80.0 |         |
|           |                                                                     | Z | 18.46 | 99.74  | 26.54 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.14  | 76.02  | 17.14 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 17.56 | 91.22  | 21.83 |      | 80.0 |         |
|           |                                                                     | Z | 8.18  | 81.93  | 19.01 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.78  | 71.70  | 15.15 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.36  | 82.53  | 18.82 |      | 80.0 |         |
|           |                                                                     | Z | 4.98  | 75.18  | 16.32 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.35  | 69.25  | 15.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.01  | 72.46  | 16.59 |      | 80.0 |         |
|           |                                                                     | Z | 2.33  | 69.25  | 14.80 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.09  | 69.06  | 14.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.90  | 74.92  | 16.84 |      | 80.0 |         |
|           |                                                                     | Z | 3.31  | 69.99  | 14.61 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.93  | 68.12  | 14.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.36  | 73.23  | 16.22 |      | 80.0 |         |
|           |                                                                     | Z | 3.05  | 68.75  | 14.10 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.95  | 72.33  | 17.49 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.47  | 74.53  | 18.53 |      | 80.0 |         |
|           |                                                                     | Z | 3.08  | 73.09  | 17.68 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.76  | 67.89  | 15.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.16  | 69.70  | 15.94 |      | 80.0 |         |
|           |                                                                     | Z | 2.75  | 68.00  | 14.88 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.75  | 67.50  | 14.83 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.13  | 69.21  | 15.71 |      | 80.0 |         |
|           |                                                                     | Z | 2.74  | 67.55  | 14.66 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.27  | 71.87  | 18.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.61  | 73.22  | 18.84 |      | 80.0 |         |
|           |                                                                     | Z | 3.35  | 72.44  | 18.47 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.21  | 68.44  | 16.77 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.45  | 69.44  | 17.24 |      | 80.0 |         |
|           |                                                                     | Z | 3.25  | 68.82  | 16.89 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.29  | 68.29  | 16.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.53  | 69.24  | 17.16 |      | 80.0 |         |
|           |                                                                     | Z | 3.33  | 68.65  | 16.82 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.51  | 70.39  | 17.81 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.78  | 71.45  | 18.28 |      | 80.0 |         |
|           |                                                                     | Z | 3.55  | 70.76  | 17.99 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.56  | 67.76  | 16.86 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.76  | 68.54  | 17.20 |      | 80.0 |         |
|           |                                                                     | Z | 3.58  | 68.03  | 16.97 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.62 | 67.64 | 16.82 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.82 | 68.40 | 17.14 |      | 80.0 |         |
|           |                                                                      | Z | 3.64 | 67.90 | 16.91 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.79 | 71.83 | 18.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.13 | 73.06 | 18.79 |      | 80.0 |         |
|           |                                                                      | Z | 3.85 | 72.23 | 18.46 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.59 | 68.11 | 17.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.79 | 68.91 | 17.40 |      | 80.0 |         |
|           |                                                                      | Z | 3.61 | 68.36 | 17.17 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.67 | 67.87 | 17.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.86 | 68.62 | 17.31 |      | 80.0 |         |
|           |                                                                      | Z | 3.69 | 68.11 | 17.10 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.45 | 63.41 | 11.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.92 | 66.56 | 12.95 |      | 80.0 |         |
|           |                                                                      | Z | 1.35 | 62.71 | 10.54 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.28 | 60.00 | 8.33  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.38 | 60.59 | 8.91  |      | 80.0 |         |
|           |                                                                      | Z | 1.25 | 60.00 | 8.01  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.30 | 60.00 | 8.19  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.33 | 60.08 | 8.49  |      | 80.0 |         |
|           |                                                                      | Z | 1.27 | 60.00 | 7.87  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.04 | 71.93 | 17.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.46 | 73.67 | 18.54 |      | 80.0 |         |
|           |                                                                      | Z | 3.15 | 72.64 | 17.94 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.98 | 68.33 | 15.79 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.31 | 69.74 | 16.50 |      | 80.0 |         |
|           |                                                                      | Z | 3.01 | 68.63 | 15.79 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.03 | 68.16 | 15.65 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.36 | 69.55 | 16.35 |      | 80.0 |         |
|           |                                                                      | Z | 3.05 | 68.42 | 15.63 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.23 | 71.65 | 18.12 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.56 | 73.00 | 18.74 |      | 80.0 |         |
|           |                                                                      | Z | 3.30 | 72.21 | 18.35 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.19 | 68.33 | 16.71 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.43 | 69.33 | 17.17 |      | 80.0 |         |
|           |                                                                      | Z | 3.23 | 68.71 | 16.82 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.27 | 68.19 | 16.66 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.51 | 69.14 | 17.10 |      | 80.0 |         |
|           |                                                                      | Z | 3.31 | 68.54 | 16.75 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.76 | 71.67 | 18.18 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.10 | 72.90 | 18.71 |      | 80.0 |         |
|           |                                                                      | Z | 3.81 | 72.07 | 18.38 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.57 | 68.04 | 17.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.78 | 68.84 | 17.36 |      | 80.0 |         |
|           |                                                                      | Z | 3.59 | 68.29 | 17.13 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.65 | 67.79 | 16.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.85 | 68.55 | 17.26 |      | 80.0  |         |
|           |                                                                     | Z | 3.67 | 68.04 | 17.05 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.11 | 70.47 | 17.71 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.41 | 71.52 | 18.16 |      | 80.0  |         |
|           |                                                                     | Z | 4.14 | 70.76 | 17.87 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.05 | 67.79 | 17.05 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.24 | 68.50 | 17.33 |      | 80.0  |         |
|           |                                                                     | Z | 4.06 | 67.96 | 17.14 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.11 | 67.57 | 17.00 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.30 | 68.25 | 17.26 |      | 80.0  |         |
|           |                                                                     | Z | 4.12 | 67.74 | 17.08 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.27 | 71.92 | 18.15 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.64 | 73.17 | 18.68 |      | 80.0  |         |
|           |                                                                     | Z | 4.32 | 72.22 | 18.32 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.94 | 68.01 | 17.14 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.13 | 68.75 | 17.43 |      | 80.0  |         |
|           |                                                                     | Z | 3.95 | 68.18 | 17.23 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.97 | 67.63 | 17.03 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.15 | 68.33 | 17.30 |      | 80.0  |         |
|           |                                                                     | Z | 3.98 | 67.79 | 17.12 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.87 | 62.63 | 14.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.97 | 63.74 | 15.08 |      | 150.0 |         |
|           |                                                                     | Z | 0.87 | 62.85 | 14.30 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.49 | 69.66 | 15.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.68 | 73.95 | 19.23 |      | 150.0 |         |
|           |                                                                     | Z | 0.52 | 70.86 | 16.45 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.71 | 64.33 | 14.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.83 | 66.01 | 15.95 |      | 150.0 |         |
|           |                                                                     | Z | 0.72 | 64.67 | 14.76 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.38 | 66.55 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.46 | 66.94 | 16.23 |      | 150.0 |         |
|           |                                                                     | Z | 4.35 | 66.64 | 16.08 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.55 | 66.77 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.62 | 67.14 | 16.33 |      | 150.0 |         |
|           |                                                                     | Z | 4.51 | 66.84 | 16.19 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.40 | 66.71 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.48 | 67.10 | 16.26 |      | 150.0 |         |
|           |                                                                     | Z | 4.37 | 66.78 | 16.10 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.34 | 66.70 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.42 | 67.10 | 16.25 |      | 150.0 |         |
|           |                                                                     | Z | 4.30 | 66.76 | 16.08 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.40 | 66.82 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.48 | 67.21 | 16.34 |      | 150.0 |         |
|           |                                                                     | Z | 4.36 | 66.90 | 16.19 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.29 | 66.70 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.37 | 67.12 | 16.22 |      | 150.0 |         |
|           |                                                            | Z | 4.26 | 66.81 | 16.06 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.34 | 66.74 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.42 | 67.13 | 16.31 |      | 150.0 |         |
|           |                                                            | Z | 4.30 | 66.82 | 16.16 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.34 | 65.80 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.43 | 66.22 | 15.92 |      | 150.0 |         |
|           |                                                            | Z | 4.32 | 65.90 | 15.77 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.50 | 66.14 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.58 | 66.55 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 4.46 | 66.22 | 15.90 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.42 | 66.09 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.50 | 66.52 | 16.00 |      | 150.0 |         |
|           |                                                            | Z | 4.38 | 66.18 | 15.84 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.44 | 66.11 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.52 | 66.53 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.40 | 66.19 | 15.87 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.44 | 66.11 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.52 | 66.53 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.40 | 66.19 | 15.87 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.42 | 66.18 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.50 | 66.61 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.37 | 66.25 | 15.86 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.29 | 66.04 | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.37 | 66.48 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.11 | 15.79 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.44 | 66.17 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.53 | 66.60 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.41 | 66.26 | 15.87 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.98 | 66.20 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.05 | 66.57 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.26 | 15.95 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.05 | 66.39 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.11 | 66.72 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 5.01 | 66.43 | 16.03 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.92 | 66.34 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.99 | 66.70 | 16.10 |      | 150.0 |         |
|           |                                                            | Z | 4.89 | 66.40 | 15.99 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.98 | 66.30 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.04 | 66.66 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.35 | 15.97 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.06 | 66.31 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.12 | 66.65 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 5.02 | 66.35 | 16.01 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.99 | 66.30 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.05 | 66.64 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.33 | 16.02 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.97 | 66.19 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.03 | 66.55 | 16.07 |      | 150.0 |         |
|           |                                                    | Z | 4.93 | 66.22 | 15.95 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.12 | 66.28 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.19 | 66.62 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.09 | 66.32 | 16.02 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.19 | 66.29 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.25 | 66.63 | 16.15 |      | 150.0 |         |
|           |                                                    | Z | 5.15 | 66.34 | 16.05 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.31 | 66.31 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 66.66 | 16.05 |      | 150.0 |         |
|           |                                                    | Z | 5.28 | 66.35 | 15.94 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.50 | 66.75 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.54 | 67.02 | 16.18 |      | 150.0 |         |
|           |                                                    | Z | 5.47 | 66.79 | 16.11 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.36 | 66.48 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.42 | 66.83 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.33 | 66.50 | 15.98 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.43 | 66.54 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.49 | 66.87 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.40 | 66.57 | 16.01 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.66 | 67.42 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.65 | 67.55 | 16.42 |      | 150.0 |         |
|           |                                                    | Z | 5.60 | 67.37 | 16.38 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.40 | 66.56 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.45 | 66.87 | 16.13 |      | 150.0 |         |
|           |                                                    | Z | 5.37 | 66.62 | 16.05 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.39 | 66.55 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.45 | 66.88 | 16.09 |      | 150.0 |         |
|           |                                                    | Z | 5.35 | 66.53 | 15.97 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.32 | 66.38 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.38 | 66.76 | 16.04 |      | 150.0 |         |
|           |                                                    | Z | 5.29 | 66.43 | 15.92 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.39 | 66.39 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.45 | 66.75 | 16.07 |      | 150.0 |         |
|           |                                                    | Z | 5.36 | 66.42 | 15.95 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.72 | 66.67 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.77 | 67.00 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.70 | 66.69 | 16.02 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.84 | 66.96 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.88 | 67.25 | 16.23 |      | 150.0 |         |
|           |                                                    | Z | 5.81 | 66.97 | 16.14 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.87 | 67.02 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.91 | 67.31 | 16.25 |      | 150.0 |         |
|           |                                                    | Z | 5.84 | 67.04 | 16.17 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.83 | 66.90 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.87 | 67.22 | 16.22 |      | 150.0 |         |
|           |                                                    | Z | 5.80 | 66.91 | 16.13 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.87 | 67.06 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.91 | 67.36 | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 5.83 | 67.06 | 16.21 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.86 | 66.91 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.92 | 67.23 | 16.28 |      | 150.0 |         |
|           |                                                                 | Z | 5.83 | 66.92 | 16.18 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.80 | 66.89 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.84 | 67.19 | 16.30 |      | 150.0 |         |
|           |                                                                 | Z | 5.77 | 66.91 | 16.21 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.89 | 67.20 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.93 | 67.48 | 16.44 |      | 150.0 |         |
|           |                                                                 | Z | 5.84 | 67.16 | 16.34 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 6.00 | 67.15 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.02 | 67.38 | 16.35 |      | 150.0 |         |
|           |                                                                 | Z | 5.93 | 67.06 | 16.25 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.70 | 66.60 | 16.19 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 66.96 | 16.34 |      | 150.0 |         |
|           |                                                                 | Z | 4.67 | 66.68 | 16.22 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.92 | 67.06 | 16.53 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.99 | 67.39 | 16.67 |      | 150.0 |         |
|           |                                                                 | Z | 4.88 | 67.12 | 16.55 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.75 | 66.88 | 16.33 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.82 | 67.22 | 16.47 |      | 150.0 |         |
|           |                                                                 | Z | 4.71 | 66.94 | 16.35 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.79 | 67.31 | 16.72 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.86 | 67.67 | 16.87 |      | 150.0 |         |
|           |                                                                 | Z | 4.75 | 67.38 | 16.75 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.66 | 66.64 | 16.08 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 66.98 | 16.23 |      | 150.0 |         |
|           |                                                                 | Z | 4.62 | 66.69 | 16.09 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.76 | 67.45 | 16.81 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 67.82 | 16.96 |      | 150.0 |         |
|           |                                                                 | Z | 4.73 | 67.57 | 16.86 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.78 | 67.26 | 16.71 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.62 | 16.86 |      | 150.0 |         |
|           |                                                                 | Z | 4.74 | 67.35 | 16.75 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.05 | 63.78 | 14.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.16 | 64.84 | 15.77 |      | 130.0 |         |
|           |                                                                 | Z | 1.06 | 64.03 | 15.14 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.06 | 64.35 | 15.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.17 | 65.47 | 16.16 |      | 130.0 |         |
|           |                                                                 | Z | 1.07 | 64.63 | 15.52 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.81 | 84.33 | 21.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 2.93 | 92.85 | 25.80 |      | 130.0 |         |
|           |                                                                 | Z | 2.19 | 87.52 | 22.91 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.15 | 70.21 | 18.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.33 | 72.12 | 19.55 |      | 130.0 |         |
|           |                                                                 | Z | 1.19 | 70.90 | 18.68 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.49 | 66.39 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.72 | 16.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.46 | 66.48 | 16.26 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.51 | 66.57 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 66.91 | 16.44 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 66.67 | 16.34 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.70 | 66.85 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.17 | 16.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.67 | 66.93 | 16.51 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.60 | 67.01 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.67 | 67.35 | 16.72 |      | 130.0 |         |
|           |                                                                 | Z | 4.57 | 67.10 | 16.62 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.36 | 66.21 | 15.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.42 | 66.54 | 15.97 |      | 130.0 |         |
|           |                                                                 | Z | 4.32 | 66.26 | 15.84 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.40 | 66.27 | 15.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.46 | 66.59 | 16.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.36 | 66.33 | 15.88 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.50 | 67.05 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 67.39 | 16.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 67.15 | 16.57 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.29 | 65.96 | 15.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.35 | 66.28 | 15.74 |      | 130.0 |         |
|           |                                                                 | Z | 4.25 | 66.00 | 15.61 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.49 | 66.39 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.72 | 16.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.46 | 66.48 | 16.26 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.51 | 66.57 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 66.91 | 16.44 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 66.67 | 16.34 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.70 | 66.85 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.17 | 16.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.67 | 66.93 | 16.51 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.60 | 67.01 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.67 | 67.35 | 16.72 |      | 130.0 |         |
|           |                                                                 | Z | 4.57 | 67.10 | 16.62 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.36 | 66.21 | 15.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.42 | 66.54 | 15.97 |      | 130.0 |         |
|           |                                                                 | Z | 4.32 | 66.26 | 15.84 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.40 | 66.27 | 15.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.46 | 66.59 | 16.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.36 | 66.33 | 15.88 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.50 | 67.05 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 67.39 | 16.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 67.15 | 16.57 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.29 | 65.96 | 15.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.35 | 66.28 | 15.74 |      | 130.0 |         |
|           |                                                                 | Z | 4.25 | 66.00 | 15.61 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.64 | 66.47 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.70 | 66.79 | 16.47 |      | 130.0 |         |
|           |                                                       | Z | 4.61 | 66.56 | 16.38 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.78 | 66.80 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.84 | 67.11 | 16.60 |      | 130.0 |         |
|           |                                                       | Z | 4.75 | 66.87 | 16.51 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.70 | 66.68 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.76 | 67.00 | 16.47 |      | 130.0 |         |
|           |                                                       | Z | 4.66 | 66.75 | 16.37 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.76 | 66.86 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.82 | 67.18 | 16.63 |      | 130.0 |         |
|           |                                                       | Z | 4.72 | 66.94 | 16.54 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.72 | 66.81 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.78 | 67.13 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 4.68 | 66.89 | 16.44 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.66 | 66.80 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.72 | 67.12 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 4.62 | 66.87 | 16.43 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.60 | 66.68 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.67 | 67.01 | 16.40 |      | 130.0 |         |
|           |                                                       | Z | 4.57 | 66.74 | 16.29 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.59 | 66.93 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.66 | 67.26 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 4.56 | 67.00 | 16.58 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.32 | 67.00 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.34 | 67.19 | 16.62 |      | 130.0 |         |
|           |                                                       | Z | 5.28 | 67.04 | 16.61 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.45 | 67.42 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.44 | 67.51 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 5.41 | 67.45 | 16.79 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.34 | 67.16 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.36 | 67.35 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 5.30 | 67.21 | 16.68 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.45 | 67.27 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.48 | 67.47 | 16.67 |      | 130.0 |         |
|           |                                                       | Z | 5.43 | 67.37 | 16.68 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.52 | 67.55 | 16.90 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.54 | 67.72 | 16.93 |      | 130.0 |         |
|           |                                                       | Z | 5.50 | 67.66 | 16.96 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.38 | 67.16 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.41 | 67.36 | 16.73 |      | 130.0 |         |
|           |                                                       | Z | 5.38 | 67.32 | 16.78 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.44 | 67.34 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.45 | 67.47 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 5.41 | 67.37 | 16.80 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.17 | 66.57 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.21 | 66.82 | 16.32 |      | 130.0 |         |
|           |                                                       | Z | 5.14 | 66.65 | 16.29 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.48 | 65.79 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.55 | 66.14 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.46 | 65.89 | 16.02 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.65 | 66.17 | 16.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.72 | 66.52 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 4.61 | 66.26 | 16.18 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.54 | 66.00 | 15.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.61 | 66.36 | 16.11 |      | 130.0 |         |
|           |                                                   | Z | 4.51 | 66.08 | 15.99 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.59 | 66.17 | 16.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.53 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 4.56 | 66.26 | 16.17 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.51 | 65.97 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.57 | 66.32 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.05 | 16.01 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.51 | 66.11 | 16.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.58 | 66.46 | 16.16 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.19 | 16.05 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.51 | 65.96 | 15.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.57 | 66.31 | 16.02 |      | 130.0 |         |
|           |                                                   | Z | 4.46 | 66.02 | 15.90 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.46 | 66.18 | 16.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.53 | 66.55 | 16.29 |      | 130.0 |         |
|           |                                                   | Z | 4.43 | 66.26 | 16.17 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.50 | 65.78 | 15.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.57 | 66.13 | 15.88 |      | 130.0 |         |
|           |                                                   | Z | 4.46 | 65.86 | 15.76 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.13 | 66.23 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.18 | 66.52 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 5.10 | 66.28 | 16.22 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.21 | 66.44 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.24 | 66.68 | 16.33 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.48 | 16.29 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.09 | 66.44 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.14 | 66.73 | 16.37 |      | 130.0 |         |
|           |                                                   | Z | 5.07 | 66.51 | 16.32 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.10 | 66.22 | 16.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.14 | 66.49 | 16.19 |      | 130.0 |         |
|           |                                                   | Z | 5.07 | 66.27 | 16.13 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.19 | 66.25 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.23 | 66.52 | 16.25 |      | 130.0 |         |
|           |                                                   | Z | 5.15 | 66.30 | 16.20 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.20 | 66.42 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.25 | 66.70 | 16.46 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.46 | 16.41 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.21 | 66.59 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.25 | 66.84 | 16.53 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.58 | 16.46 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.08 | 66.07 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.13 | 66.35 | 16.15 |      | 130.0 |         |
|           |                                                    | Z | 5.04 | 66.08 | 16.07 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.27 | 66.29 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.55 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.24 | 66.33 | 16.26 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.56 | 67.05 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 67.20 | 16.69 |      | 130.0 |         |
|           |                                                    | Z | 5.45 | 66.85 | 16.58 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.45 | 66.29 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.49 | 66.58 | 16.24 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.33 | 16.18 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.69 | 66.90 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.70 | 67.08 | 16.45 |      | 130.0 |         |
|           |                                                    | Z | 5.66 | 66.94 | 16.45 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.46 | 66.33 | 16.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 66.60 | 16.14 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.33 | 16.07 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.54 | 66.41 | 16.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 66.66 | 16.17 |      | 130.0 |         |
|           |                                                    | Z | 5.51 | 66.44 | 16.12 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 5.93 | 67.80 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.86 | 67.72 | 16.70 |      | 130.0 |         |
|           |                                                    | Z | 5.85 | 67.67 | 16.74 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.84 | 67.65 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.86 | 67.82 | 16.94 |      | 130.0 |         |
|           |                                                    | Z | 5.79 | 67.61 | 16.91 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.66 | 66.99 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.68 | 67.19 | 16.65 |      | 130.0 |         |
|           |                                                    | Z | 5.64 | 67.07 | 16.66 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.53 | 66.52 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 66.82 | 16.28 |      | 130.0 |         |
|           |                                                    | Z | 5.50 | 66.56 | 16.22 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.51 | 66.55 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 66.86 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.48 | 66.58 | 16.29 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.38 | 65.83 | 15.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.42 | 66.12 | 15.72 |      | 130.0 |         |
|           |                                                    | Z | 5.34 | 65.82 | 15.63 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.87 | 66.66 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.90 | 66.93 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.85 | 66.69 | 16.27 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.02 | 67.05 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.04 | 67.25 | 16.46 |      | 130.0 |         |
|           |                                                    | Z | 5.99 | 67.06 | 16.43 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.02 | 67.01 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.04 | 67.26 | 16.44 |      | 130.0 |         |
|           |                                                    | Z | 5.99 | 67.04 | 16.40 |      | 130.0 |         |

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.99   | 66.94  | 16.39 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.02   | 67.20  | 16.45 |       | 130.0 |         |
|           |                                                        | Z | 5.96   | 66.96  | 16.40 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.99   | 66.93  | 16.32 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.01   | 67.17  | 16.38 |       | 130.0 |         |
|           |                                                        | Z | 5.95   | 66.93  | 16.33 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.05   | 66.90  | 16.33 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.06   | 67.10  | 16.36 |       | 130.0 |         |
|           |                                                        | Z | 6.02   | 66.93  | 16.35 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.08   | 67.13  | 16.62 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.11   | 67.39  | 16.68 |       | 130.0 |         |
|           |                                                        | Z | 6.05   | 67.15  | 16.64 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.92   | 66.82  | 16.35 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.94   | 67.04  | 16.40 |       | 130.0 |         |
|           |                                                        | Z | 5.89   | 66.84  | 16.37 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.04   | 67.19  | 16.56 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.06   | 67.41  | 16.60 |       | 130.0 |         |
|           |                                                        | Z | 5.99   | 67.13  | 16.53 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.20   | 67.30  | 16.58 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.18   | 67.42  | 16.57 |       | 130.0 |         |
|           |                                                        | Z | 6.12   | 67.19  | 16.53 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 13.97  | 103.27 | 34.96 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 20.81  | 112.89 | 38.12 |       | 60.0  |         |
|           |                                                        | Z | 13.67  | 103.09 | 35.06 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 12.30  | 101.10 | 34.41 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 17.37  | 109.51 | 37.26 |       | 60.0  |         |
|           |                                                        | Z | 12.00  | 100.85 | 34.49 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.49   | 61.28  | 8.20  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.65   | 63.85  | 10.60 |       | 150.0 |         |
|           |                                                        | Z | 0.46   | 61.03  | 7.80  |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.40   | 66.41  | 16.15 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.58   | 67.18  | 16.52 |       | 80.0  |         |
|           |                                                        | Z | 3.42   | 66.69  | 16.22 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.94   | 65.81  | 16.40 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.08   | 66.40  | 16.64 |       | 80.0  |         |
|           |                                                        | Z | 3.94   | 66.00  | 16.46 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.93   | 65.47  | 16.42 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.06   | 66.03  | 16.64 |       | 80.0  |         |
|           |                                                        | Z | 3.94   | 65.63  | 16.48 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.99   | 65.43  | 16.46 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.13   | 65.99  | 16.67 |       | 80.0  |         |
|           |                                                        | Z | 4.01   | 65.58  | 16.52 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 7.13   | 77.36  | 16.21 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 16.32  | 87.94  | 19.95 |       | 50.0  |         |
|           |                                                        | Z | 9.11   | 80.61  | 17.72 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 35.68  | 94.53  | 19.76 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 107.23 | 23.45 |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 106.51 | 23.11 |       | 60.0  |         |

|           |                             |   |        |        |       |      |       |         |
|-----------|-----------------------------|---|--------|--------|-------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 100.10 | 18.83 | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 100.00 | 106.47 | 21.86 |      | 80.0  |         |
|           |                             | Z | 100.00 | 102.58 | 20.01 |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 1.25   | 67.33  | 8.37  | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 108.17 | 21.47 |      | 100.0 |         |
|           |                             | Z | 100.00 | 96.28  | 16.23 |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 0.30   | 60.00  | 2.55  | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 113.09 | 21.91 |      | 120.0 |         |
|           |                             | Z | 0.20   | 60.00  | 3.18  |      | 120.0 |         |

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

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- 3) The complex admittance with respect to the probe aperture was measured
- 4) The complex relative permittivity  $\epsilon'$  can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

where  $Y$  is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively,  $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$ ,  $\omega$  is the angular frequency, and  $j = \sqrt{-1}$ .

**Table D-I**  
**Composition of the Tissue Equivalent Matter**

| Frequency (MHz)           | 13 MHz     |
|---------------------------|------------|
| Tissue                    |            |
| Ingredients (% by weight) |            |
| Bactericide               | See Page 2 |
| DGBE                      |            |
| HEC                       |            |
| NaCl                      |            |
| Sucrose                   |            |
| Polysorbate (Tween) 80    |            |
| Water                     |            |

|                           |                                                                                                           |                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------|
| Model: AURA Antenna       |  SAR EVALUATION REPORT | Approved by:<br>Quality Manager |
| Test Dates:<br>07/25/2018 | DUT Type:<br>Wireless Power Transfer Device                                                               | APPENDIX D:<br>Page 1 of 2      |

# Measurement Certificate / Material Test

|              |                                              |
|--------------|----------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL30-250V3) |
| Product No.  | SL AAH 005 AD (Batch: 141125-1)              |
| Manufacturer | SPEAG                                        |

## Measurement Method

|                                                                |
|----------------------------------------------------------------|
| TSL dielectric parameters measured using calibrated DAK probe. |
|----------------------------------------------------------------|

## Setup Validation

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Validation results were within $\pm 2.5\%$ towards the target values of Methanol. |
|-----------------------------------------------------------------------------------|

## Target Parameters

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards. |
|-----------------------------------------------------------------------------------|

## Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 14-Apr-16                                                   |
| Operator        | WM                                                          |

## Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.042 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.574 kJ/(kg*K)         |

| f (MHz) | Measured |        |       | Target |       | Diff to Target (%) |         |
|---------|----------|--------|-------|--------|-------|--------------------|---------|
|         | e'       | e''    | sigma | eps    | sigma | Δ-eps              | Δ-sigma |
| 20      | 54.4     | 663.46 | 0.74  | 55.2   | 0.75  | -1.5               | -1.1    |
| 25      | 54.1     | 530.83 | 0.74  | 55.1   | 0.75  | -1.8               | -1.1    |
| 30      | 54.1     | 442.69 | 0.74  | 55.0   | 0.75  | -1.6               | -1.2    |
| 35      | 54.0     | 380.50 | 0.74  | 54.9   | 0.75  | -1.6               | -1.3    |
| 40      | 54.3     | 333.21 | 0.74  | 54.8   | 0.75  | -0.9               | -1.3    |
| 45      | 54.0     | 296.78 | 0.74  | 54.7   | 0.75  | -1.2               | -1.4    |
| 50      | 53.9     | 267.29 | 0.74  | 54.6   | 0.75  | -1.2               | -1.4    |
| 55      | 53.9     | 243.63 | 0.75  | 54.4   | 0.75  | -1.0               | -0.1    |
| 60      | 53.5     | 223.41 | 0.75  | 54.3   | 0.75  | -1.5               | -0.2    |
| 65      | 53.4     | 206.42 | 0.75  | 54.2   | 0.75  | -1.5               | -0.3    |
| 70      | 53.2     | 191.91 | 0.75  | 54.1   | 0.75  | -1.7               | -0.3    |
| 75      | 53.0     | 179.54 | 0.75  | 54.0   | 0.75  | -1.8               | -0.4    |
| 80      | 53.1     | 168.58 | 0.75  | 53.9   | 0.75  | -1.4               | -0.4    |
| 85      | 52.9     | 159.16 | 0.75  | 53.8   | 0.75  | -1.8               | -0.5    |
| 90      | 52.8     | 150.53 | 0.75  | 53.7   | 0.75  | -1.6               | -0.5    |
| 95      | 52.6     | 142.85 | 0.75  | 53.5   | 0.75  | -1.8               | -0.6    |
| 100     | 52.6     | 136.08 | 0.76  | 53.4   | 0.75  | -1.8               | 0.7     |
| 105     | 52.6     | 129.84 | 0.76  | 53.3   | 0.76  | -1.3               | 0.6     |
| 110     | 52.4     | 124.22 | 0.76  | 53.2   | 0.76  | -1.5               | 0.6     |
| 115     | 52.4     | 119.11 | 0.76  | 53.1   | 0.76  | -1.3               | 0.5     |
| 120     | 52.2     | 114.42 | 0.76  | 53.0   | 0.76  | -1.5               | 0.5     |
| 125     | 52.1     | 110.08 | 0.77  | 52.9   | 0.76  | -1.4               | 1.7     |
| 130     | 52.0     | 106.10 | 0.77  | 52.8   | 0.76  | -1.4               | 1.7     |
| 135     | 51.9     | 102.44 | 0.77  | 52.6   | 0.76  | -1.4               | 1.6     |
| 140     | 51.9     | 99.02  | 0.77  | 52.5   | 0.76  | -1.2               | 1.6     |
| 145     | 51.7     | 95.89  | 0.77  | 52.4   | 0.76  | -1.4               | 1.5     |
| 150     | 51.7     | 92.91  | 0.78  | 52.3   | 0.76  | -1.1               | 2.8     |
| 155     | 51.6     | 90.14  | 0.78  | 52.1   | 0.76  | -0.9               | 2.3     |
| 160     | 51.5     | 87.54  | 0.78  | 51.8   | 0.77  | -0.6               | 1.8     |
| 165     | 51.4     | 85.10  | 0.78  | 51.6   | 0.77  | -0.4               | 1.3     |
| 170     | 51.3     | 82.78  | 0.78  | 51.4   | 0.77  | -0.1               | 0.8     |
| 175     | 51.2     | 80.67  | 0.79  | 51.1   | 0.78  | 0.1                | 1.6     |
| 180     | 51.1     | 78.63  | 0.79  | 50.9   | 0.78  | 0.4                | 1.2     |
| 185     | 51.0     | 76.69  | 0.79  | 50.7   | 0.78  | 0.7                | 0.7     |
| 190     | 51.0     | 74.91  | 0.79  | 50.4   | 0.79  | 1.1                | 0.2     |
| 195     | 50.9     | 73.18  | 0.79  | 50.2   | 0.79  | 1.4                | -0.2    |
| 200     | 50.8     | 71.54  | 0.80  | 50.0   | 0.80  | 1.7                | 0.6     |
| 205     | 50.7     | 69.96  | 0.80  | 49.7   | 0.80  | 2.0                | 0.1     |
| 210     | 50.6     | 68.49  | 0.80  | 49.5   | 0.80  | 2.2                | -0.4    |
| 215     | 50.5     | 67.08  | 0.80  | 49.3   | 0.81  | 2.5                | -0.8    |
| 220     | 50.4     | 65.74  | 0.80  | 49.0   | 0.81  | 2.8                | -1.3    |
| 225     | 50.3     | 64.45  | 0.81  | 48.8   | 0.81  | 3.1                | -0.5    |
| 230     | 50.3     | 63.25  | 0.81  | 48.6   | 0.82  | 3.6                | -0.9    |
| 235     | 50.2     | 62.07  | 0.81  | 48.3   | 0.82  | 3.9                | -1.4    |
| 240     | 50.1     | 60.96  | 0.81  | 48.1   | 0.82  | 4.2                | -1.8    |
| 245     | 50.0     | 59.88  | 0.82  | 47.9   | 0.83  | 4.4                | -1.0    |
| 250     | 49.9     | 58.87  | 0.82  | 47.6   | 0.83  | 4.8                | -1.5    |

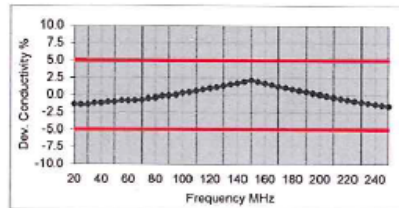
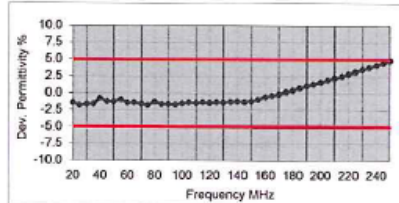


Figure D-1  
13 MHz Tissue Equivalent Matter

|                           |                                                                                     |                       |                                 |
|---------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------|
| Model: AURA Antenna       |  | SAR EVALUATION REPORT | Approved by:<br>Quality Manager |
| Test Dates:<br>07/25/2018 | DUT Type:<br>Wireless Power Transfer Device                                         |                       | APPENDIX D:<br>Page 2 of 2      |

## APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table E-1**  
**SAR System Validation Summary – 1g**

| SAR SYSTEM # | FREQ. [MHz] | DATE      | PROBE SN | PROBE TYPE | PROBE CAL. POINT |      | COND.        | PERM.            | CW VALIDATION |                 |                | MOD. VALIDATION |             |     |
|--------------|-------------|-----------|----------|------------|------------------|------|--------------|------------------|---------------|-----------------|----------------|-----------------|-------------|-----|
|              |             |           |          |            |                  |      | ( $\sigma$ ) | ( $\epsilon_r$ ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR |
| J            | 13          | 7/24/2018 | 3914     | EX3DV4     | 13               | Head | 0.744        | 53.074           | PASS          | PASS            | PASS           | N/A             | N/A         | N/A |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

|                           |                                                                                     |                       |                                 |
|---------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------|
| Model: AURA Antenna       |  | SAR EVALUATION REPORT | Approved by:<br>Quality Manager |
| Test Dates:<br>07/25/2018 | DUT Type:<br>Wireless Power Transfer Device                                         |                       | APPENDIX E:<br>Page 1 of 1      |

## APPENDIX G: ADDITIONAL SAR TESTING CONSIDERATIONS

### 1.1 SAR Test Procedures for Point SAR Evaluation

1. Evaluated SAR with the device positioned in direct contact with the bottom of the flat phantom.
2. After SAR test was completed, the probe was moved to approximate center of peak distribution. At this location, Time Sweep was run (Test Case 1) and a point SAR value was taken.
3. Positioned AURA Antenna against the side wall of the phantom. Moved the probe close to edge to approximately match the point SAR value found in step 2. Another Time Sweep was taken at this location with the AURA Sensor not in the liquid (Test Case 2).
4. Inserted an inactive AURA sensor into the liquid far away from probe and transmitter. Using the SAR measurement system, a multi-meter was configured to perform continuous point SAR measurements. The sensor was continuously moved closer to probe to and the point SAR levels were monitored to confirm that the presence of AURA sensor did not significantly impact the point SAR levels.
5. Time Sweeps were taken at the farthest point from the probe (Test Case 3) and at a point close to the probe (Test Case 4) to show that there was not a significant impact in Average Peak SAR due to the presence of the AURA Sensor.

### 1.2 Additional Evaluations to Confirm Sensor Proximity Impact

Table G-1  
AURA Antenna with AURA Sensor Head SAR Data

| MEASUREMENT RESULTS |           |              |                      |                 |                     |                      |                  |                |
|---------------------|-----------|--------------|----------------------|-----------------|---------------------|----------------------|------------------|----------------|
| FREQUENCY           | Test Case | Device       | Antenna Position     | Sensor Position | Color in Figure 1-1 | Device Serial Number | Average Peak SAR | Deviation* (%) |
| MHz                 |           |              |                      |                 |                     |                      | (W/kg)           |                |
| 13.56               | 1         | AURA Antenna | Normal test position | N/A             | Blue                | RD-0059              | 2.103            | -              |
| 13.56               | 2         | AURA Antenna | Side of ELI phantom  | N/A             | Green               | RD-0059              | 2.149            | -              |
| 13.56               | 3         | AURA Antenna | Side of ELI phantom  | Far from probe  | Yellow              | RD-0059              | 2.104            | -2.094         |
| 13.56               | 4         | AURA Antenna | Side of ELI phantom  | Near probe      | Pink                | RD-0059              | 2.005            | -6.701         |

Note: Deviation was calculated with respect to Test Case 2, when the AURA Sensor was not submerged in the liquid. Test Case 2 was positioned to approximately match the maximum Average Peak SAR found in Test Case 1.

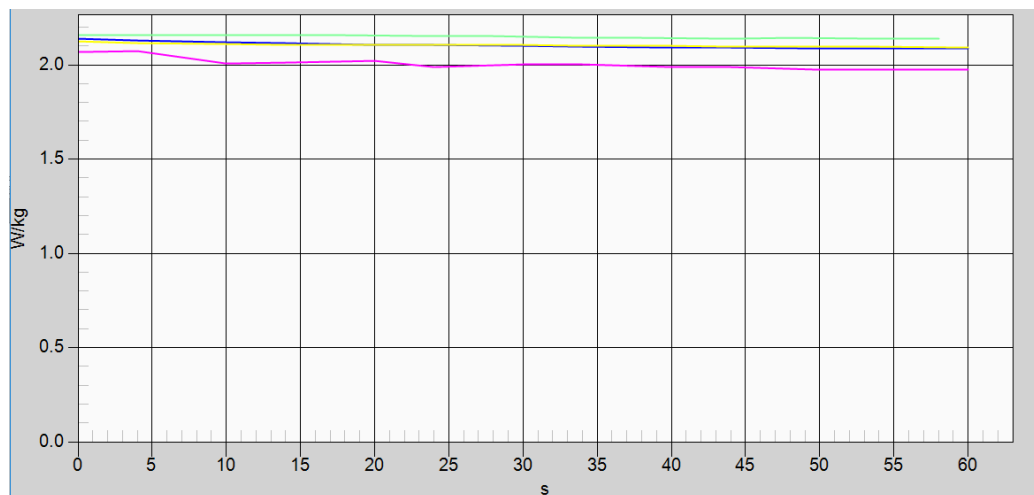


Figure G-1  
Time Sweep Average Peak SAR Graph

|                           |                                                                                                           |                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------|
| Model: AURA Antenna       |  SAR EVALUATION REPORT | Approved by:<br>Quality Manager |
| Test Dates:<br>07/25/2018 | DUT Type:<br>Wireless Power Transfer Device                                                               | APPENDIX G:<br>Page 1 of 1      |