

#### **12.4. Calibration Certificate for E-Field Probes**

This sub-section contains Cal Certificates for E-Field Probes, and is not included in the total number of pages for this report.

A2545

Checked  
M. N. Lorenz  
09/05/2018

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Multilateral Agreement for the recognition of calibration certificates

Client **UL RFI UK**

Certificate No: **EX3-3995\_Apr18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3995**

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

Calibration date: **April 24, 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-18 (No. 217-02672/02673)   | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-18 (No. 217-02672)         | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-18 (No. 217-02673)         | Apr-19                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 04-Apr-18 (No. 217-02682)         | Apr-19                 |
| Reference Probe ES3DV2     | SN: 3013         | 30-Dec-17 (No. ES3-3013_Dec17)    | Dec-18                 |
| DAE4                       | SN: 660          | 21-Dec-17 (No. DAE4-660_Dec17)    | Dec-18                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-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 |

|                                                                                                                 |                       |                                   |                        |
|-----------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------|------------------------|
| Calibrated by:                                                                                                  | Name<br>Michael Weber | Function<br>Laboratory Technician | Signature<br>          |
| Approved by:                                                                                                    | Katja Pokovic         | Technical Manager                 |                        |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                       |                                   | Issued: April 25, 2018 |



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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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:3995

Manufactured: January 21, 2014  
Calibrated: April 24, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3995

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.49     | 0.36     | 0.53     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 102.7    | 103.6    | 102.5    |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 144.3    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 159.3    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 142.2    |                           |

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 | 48.27    | 356.2    | 35.29                       | 23.55                               | 0.884                               | 5.100    | 1.161                 | 0.396                 | 1.009 |
| Y | 32.67    | 242.9    | 35.38                       | 9.987                               | 1.129                               | 5.007    | 0.597                 | 0.371                 | 1.006 |
| Z | 40.47    | 294.9    | 34.25                       | 18.59                               | 0.568                               | 5.095    | 2.000                 | 0.156                 | 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:3995

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.48   | 10.48   | 10.48   | 0.52               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.22   | 10.22   | 10.22   | 0.46               | 0.80                    | ± 12.0 %  |
| 900                  | 41.5                               | 0.97                            | 9.95    | 9.95    | 9.95    | 0.53               | 0.80                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.74    | 8.74    | 8.74    | 0.37               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.51    | 8.51    | 8.51    | 0.49               | 0.85                    | ± 12.0 %  |
| 2100                 | 39.8                               | 1.49                            | 8.67    | 8.67    | 8.67    | 0.40               | 0.80                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.07    | 8.07    | 8.07    | 0.37               | 0.85                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.74    | 7.74    | 7.74    | 0.36               | 0.85                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.41    | 7.41    | 7.41    | 0.41               | 0.87                    | ± 12.0 %  |
| 3500                 | 37.9                               | 2.91                            | 7.18    | 7.18    | 7.18    | 0.23               | 1.20                    | ± 13.1 %  |
| 5250                 | 35.9                               | 4.71                            | 5.33    | 5.33    | 5.33    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 5.04    | 5.04    | 5.04    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.26    | 5.26    | 5.26    | 0.40               | 1.80                    | ± 13.1 %  |

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3995

### 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                            | 10.26   | 10.26   | 10.26   | 0.46               | 0.80                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.04   | 10.04   | 10.04   | 0.50               | 0.80                    | ± 12.0 %  |
| 900                  | 55.0                               | 1.05                            | 9.96    | 9.96    | 9.96    | 0.45               | 0.84                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.37    | 8.37    | 8.37    | 0.42               | 0.84                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 8.10    | 8.10    | 8.10    | 0.41               | 0.80                    | ± 12.0 %  |
| 2100                 | 53.2                               | 1.62                            | 8.51    | 8.51    | 8.51    | 0.37               | 0.85                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.65    | 7.65    | 7.65    | 0.46               | 0.84                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.69    | 7.69    | 7.69    | 0.32               | 0.89                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.52    | 7.52    | 7.52    | 0.36               | 0.84                    | ± 12.0 %  |
| 3500                 | 51.3                               | 3.31                            | 6.87    | 6.87    | 6.87    | 0.25               | 1.25                    | ± 13.1 %  |
| 5250                 | 48.9                               | 5.36                            | 4.78    | 4.78    | 4.78    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.36    | 4.36    | 4.36    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.57    | 4.57    | 4.57    | 0.50               | 1.90                    | ± 13.1 %  |

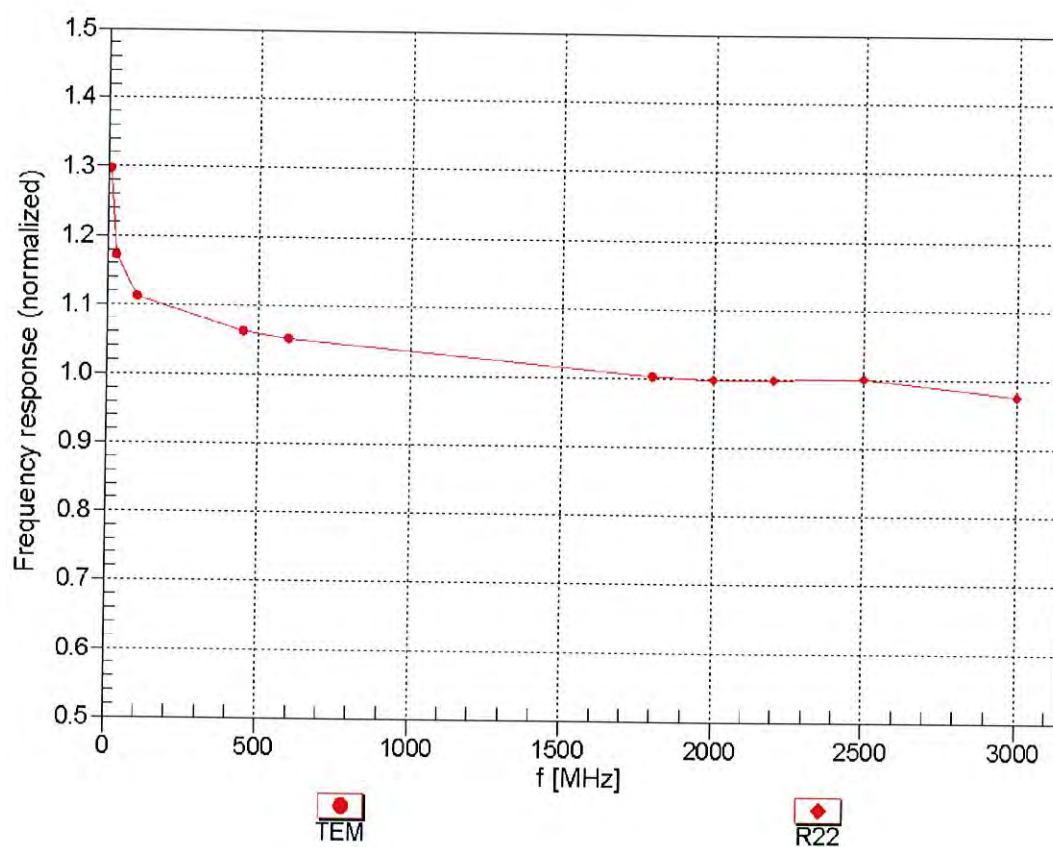
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

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

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

## Frequency Response of E-Field

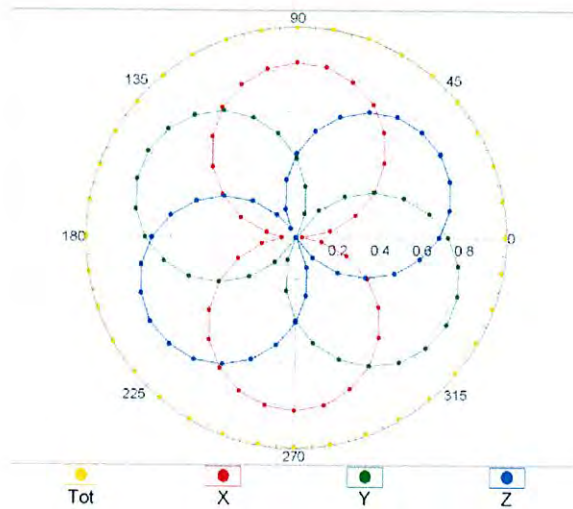
(TEM-Cell:ifi110 EXX, Waveguide: R22)



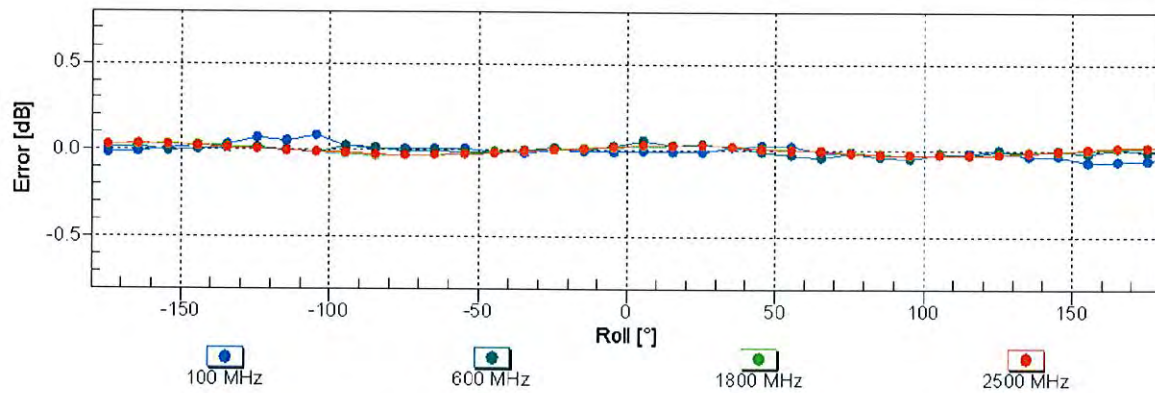
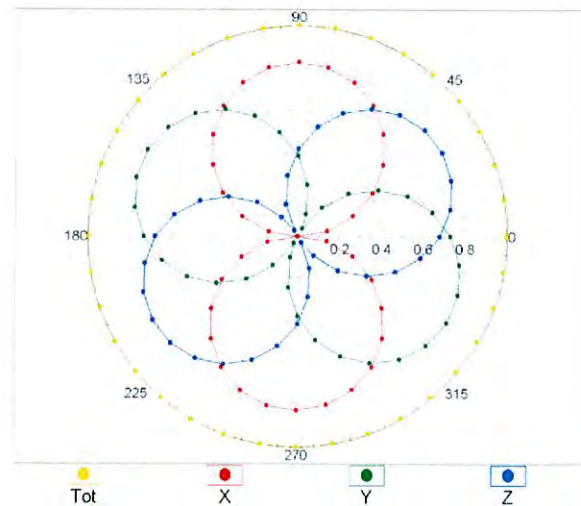
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

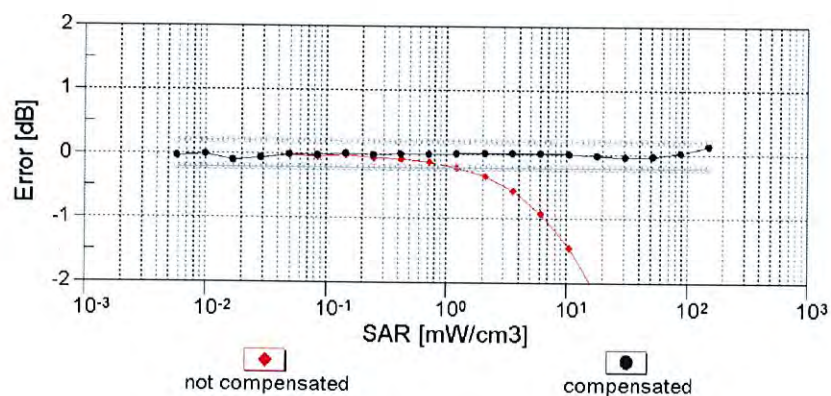
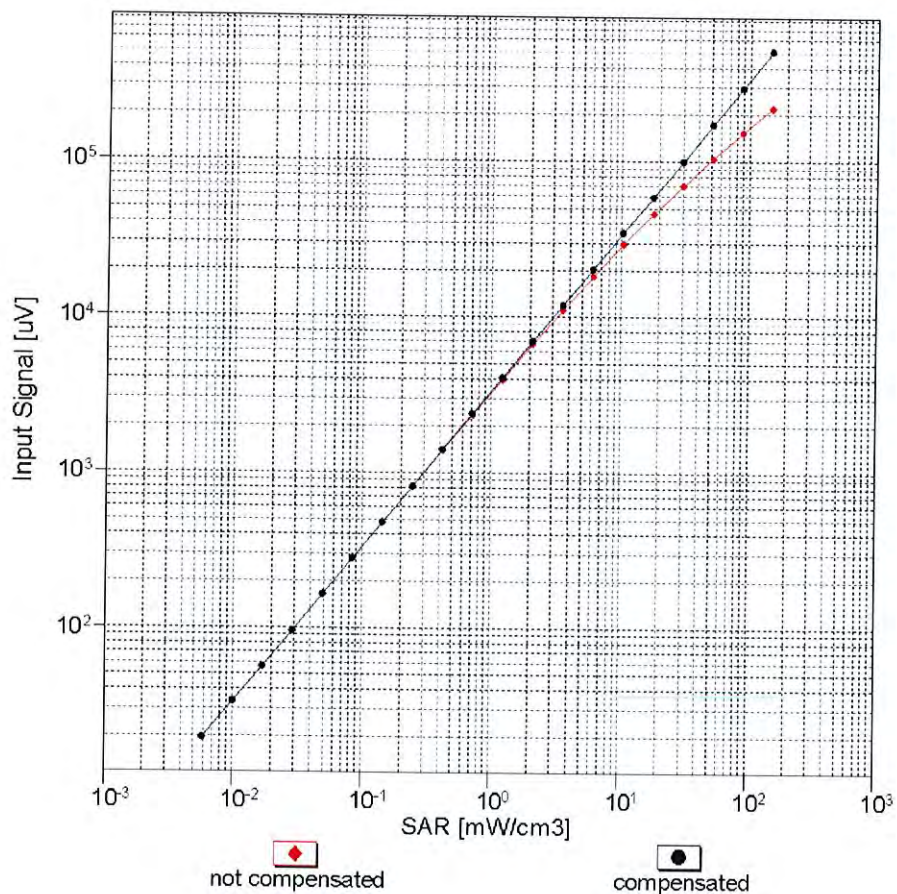


f=1800 MHz,R22



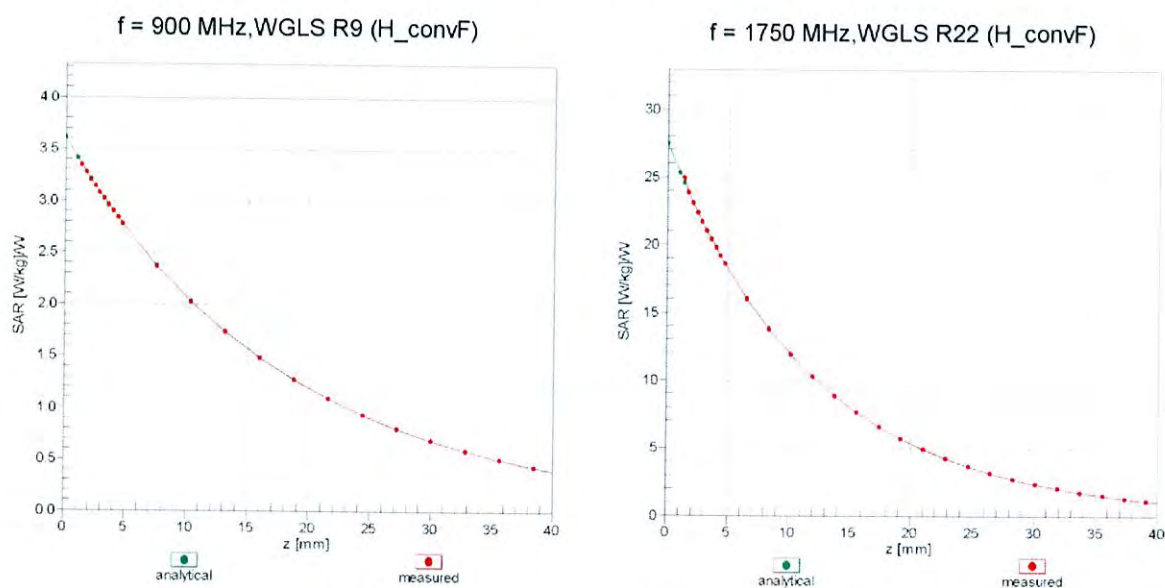
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



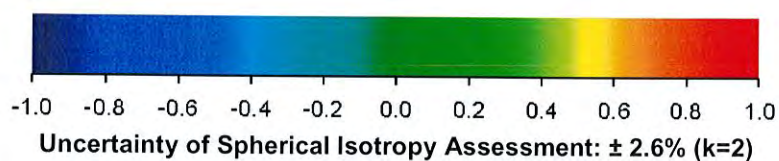
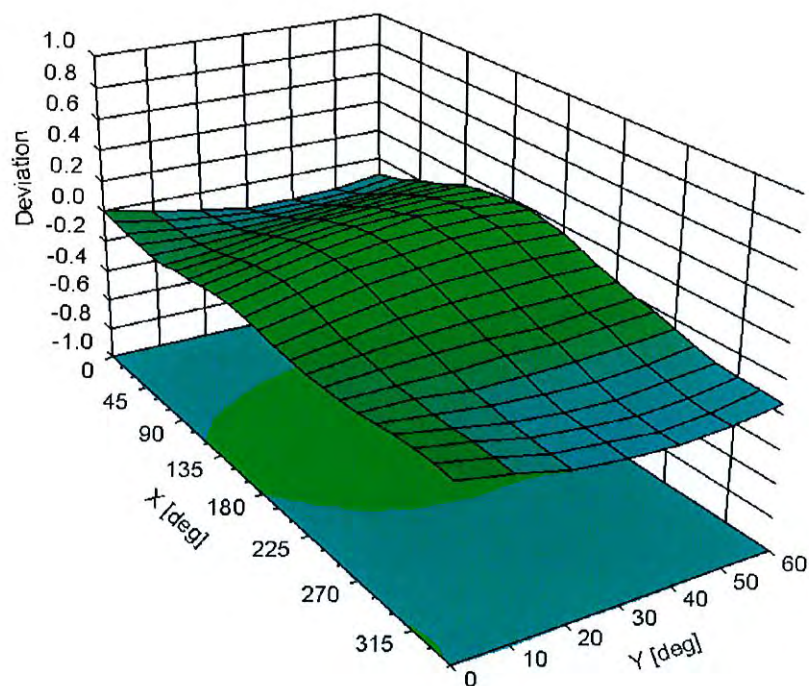
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900 \text{ MHz}$



Uncertainty of Spherical Isotropy Assessment:  $\pm 2.6\%$  ( $k=2$ )

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3995

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | -44.6      |
| 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    | 144.3    | $\pm 3.3 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 159.3    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 142.2    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 95.22   | 109.63                 | 25.46 | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 2.30    | 64.12                  | 9.40  |         | 20.0     |                                  |
|               |                                               | Z | 39.91   | 98.51                  | 22.05 |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 2.52    | 85.20                  | 24.22 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 0.91    | 68.50                  | 15.10 |         | 150.0    |                                  |
|               |                                               | Z | 1.22    | 71.24                  | 17.53 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.41    | 68.39                  | 18.74 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.06    | 64.20                  | 15.17 |         | 150.0    |                                  |
|               |                                               | Z | 1.26    | 65.62                  | 16.51 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.02    | 67.52                  | 17.85 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.56    | 66.85                  | 16.91 |         | 150.0    |                                  |
|               |                                               | Z | 4.87    | 67.25                  | 17.43 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 119.81                 | 30.90 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 8.46    | 79.91                  | 17.33 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 119.74                 | 30.35 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 119.54                 | 30.82 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 6.68    | 76.76                  | 16.22 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 119.23                 | 30.16 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 119.02                 | 29.58 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 11.80   | 84.16                  | 17.13 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 119.42                 | 29.26 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 13.64   | 105.97                 | 42.47 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 3.84    | 65.99                  | 22.46 |         | 50.0     |                                  |
|               |                                               | Z | 8.01    | 90.96                  | 36.82 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 35.11   | 125.23                 | 43.95 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 7.90    | 86.97                  | 29.75 |         | 60.0     |                                  |
|               |                                               | Z | 16.37   | 107.56                 | 38.73 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 121.03                 | 29.72 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 103.04                 | 20.57 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 121.62                 | 29.49 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 125.43                 | 30.92 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 100.74                 | 18.89 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 125.73                 | 30.57 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 14.50   | 102.31                 | 35.48 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.29    | 79.06                  | 25.68 |         | 80.0     |                                  |
|               |                                               | Z | 8.49    | 90.68                  | 31.43 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 118.43                 | 28.85 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.41    | 74.51                  | 13.26 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 118.35                 | 28.32 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 137.91                 | 34.59 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 0.32    | 60.00                  | 4.68  |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 132.02                 | 31.65 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 168.44 | 45.61 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.22   | 60.00  | 3.28  |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 149.49 | 37.51 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 100.00 | 129.68 | 35.61 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 4.45   | 75.97  | 16.75 |       | 70.0  |         |
|           |                                                     | Z | 100.00 | 128.40 | 34.56 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 100.00 | 130.65 | 34.30 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.57   | 67.49  | 11.58 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 125.53 | 31.57 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 100.00 | 131.93 | 34.37 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.14   | 65.62  | 10.43 |       | 100.0 |         |
|           |                                                     | Z | 24.24  | 106.54 | 26.73 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 100.00 | 130.06 | 35.79 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 5.18   | 78.12  | 17.59 |       | 70.0  |         |
|           |                                                     | Z | 100.00 | 128.86 | 34.77 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 100.00 | 130.67 | 34.27 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.46   | 66.85  | 11.29 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 125.55 | 31.54 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 100.00 | 132.82 | 34.76 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.16   | 65.98  | 10.72 |       | 100.0 |         |
|           |                                                     | Z | 25.86  | 108.08 | 27.29 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 100.00 | 132.84 | 34.21 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.77   | 63.99  | 9.29  |       | 150.0 |         |
|           |                                                     | Z | 3.79   | 82.91  | 19.48 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 115.89 | 28.31 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 3.93   | 71.53  | 12.94 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 115.68 | 27.74 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 123.15 | 8.76  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.31   | 135.07 | 15.92 |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 100.96 | 0.72  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 100.00 | 121.32 | 32.89 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 5.60   | 70.79  | 15.40 |       | 25.0  |         |
|           |                                                     | Z | 100.00 | 119.96 | 31.70 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 100.00 | 119.14 | 30.91 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 5.57   | 73.28  | 15.15 |       | 40.0  |         |
|           |                                                     | Z | 100.00 | 118.11 | 29.91 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 100.00 | 126.07 | 35.16 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 7.02   | 77.86  | 18.23 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 125.69 | 34.49 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 9.10   | 91.66  | 30.96 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.18   | 75.08  | 23.38 |       | 100.0 |         |
|           |                                                     | Z | 6.05   | 83.12  | 27.64 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.64   | 71.64  | 20.33 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.10   | 65.39  | 15.73 |       | 110.0 |         |
|           |                                                     | Z | 1.37   | 67.54  | 17.55 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 147.47 | 40.39 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 84.53  | 128.04 | 31.27 |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 143.09 | 38.22 |       | 110.0 |         |

|           |                                                |   |        |        |       |      |       |         |
|-----------|------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 100.00 | 145.63 | 41.61 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 3.02   | 81.14  | 21.45 |      | 110.0 |         |
|           |                                                | Z | 14.12  | 108.99 | 32.01 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.81   | 67.49  | 17.25 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.35   | 66.80  | 16.37 |      | 100.0 |         |
|           |                                                | Z | 4.64   | 67.16  | 16.79 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.84   | 67.62  | 17.38 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.37   | 66.91  | 16.46 |      | 100.0 |         |
|           |                                                | Z | 4.67   | 67.29  | 16.91 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.12   | 67.85  | 17.58 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.60   | 67.08  | 16.63 |      | 100.0 |         |
|           |                                                | Z | 4.93   | 67.50  | 17.11 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.01   | 67.83  | 17.74 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.48   | 66.93  | 16.69 |      | 100.0 |         |
|           |                                                | Z | 4.82   | 67.44  | 17.26 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.04   | 67.89  | 17.93 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.49   | 66.93  | 16.83 |      | 100.0 |         |
|           |                                                | Z | 4.84   | 67.48  | 17.44 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.33   | 68.00  | 18.34 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.78   | 67.21  | 17.29 |      | 100.0 |         |
|           |                                                | Z | 5.15   | 67.73  | 17.93 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.40   | 68.13  | 18.60 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.83   | 67.15  | 17.45 |      | 100.0 |         |
|           |                                                | Z | 5.19   | 67.73  | 18.14 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.48   | 68.08  | 18.77 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.89   | 67.17  | 17.63 |      | 100.0 |         |
|           |                                                | Z | 5.27   | 67.74  | 18.33 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.13   | 67.64  | 18.17 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.67   | 66.94  | 17.19 |      | 100.0 |         |
|           |                                                | Z | 4.98   | 67.37  | 17.76 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.15   | 68.12  | 18.49 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.63   | 67.20  | 17.37 |      | 100.0 |         |
|           |                                                | Z | 4.97   | 67.76  | 18.03 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.24   | 68.38  | 18.87 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.72   | 67.44  | 17.71 |      | 100.0 |         |
|           |                                                | Z | 5.06   | 68.01  | 18.42 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.24   | 68.32  | 19.05 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.75   | 67.45  | 17.87 |      | 100.0 |         |
|           |                                                | Z | 5.06   | 67.97  | 18.61 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.31   | 68.57  | 19.44 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.79   | 67.49  | 18.11 |      | 90.0  |         |
|           |                                                | Z | 5.11   | 68.10  | 18.94 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.32   | 68.32  | 19.54 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.85   | 67.41  | 18.29 |      | 90.0  |         |
|           |                                                | Z | 5.14   | 67.94  | 19.09 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.34   | 68.39  | 19.64 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.89   | 67.53  | 18.41 |      | 90.0  |         |
|           |                                                | Z | 5.17   | 68.03  | 19.20 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 53.65  | 128.43 | 33.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.36   | 60.22  | 6.42  |      | 150.0 |         |
|           |                                                     | Z | 1.16   | 71.39  | 14.87 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 1.17   | 60.98  | 6.16  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.75   | 60.00  | 4.24  |      | 80.0  |         |
|           |                                                     | Z | 0.88   | 60.00  | 5.21  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 119.06 | 29.62 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 12.02  | 84.36  | 17.22 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 119.44 | 29.29 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 2.52   | 74.39  | 19.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.76   | 69.27  | 15.65 |      | 150.0 |         |
|           |                                                     | Z | 2.02   | 70.25  | 17.00 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 2.48   | 74.51  | 19.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.72   | 69.21  | 15.63 |      | 150.0 |         |
|           |                                                     | Z | 1.98   | 70.23  | 16.99 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 35.36  | 125.36 | 43.97 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 7.94   | 87.03  | 29.77 |      | 60.0  |         |
|           |                                                     | Z | 16.55  | 107.78 | 38.80 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 4.07   | 75.64  | 19.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.89   | 70.56  | 16.77 |      | 150.0 |         |
|           |                                                     | Z | 3.30   | 71.93  | 17.64 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.54   | 69.70  | 17.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.98   | 67.51  | 15.84 |      | 150.0 |         |
|           |                                                     | Z | 3.26   | 68.24  | 16.41 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.63   | 69.49  | 17.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.08   | 67.55  | 15.97 |      | 150.0 |         |
|           |                                                     | Z | 3.36   | 68.18  | 16.47 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 10.11  | 83.80  | 23.97 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.63   | 74.46  | 19.60 |      | 65.0  |         |
|           |                                                     | Z | 8.47   | 81.35  | 22.96 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.37   | 78.87  | 22.91 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.67   | 72.55  | 19.52 |      | 65.0  |         |
|           |                                                     | Z | 7.23   | 76.71  | 21.87 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 7.59   | 76.85  | 22.36 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.29   | 71.10  | 19.18 |      | 65.0  |         |
|           |                                                     | Z | 7.07   | 76.17  | 21.94 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.54   | 74.89  | 19.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.47   | 70.00  | 16.63 |      | 150.0 |         |
|           |                                                     | Z | 2.86   | 71.20  | 17.50 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.23   | 69.95  | 17.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.62   | 67.60  | 15.71 |      | 150.0 |         |
|           |                                                     | Z | 2.92   | 68.29  | 16.38 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.97   | 74.72  | 19.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.95   | 69.29  | 16.03 |      | 150.0 |         |
|           |                                                     | Z | 2.33   | 70.59  | 17.22 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 3.13   | 72.20  | 18.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.42   | 69.32  | 16.04 |      | 150.0 |         |
|           |                                                     | Z | 2.72   | 69.89  | 16.96 |      | 150.0 |         |

|           |                                                |   |        |        |       |      |       |         |
|-----------|------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.33   | 69.73  | 17.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.75   | 67.70  | 15.81 |      | 150.0 |         |
|           |                                                | Z | 3.04   | 68.27  | 16.42 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 3.27   | 72.03  | 18.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.57   | 69.53  | 16.21 |      | 150.0 |         |
|           |                                                | Z | 2.87   | 69.98  | 17.05 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.23   | 67.88  | 17.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.81   | 67.16  | 16.39 |      | 150.0 |         |
|           |                                                | Z | 5.06   | 67.46  | 16.60 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.51   | 67.94  | 17.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.04   | 67.19  | 16.40 |      | 150.0 |         |
|           |                                                | Z | 5.31   | 67.49  | 16.61 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.33   | 68.08  | 17.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.88   | 67.32  | 16.39 |      | 150.0 |         |
|           |                                                | Z | 5.14   | 67.64  | 16.62 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.19   | 67.73  | 16.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.79   | 67.07  | 16.36 |      | 150.0 |         |
|           |                                                | Z | 5.04   | 67.36  | 16.57 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.60   | 68.16  | 17.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.11   | 67.39  | 16.50 |      | 150.0 |         |
|           |                                                | Z | 5.38   | 67.65  | 16.70 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.31   | 68.02  | 17.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.89   | 67.34  | 16.41 |      | 150.0 |         |
|           |                                                | Z | 5.13   | 67.60  | 16.61 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.67   | 69.49  | 17.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.10   | 67.56  | 15.86 |      | 150.0 |         |
|           |                                                | Z | 3.39   | 68.20  | 16.39 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.78   | 69.47  | 17.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.23   | 67.78  | 16.09 |      | 150.0 |         |
|           |                                                | Z | 3.51   | 68.30  | 16.55 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 3.01   | 76.73  | 20.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.70   | 69.08  | 15.06 |      | 150.0 |         |
|           |                                                | Z | 2.17   | 71.22  | 17.06 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 3.44   | 75.37  | 19.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.16   | 69.21  | 14.68 |      | 150.0 |         |
|           |                                                | Z | 2.71   | 71.47  | 16.88 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.80   | 70.97  | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.73   | 65.33  | 12.19 |      | 150.0 |         |
|           |                                                | Z | 2.28   | 67.93  | 14.67 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 3.84   | 81.95  | 19.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.57   | 60.00  | 6.10  |      | 150.0 |         |
|           |                                                | Z | 1.21   | 66.08  | 11.77 |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 16.65  | 93.86  | 22.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.85   | 60.00  | 5.74  |      | 150.0 |         |
|           |                                                | Z | 2.05   | 67.10  | 11.28 |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 100.00 | 117.23 | 28.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.86   | 60.00  | 5.80  |      | 150.0 |         |
|           |                                                | Z | 2.81   | 70.56  | 12.89 |      | 150.0 |         |

|           |                                            |   |       |       |       |      |       |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.24  | 70.03 | 17.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.64  | 67.69 | 15.77 |      | 150.0 |         |
|           |                                            | Z | 2.93  | 68.37 | 16.44 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.34  | 69.80 | 17.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.76  | 67.78 | 15.86 |      | 150.0 |         |
|           |                                            | Z | 3.05  | 68.34 | 16.47 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 12.13 | 88.77 | 25.89 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.06  | 77.37 | 20.72 |      | 65.0  |         |
|           |                                            | Z | 9.54  | 85.21 | 24.49 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.17  | 79.68 | 22.97 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.16  | 72.33 | 18.90 |      | 65.0  |         |
|           |                                            | Z | 6.89  | 77.17 | 21.73 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.64  | 80.69 | 23.74 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.62  | 73.74 | 19.92 |      | 65.0  |         |
|           |                                            | Z | 7.37  | 78.34 | 22.57 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 3.09  | 75.50 | 20.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.01  | 69.83 | 16.35 |      | 150.0 |         |
|           |                                            | Z | 2.39  | 71.09 | 17.51 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 3.14  | 72.22 | 18.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.43  | 69.38 | 16.09 |      | 150.0 |         |
|           |                                            | Z | 2.73  | 69.92 | 16.98 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 3.22  | 79.25 | 20.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.47  | 68.34 | 14.10 |      | 150.0 |         |
|           |                                            | Z | 2.06  | 71.79 | 16.99 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.97  | 73.71 | 17.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.49  | 64.99 | 11.47 |      | 150.0 |         |
|           |                                            | Z | 2.19  | 69.01 | 14.88 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 3.28  | 72.13 | 18.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59  | 69.66 | 16.29 |      | 150.0 |         |
|           |                                            | Z | 2.88  | 70.07 | 17.11 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 3.19  | 74.53 | 18.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.55  | 65.27 | 11.65 |      | 150.0 |         |
|           |                                            | Z | 2.32  | 69.59 | 15.20 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.28  | 72.60 | 18.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.51  | 69.28 | 16.38 |      | 150.0 |         |
|           |                                            | Z | 2.82  | 70.00 | 17.10 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.25  | 69.89 | 17.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.65  | 67.77 | 15.72 |      | 150.0 |         |
|           |                                            | Z | 2.95  | 68.36 | 16.41 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.36  | 69.95 | 17.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.77  | 68.04 | 15.89 |      | 150.0 |         |
|           |                                            | Z | 3.07  | 68.54 | 16.53 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.06  | 72.59 | 21.10 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.14  | 69.64 | 19.18 |      | 150.0 |         |
|           |                                            | Z | 3.76  | 71.70 | 20.34 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.59  | 77.50 | 22.24 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.83  | 72.79 | 19.61 |      | 150.0 |         |
|           |                                            | Z | 5.21  | 76.95 | 21.62 |      | 150.0 |         |

|           |                                            |   |        |        |       |      |       |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.53   | 80.93  | 23.98 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.59   | 76.73  | 21.76 |      | 150.0 |         |
|           |                                            | Z | 6.22   | 80.76  | 23.52 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.62   | 73.51  | 21.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.62   | 68.32  | 18.54 |      | 150.0 |         |
|           |                                            | Z | 3.29   | 72.02  | 20.54 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 6.63   | 85.06  | 25.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.73   | 75.41  | 21.45 |      | 150.0 |         |
|           |                                            | Z | 6.17   | 84.12  | 25.03 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 4.81   | 77.94  | 22.07 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.85   | 69.78  | 17.83 |      | 150.0 |         |
|           |                                            | Z | 4.35   | 76.60  | 21.04 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 100.00 | 142.80 | 43.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.82   | 81.47  | 24.36 |      | 65.0  |         |
|           |                                            | Z | 51.21  | 130.96 | 40.98 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 100.00 | 132.49 | 38.56 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.56   | 88.37  | 24.76 |      | 65.0  |         |
|           |                                            | Z | 100.00 | 134.28 | 38.84 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 100.00 | 130.12 | 37.31 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.76   | 78.33  | 20.77 |      | 65.0  |         |
|           |                                            | Z | 100.00 | 131.93 | 37.58 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.56   | 73.07  | 21.31 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.58   | 67.94  | 18.24 |      | 150.0 |         |
|           |                                            | Z | 3.24   | 71.61  | 20.25 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 6.64   | 85.10  | 25.86 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.74   | 75.44  | 21.47 |      | 150.0 |         |
|           |                                            | Z | 6.19   | 84.16  | 25.05 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.60   | 73.29  | 21.43 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.60   | 68.09  | 18.33 |      | 150.0 |         |
|           |                                            | Z | 3.27   | 71.79  | 20.35 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 6.52   | 84.69  | 25.68 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.70   | 75.21  | 21.35 |      | 150.0 |         |
|           |                                            | Z | 6.09   | 83.81  | 24.90 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 5.64   | 81.36  | 23.83 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.22   | 72.30  | 19.43 |      | 150.0 |         |
|           |                                            | Z | 5.15   | 80.12  | 22.88 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 4.78   | 77.81  | 22.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.85   | 69.73  | 17.79 |      | 150.0 |         |
|           |                                            | Z | 4.33   | 76.49  | 20.98 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.59   | 73.26  | 21.42 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59   | 68.07  | 18.32 |      | 150.0 |         |
|           |                                            | Z | 3.26   | 71.77  | 20.34 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 6.50   | 84.65  | 25.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.69   | 75.18  | 21.33 |      | 150.0 |         |
|           |                                            | Z | 6.07   | 83.77  | 24.88 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 4.77   | 77.77  | 21.98 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84   | 69.70  | 17.78 |      | 150.0 |         |
|           |                                            | Z | 4.32   | 76.46  | 20.97 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.60 | 73.32 | 21.45 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.60 | 68.12 | 18.35 |      | 150.0 |         |
|           |                                               | Z | 3.28 | 71.82 | 20.36 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 6.55 | 84.77 | 25.71 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.72 | 75.28 | 21.38 |      | 150.0 |         |
|           |                                               | Z | 6.12 | 83.89 | 24.93 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 4.80 | 77.87 | 22.03 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.86 | 69.77 | 17.82 |      | 150.0 |         |
|           |                                               | Z | 4.35 | 76.56 | 21.01 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.62 | 73.38 | 21.52 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.62 | 68.22 | 18.45 |      | 150.0 |         |
|           |                                               | Z | 3.29 | 71.91 | 20.45 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 6.91 | 85.96 | 26.26 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.87 | 76.16 | 21.86 |      | 150.0 |         |
|           |                                               | Z | 6.47 | 85.08 | 25.48 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 4.98 | 78.59 | 22.40 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.93 | 70.25 | 18.13 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 77.26 | 21.39 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.63 | 67.39 | 16.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 66.89 | 16.08 |      | 150.0 |         |
|           |                                               | Z | 4.47 | 67.05 | 16.35 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.81 | 67.71 | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.35 | 67.10 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.63 | 67.32 | 16.47 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.85 | 67.73 | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.38 | 67.11 | 16.23 |      | 150.0 |         |
|           |                                               | Z | 4.66 | 67.35 | 16.49 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.64 | 67.46 | 16.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.20 | 66.87 | 16.06 |      | 150.0 |         |
|           |                                               | Z | 4.46 | 67.08 | 16.35 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.82 | 67.73 | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.36 | 67.10 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.64 | 67.33 | 16.48 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.85 | 67.75 | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.37 | 67.10 | 16.23 |      | 150.0 |         |
|           |                                               | Z | 4.66 | 67.35 | 16.50 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.59 | 67.51 | 16.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.15 | 66.93 | 16.04 |      | 150.0 |         |
|           |                                               | Z | 4.42 | 67.12 | 16.33 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.81 | 67.70 | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.35 | 67.06 | 16.21 |      | 150.0 |         |
|           |                                               | Z | 4.63 | 67.30 | 16.47 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.86 | 67.66 | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.39 | 67.05 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.67 | 67.28 | 16.48 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.17 | 67.75 | 16.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.07 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 5.01 | 67.36 | 16.56 |      | 150.0 |         |

|           |                                           |   |        |        |       |      |       |         |
|-----------|-------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.46   | 67.88  | 17.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.01   | 67.21  | 16.43 |      | 150.0 |         |
|           |                                           | Z | 5.29   | 67.54  | 16.66 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.22   | 67.88  | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.81   | 67.20  | 16.34 |      | 150.0 |         |
|           |                                           | Z | 5.05   | 67.47  | 16.54 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 3.02   | 68.09  | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.50   | 66.39  | 14.71 |      | 150.0 |         |
|           |                                           | Z | 2.80   | 67.01  | 15.68 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 100.00 | 132.72 | 38.71 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.34   | 89.97  | 25.38 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 134.54 | 39.00 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 100.00 | 130.15 | 37.37 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.49   | 87.20  | 23.81 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 131.60 | 37.47 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 100.00 | 142.81 | 43.84 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.26   | 86.70  | 26.34 |      | 65.0  |         |
|           |                                           | Z | 55.72  | 133.15 | 41.64 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 100.00 | 132.47 | 38.56 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.63   | 88.49  | 24.80 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 134.26 | 38.84 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 100.00 | 129.99 | 37.25 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.84   | 85.84  | 23.28 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 131.43 | 37.36 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 100.00 | 142.62 | 43.72 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.93   | 85.57  | 25.85 |      | 65.0  |         |
|           |                                           | Z | 48.20  | 129.90 | 40.73 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 100.00 | 132.49 | 38.56 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.62   | 88.48  | 24.80 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 134.28 | 38.84 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 100.00 | 130.01 | 37.26 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.82   | 85.81  | 23.27 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 131.46 | 37.37 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 100.00 | 142.27 | 43.51 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.68   | 84.61  | 25.38 |      | 65.0  |         |
|           |                                           | Z | 43.09  | 127.21 | 39.89 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 100.00 | 132.51 | 38.57 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.63   | 88.51  | 24.81 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 134.30 | 38.85 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 100.00 | 129.95 | 37.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.89   | 85.93  | 23.31 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 131.39 | 37.34 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 100.00 | 142.66 | 43.73 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.93   | 85.60  | 25.86 |      | 65.0  |         |
|           |                                           | Z | 48.85  | 130.23 | 40.82 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 100.00 | 132.50 | 38.57 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.60   | 88.45  | 24.79 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 134.30 | 38.85 |      | 65.0  |         |

|           |                                            |   |        |        |       |      |      |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 100.00 | 130.03 | 37.27 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.79   | 85.78  | 23.26 |      | 65.0 |         |
|           |                                            | Z | 100.00 | 131.49 | 37.38 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 100.00 | 142.68 | 43.73 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.92   | 85.58  | 25.86 |      | 65.0 |         |
|           |                                            | Z | 48.67  | 130.16 | 40.80 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 13.44  | 92.05  | 30.01 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.57   | 81.53  | 24.92 |      | 65.0 |         |
|           |                                            | Z | 12.21  | 91.50  | 29.66 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 13.19  | 91.60  | 29.75 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.49   | 78.53  | 23.64 |      | 65.0 |         |
|           |                                            | Z | 11.53  | 90.28  | 29.14 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 8.15   | 82.63  | 27.34 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.35   | 75.30  | 23.22 |      | 65.0 |         |
|           |                                            | Z | 7.96   | 83.56  | 27.61 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 16.00  | 91.35  | 24.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.31   | 67.10  | 12.48 |      | 65.0 |         |
|           |                                            | Z | 10.45  | 84.22  | 21.29 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 14.44  | 89.39  | 23.96 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.26   | 66.68  | 12.23 |      | 65.0 |         |
|           |                                            | Z | 9.47   | 82.45  | 20.60 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 29.63  | 104.93 | 28.92 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.05   | 69.19  | 13.88 |      | 65.0 |         |
|           |                                            | Z | 12.77  | 91.20  | 24.08 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 9.19   | 83.56  | 22.86 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.67   | 69.06  | 14.66 |      | 65.0 |         |
|           |                                            | Z | 6.83   | 78.92  | 20.47 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 8.61   | 81.94  | 22.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.63   | 68.53  | 14.41 |      | 65.0 |         |
|           |                                            | Z | 6.47   | 77.57  | 19.91 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 31.25  | 107.62 | 30.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.84   | 76.09  | 18.18 |      | 65.0 |         |
|           |                                            | Z | 16.20  | 96.54  | 26.97 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 9.63   | 84.93  | 25.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.28   | 74.82  | 19.62 |      | 65.0 |         |
|           |                                            | Z | 7.74   | 81.48  | 23.36 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 8.40   | 80.97  | 23.13 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.80   | 72.03  | 17.99 |      | 65.0 |         |
|           |                                            | Z | 6.90   | 78.06  | 21.61 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 18.06  | 98.29  | 29.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.17   | 79.75  | 21.27 |      | 65.0 |         |
|           |                                            | Z | 12.25  | 91.97  | 26.75 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 7.88   | 78.85  | 22.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.09   | 71.97  | 18.61 |      | 65.0 |         |
|           |                                            | Z | 6.73   | 76.58  | 21.43 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.33   | 79.82  | 23.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.48   | 73.14  | 19.46 |      | 65.0 |         |
|           |                                            | Z | 7.16   | 77.62  | 22.17 |      | 65.0 |         |

|           |                                             |   |       |        |       |      |      |         |
|-----------|---------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 11.12 | 87.52  | 25.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.81  | 76.82  | 20.62 |      | 65.0 |         |
|           |                                             | Z | 8.87  | 84.13  | 24.29 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 12.14 | 85.70  | 21.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.39  | 63.29  | 9.34  |      | 65.0 |         |
|           |                                             | Z | 6.53  | 76.31  | 17.14 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 10.52 | 83.12  | 20.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.37  | 62.97  | 9.07  |      | 65.0 |         |
|           |                                             | Z | 5.84  | 74.42  | 16.27 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 17.57 | 94.83  | 24.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.09  | 64.17  | 10.28 |      | 65.0 |         |
|           |                                             | Z | 7.18  | 81.13  | 19.58 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 9.35  | 84.00  | 23.60 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.27  | 71.26  | 16.49 |      | 65.0 |         |
|           |                                             | Z | 7.23  | 79.98  | 21.55 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 9.09  | 83.14  | 23.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.29  | 70.99  | 16.36 |      | 65.0 |         |
|           |                                             | Z | 7.09  | 79.30  | 21.28 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 20.60 | 100.63 | 29.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.19  | 77.02  | 19.19 |      | 65.0 |         |
|           |                                             | Z | 12.69 | 92.56  | 26.23 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 9.60  | 84.85  | 24.96 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.25  | 74.71  | 19.54 |      | 65.0 |         |
|           |                                             | Z | 7.71  | 81.39  | 23.31 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 8.38  | 80.94  | 23.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.79  | 72.02  | 17.98 |      | 65.0 |         |
|           |                                             | Z | 6.88  | 78.03  | 21.60 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 17.71 | 97.89  | 28.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.08  | 79.47  | 21.14 |      | 65.0 |         |
|           |                                             | Z | 12.04 | 91.62  | 26.61 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.16  | 79.68  | 22.98 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.16  | 72.34  | 18.91 |      | 65.0 |         |
|           |                                             | Z | 6.89  | 77.18  | 21.74 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.64  | 80.68  | 23.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.62  | 73.72  | 19.91 |      | 65.0 |         |
|           |                                             | Z | 7.37  | 78.32  | 22.56 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 12.08 | 88.69  | 25.86 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.04  | 77.32  | 20.69 |      | 65.0 |         |
|           |                                             | Z | 9.51  | 85.13  | 24.46 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.37  | 78.32  | 22.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.85  | 72.63  | 19.64 |      | 65.0 |         |
|           |                                             | Z | 7.33  | 76.42  | 21.84 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.22  | 77.64  | 22.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.86  | 72.30  | 19.53 |      | 65.0 |         |
|           |                                             | Z | 7.25  | 75.87  | 21.65 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 9.48  | 82.12  | 23.59 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.97  | 74.85  | 19.97 |      | 65.0 |         |
|           |                                             | Z | 8.10  | 79.95  | 22.63 |      | 65.0 |         |

|           |                                                                    |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.89   | 69.10  | 17.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.36   | 67.08  | 14.79 |      | 150.0 |         |
|           |                                                                    | Z | 2.65   | 67.73  | 15.81 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 2.55   | 77.12  | 20.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.45   | 68.81  | 15.34 |      | 150.0 |         |
|           |                                                                    | Z | 1.79   | 70.64  | 17.05 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 3.19   | 64.63  | 9.78  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.16   | 60.77  | 6.33  |      | 50.0  |         |
|           |                                                                    | Z | 2.41   | 62.57  | 7.97  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 15.37  | 89.83  | 22.98 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 3.14   | 64.77  | 10.49 |      | 50.0  |         |
|           |                                                                    | Z | 7.87   | 79.67  | 18.58 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 15.50  | 89.93  | 23.07 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 3.19   | 64.91  | 10.61 |      | 50.0  |         |
|           |                                                                    | Z | 8.01   | 79.89  | 18.72 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 22.74  | 109.60 | 28.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.62   | 61.86  | 7.86  |      | 150.0 |         |
|           |                                                                    | Z | 1.95   | 73.86  | 15.85 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 36.45  | 122.76 | 31.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.36   | 60.12  | 6.34  |      | 150.0 |         |
|           |                                                                    | Z | 1.11   | 70.86  | 14.62 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 100.00 | 143.86 | 37.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.42   | 62.15  | 7.79  |      | 150.0 |         |
|           |                                                                    | Z | 3.92   | 88.86  | 21.59 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 100.00 | 148.39 | 39.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.93   | 69.44  | 11.66 |      | 150.0 |         |
|           |                                                                    | Z | 100.00 | 135.31 | 33.82 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 21.42  | 100.72 | 29.80 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.48   | 80.82  | 19.81 |      | 50.0  |         |
|           |                                                                    | Z | 22.46  | 101.08 | 29.15 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.57   | 75.06  | 19.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.49   | 70.15  | 16.72 |      | 150.0 |         |
|           |                                                                    | Z | 2.87   | 71.33  | 17.58 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 3.98   | 83.19  | 21.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.87   | 63.05  | 9.53  |      | 150.0 |         |
|           |                                                                    | Z | 1.75   | 70.46  | 15.13 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 15.24  | 95.03  | 23.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.24   | 62.42  | 8.46  |      | 150.0 |         |
|           |                                                                    | Z | 4.10   | 75.50  | 16.04 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 3.48   | 73.00  | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.02   | 60.32  | 6.60  |      | 150.0 |         |
|           |                                                                    | Z | 2.01   | 65.94  | 11.18 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 5.29   | 67.78  | 18.83 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.52   | 66.44  | 17.46 |      | 50.0  |         |
|           |                                                                    | Z | 4.95   | 66.95  | 18.06 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.66   | 67.86  | 19.26 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.91   | 66.53  | 17.88 |      | 50.0  |         |
|           |                                                                    | Z | 5.35   | 67.21  | 18.60 |      | 50.0  |         |

|           |                                                                     |   |        |        |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.43   | 67.67  | 19.19 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.82   | 67.17  | 18.26 |       | 50.0  |         |
|           |                                                                     | Z | 5.13   | 66.95  | 18.46 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.21   | 67.43  | 18.63 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.50   | 66.16  | 17.24 |       | 50.0  |         |
|           |                                                                     | Z | 4.92   | 66.79  | 17.94 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 5.62   | 73.06  | 22.56 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.92   | 71.14  | 19.97 |       | 35.0  |         |
|           |                                                                     | Z | 5.01   | 70.89  | 20.92 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 5.46   | 70.01  | 21.21 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.83   | 68.81  | 19.35 |       | 35.0  |         |
|           |                                                                     | Z | 5.06   | 68.79  | 20.10 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 5.45   | 70.58  | 21.36 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.77   | 69.06  | 19.33 |       | 35.0  |         |
|           |                                                                     | Z | 4.99   | 69.08  | 20.12 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 5.48   | 71.02  | 21.61 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.79   | 69.43  | 19.54 |       | 35.0  |         |
|           |                                                                     | Z | 5.00   | 69.44  | 20.33 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 5.54   | 70.29  | 21.38 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.84   | 68.85  | 19.43 |       | 35.0  |         |
|           |                                                                     | Z | 5.10   | 68.96  | 20.23 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 5.44   | 70.24  | 21.26 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.82   | 69.00  | 19.40 |       | 35.0  |         |
|           |                                                                     | Z | 5.03   | 68.95  | 20.12 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.96   | 73.78  | 18.94 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.85   | 69.23  | 16.35 |       | 150.0 |         |
|           |                                                                     | Z | 3.25   | 70.46  | 17.13 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 41.02  | 105.42 | 26.86 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 2.69   | 68.61  | 13.47 |       | 70.0  |         |
|           |                                                                     | Z | 16.02  | 93.57  | 23.56 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 100.00 | 129.02 | 36.10 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 4.45   | 76.08  | 19.04 |       | 30.0  |         |
|           |                                                                     | Z | 45.38  | 117.87 | 33.58 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.29   | 68.31  | 18.77 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.97   | 64.25  | 15.22 |       | 150.0 |         |
|           |                                                                     | Z | 1.16   | 65.45  | 16.41 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.71   | 67.50  | 17.03 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.24   | 66.78  | 16.13 |       | 150.0 |         |
|           |                                                                     | Z | 4.53   | 67.13  | 16.54 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.71   | 67.50  | 17.03 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.24   | 66.78  | 16.13 |       | 150.0 |         |
|           |                                                                     | Z | 4.53   | 67.13  | 16.54 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.80   | 67.78  | 16.96 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.30   | 67.06  | 16.16 |       | 150.0 |         |
|           |                                                                     | Z | 4.60   | 67.35  | 16.46 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.47   | 67.75  | 16.97 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.96   | 66.77  | 16.15 |       | 150.0 |         |
|           |                                                                     | Z | 5.26   | 67.23  | 16.47 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.73   | 68.06  | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.32   | 67.38  | 16.37 |      | 150.0 |         |
|           |                                                                                 | Z | 5.56   | 67.68  | 16.57 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 22.74  | 109.60 | 28.28 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.62   | 61.86  | 7.86  |      | 115.0 |         |
|           |                                                                                 | Z | 1.95   | 73.86  | 15.85 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 22.74  | 109.60 | 28.28 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.62   | 61.86  | 7.86  |      | 115.0 |         |
|           |                                                                                 | Z | 1.95   | 73.86  | 15.85 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 125.60 | 32.43 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 114.81 | 26.31 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 116.76 | 27.87 |      | 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 | 100.00 | 127.36 | 33.31 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 11.38  | 91.76  | 21.18 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 126.26 | 32.23 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 1.13   | 66.51  | 17.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.90   | 63.42  | 14.70 |      | 150.0 |         |
|           |                                                                                 | Z | 1.05   | 64.25  | 15.64 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.63   | 67.43  | 16.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.21   | 66.85  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.47   | 67.06  | 16.42 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.63   | 67.43  | 16.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.21   | 66.85  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.47   | 67.06  | 16.42 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.63   | 67.64  | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.20   | 67.08  | 16.22 |      | 150.0 |         |
|           |                                                                                 | Z | 4.47   | 67.27  | 16.47 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.65   | 67.56  | 16.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.22   | 67.00  | 16.20 |      | 150.0 |         |
|           |                                                                                 | Z | 4.48   | 67.20  | 16.46 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.76   | 67.51  | 16.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.32   | 66.96  | 16.20 |      | 150.0 |         |
|           |                                                                                 | Z | 4.59   | 67.16  | 16.45 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.93   | 67.84  | 17.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.44   | 67.21  | 16.29 |      | 150.0 |         |
|           |                                                                                 | Z | 4.73   | 67.44  | 16.55 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.85   | 67.81  | 17.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.37   | 67.16  | 16.27 |      | 150.0 |         |
|           |                                                                                 | Z | 4.66   | 67.41  | 16.53 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.43   | 67.95  | 17.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.00   | 67.29  | 16.44 |      | 150.0 |         |
|           |                                                                                 | Z | 5.25   | 67.54  | 16.64 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.44   | 67.98  | 17.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.02   | 67.36  | 16.48 |      | 150.0 |         |
|           |                                                                                 | Z | 5.26   | 67.59  | 16.66 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.45   | 67.95  | 17.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.98   | 67.14  | 16.37 |      | 150.0 |         |
|           |                                                                | Z | 5.26   | 67.50  | 16.61 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.73   | 73.47  | 19.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 74.63  | 19.17 |      | 150.0 |         |
|           |                                                                | Z | 4.43   | 72.70  | 18.91 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.37   | 68.31  | 17.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.81   | 67.51  | 15.99 |      | 150.0 |         |
|           |                                                                | Z | 4.14   | 67.77  | 16.44 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.64   | 67.98  | 17.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.14   | 67.30  | 16.19 |      | 150.0 |         |
|           |                                                                | Z | 4.43   | 67.53  | 16.50 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.87   | 67.84  | 17.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.39   | 67.20  | 16.29 |      | 150.0 |         |
|           |                                                                | Z | 4.68   | 67.44  | 16.55 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 5.07   | 75.14  | 20.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.79   | 75.67  | 18.89 |      | 150.0 |         |
|           |                                                                | Z | 4.66   | 74.02  | 18.99 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 127.12 | 33.20 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 9.95   | 90.00  | 20.62 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 126.00 | 32.12 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.77   | 69.03  | 16.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.02   | 67.13  | 14.58 |      | 150.0 |         |
|           |                                                                | Z | 3.45   | 68.00  | 15.73 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.21   | 68.12  | 16.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.69   | 67.31  | 15.87 |      | 150.0 |         |
|           |                                                                | Z | 3.99   | 67.57  | 16.32 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.45   | 67.85  | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.99   | 67.14  | 16.10 |      | 150.0 |         |
|           |                                                                | Z | 4.26   | 67.38  | 16.42 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.63   | 67.66  | 16.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.20   | 66.99  | 16.15 |      | 150.0 |         |
|           |                                                                | Z | 4.46   | 67.24  | 16.43 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.74   | 69.59  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.77   | 66.56  | 13.57 |      | 150.0 |         |
|           |                                                                | Z | 3.32   | 68.12  | 15.25 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.29   | 68.37  | 17.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.92   | 67.73  | 16.56 |      | 150.0 |         |
|           |                                                                | Z | 6.16   | 68.12  | 16.80 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.86   | 66.03  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.59   | 65.64  | 15.90 |      | 150.0 |         |
|           |                                                                | Z | 3.77   | 65.74  | 16.14 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 4.71   | 74.59  | 19.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.63   | 71.61  | 16.38 |      | 150.0 |         |
|           |                                                                | Z | 4.23   | 73.04  | 18.15 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 5.32   | 69.67  | 19.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.95   | 70.42  | 18.28 |      | 150.0 |         |
|           |                                                                | Z | 5.08   | 69.45  | 18.40 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 3.22   | 94.80  | 28.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.87   | 70.99  | 16.70 |      | 150.0 |         |
|           |                                                                   | Z | 1.14   | 73.38  | 19.07 |      | 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 | 137.24 | 37.78 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 27.76  | 104.85 | 25.39 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 135.72 | 36.50 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 115.69 | 27.66 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.81   | 60.00  | 7.10  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.18 | 24.14 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 111.01 | 25.46 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.83   | 60.00  | 6.54  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 103.49 | 21.52 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 135.32 | 36.70 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 6.51   | 85.78  | 19.53 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 133.26 | 35.17 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 114.90 | 27.28 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.81   | 60.00  | 7.04  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.29 | 23.73 |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.24 | 25.11 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.83   | 60.00  | 6.50  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 102.72 | 21.18 |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 135.65 | 36.85 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 8.40   | 88.81  | 20.44 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 133.64 | 35.34 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 115.17 | 27.40 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.80   | 60.00  | 7.06  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.60 | 23.86 |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.28 | 25.12 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.83   | 60.00  | 6.50  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 102.76 | 21.19 |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 135.73 | 36.87 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 8.46   | 88.91  | 20.45 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 133.70 | 35.35 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 115.11 | 27.37 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.80   | 60.00  | 7.05  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.51 | 23.82 |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.22 | 25.09 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.83   | 60.00  | 6.48  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 102.65 | 21.14 |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 135.69 | 36.85 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 8.31   | 88.69  | 20.39 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 133.67 | 35.34 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 115.13 | 27.37 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.80   | 60.00  | 7.05  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.51 | 23.82 |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.23 | 25.09 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.83   | 60.00  | 6.49  |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 102.67 | 21.15 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 114.89 | 27.26 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.80   | 60.00  | 7.03  |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 108.23 | 23.69 |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 110.15 | 25.05 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.83   | 60.00  | 6.47  |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 102.57 | 21.10 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 130.53 | 36.28 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 18.93  | 98.08  | 24.66 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 128.53 | 34.78 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 119.15 | 30.92 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.63   | 68.46  | 12.82 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 115.76 | 28.71 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 117.09 | 29.88 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.81   | 64.24  | 10.62 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 113.26 | 27.47 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 124.02 | 32.68 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.33   | 62.80  | 10.48 |      | 80.0 |         |
|           |                                                                     | Z | 11.32  | 90.77  | 23.06 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 118.33 | 30.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.45   | 60.89  | 8.88  |      | 80.0 |         |
|           |                                                                     | Z | 33.72  | 99.77  | 24.58 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 117.97 | 30.58 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.44   | 60.60  | 8.71  |      | 80.0 |         |
|           |                                                                     | Z | 19.16  | 92.36  | 22.59 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 38.56  | 112.87 | 31.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.39   | 69.74  | 15.25 |      | 80.0 |         |
|           |                                                                     | Z | 8.50   | 88.48  | 23.80 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.54   | 86.30  | 23.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.00   | 64.32  | 12.02 |      | 80.0 |         |
|           |                                                                     | Z | 5.15   | 76.91  | 19.01 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 8.55   | 84.23  | 22.37 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.00   | 63.98  | 11.82 |      | 80.0 |         |
|           |                                                                     | Z | 4.88   | 75.76  | 18.55 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 10.84  | 91.44  | 26.20 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.04   | 71.59  | 17.60 |      | 80.0 |         |
|           |                                                                     | Z | 5.59   | 80.65  | 22.14 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.78   | 77.79  | 21.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.01   | 68.33  | 16.04 |      | 80.0 |         |
|           |                                                                     | Z | 4.39   | 73.55  | 19.28 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.67   | 76.87  | 21.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.08   | 68.14  | 15.97 |      | 80.0 |         |
|           |                                                                     | Z | 4.41   | 73.06  | 19.08 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.32   | 82.36  | 23.22 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.28   | 70.20  | 17.41 |      | 80.0 |         |
|           |                                                                     | Z | 4.97   | 76.22  | 20.62 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.31   | 74.16  | 20.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.38   | 67.82  | 16.45 |      | 80.0 |         |
|           |                                                                     | Z | 4.40   | 71.34  | 18.72 |      | 80.0 |         |

|           |                                                                      |   |        |        |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.30   | 73.69  | 20.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.43   | 67.68  | 16.39 |      | 80.0 |         |
|           |                                                                      | Z | 4.43   | 71.06  | 18.60 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 9.52   | 86.81  | 24.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.53   | 71.47  | 17.85 |      | 80.0 |         |
|           |                                                                      | Z | 5.74   | 78.70  | 21.42 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.47   | 74.91  | 20.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.41   | 68.11  | 16.71 |      | 80.0 |         |
|           |                                                                      | Z | 4.46   | 71.77  | 18.96 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.39   | 74.05  | 20.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.49   | 67.92  | 16.66 |      | 80.0 |         |
|           |                                                                      | Z | 4.48   | 71.27  | 18.77 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 119.13 | 29.98 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.97   | 60.00  | 7.52  |      | 80.0 |         |
|           |                                                                      | Z | 6.39   | 80.96  | 18.49 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 6.50   | 78.03  | 17.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.16   | 60.00  | 6.40  |      | 80.0 |         |
|           |                                                                      | Z | 1.70   | 62.78  | 10.09 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.96   | 74.41  | 15.87 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.18   | 60.00  | 6.24  |      | 80.0 |         |
|           |                                                                      | Z | 1.56   | 61.72  | 9.39  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 16.92  | 99.40  | 28.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.69   | 70.74  | 16.30 |      | 80.0 |         |
|           |                                                                      | Z | 6.56   | 84.02  | 22.76 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 7.28   | 81.96  | 22.15 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.48   | 66.42  | 13.80 |      | 80.0 |         |
|           |                                                                      | Z | 4.80   | 75.55  | 19.11 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 7.13   | 81.15  | 21.79 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.49   | 66.14  | 13.60 |      | 80.0 |         |
|           |                                                                      | Z | 4.79   | 75.10  | 18.85 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 10.53  | 90.94  | 26.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.99   | 71.33  | 17.47 |      | 80.0 |         |
|           |                                                                      | Z | 5.48   | 80.32  | 22.00 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.73   | 77.63  | 21.35 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.99   | 68.19  | 15.96 |      | 80.0 |         |
|           |                                                                      | Z | 4.36   | 73.41  | 19.21 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.62   | 76.72  | 21.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.06   | 68.02  | 15.89 |      | 80.0 |         |
|           |                                                                      | Z | 4.38   | 72.94  | 19.01 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 9.35   | 86.49  | 24.45 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.49   | 71.29  | 17.76 |      | 80.0 |         |
|           |                                                                      | Z | 5.67   | 78.49  | 21.33 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.44   | 74.83  | 20.55 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.40   | 68.03  | 16.66 |      | 80.0 |         |
|           |                                                                      | Z | 4.44   | 71.70  | 18.92 |      | 80.0 |         |