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Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **ES3-3318\_Feb17**

## CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3318**

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

Calibration date: **February 10, 2017**

*BNV*  
*03-01-2017*

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| 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-16) | In house check: Oct-17 |

|                |                                |                                          |                           |
|----------------|--------------------------------|------------------------------------------|---------------------------|
| Calibrated by: | Name<br><b>Claudio Leubler</b> | Function<br><b>Laboratory Technician</b> | Signature<br>             |
| Approved by:   | Name<br><b>Katja Pokovic</b>   | Function<br><b>Technical Manager</b>     | Signature<br>             |
|                |                                |                                          | Issued: February 13, 2017 |

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## Glossary:

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

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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 ES3DV3

## SN:3318

Manufactured: January 10, 2012  
Calibrated: February 10, 2017

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

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3318

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 1.11     | 0.89     | 1.24     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 104.2    | 104.2    | 103.5    |               |

### 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    | 207.9    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 188.2    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 201.5    |                           |

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 | 63.42    | 453.7    | 35.34                       | 29.18                               | 2.667                               | 5.1      | 0.885                 | 0.445                 | 1.01  |
| Y | 50.41    | 352.5    | 33.95                       | 25.81                               | 1.921                               | 5.062    | 1.77                  | 0.176                 | 1.007 |
| Z | 62.08    | 445.4    | 35.38                       | 29.73                               | 3.23                                | 5.1      | 0.803                 | 0.494                 | 1.012 |

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: ES3DV3 - SN:3318

### 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                            | 6.73    | 6.73    | 6.73    | 0.43               | 1.53                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 6.47    | 6.47    | 6.47    | 0.57               | 1.36                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 5.49    | 5.49    | 5.49    | 0.74               | 1.19                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 5.31    | 5.31    | 5.31    | 0.60               | 1.33                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 4.95    | 4.95    | 4.95    | 0.60               | 1.42                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 4.74    | 4.74    | 4.74    | 0.71               | 1.28                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 4.53    | 4.53    | 4.53    | 0.75               | 1.35                    | ± 12.0 %  |

<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: ES3DV3 - SN:3318

### 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                            | 6.50    | 6.50    | 6.50    | 0.62               | 1.33                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 6.37    | 6.37    | 6.37    | 0.66               | 1.31                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 5.12    | 5.12    | 5.12    | 0.42               | 1.72                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 4.96    | 4.96    | 4.96    | 0.67               | 1.38                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 4.70    | 4.70    | 4.70    | 0.77               | 1.22                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 4.55    | 4.55    | 4.55    | 0.75               | 1.17                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 4.34    | 4.34    | 4.34    | 0.80               | 1.05                    | ± 12.0 %  |

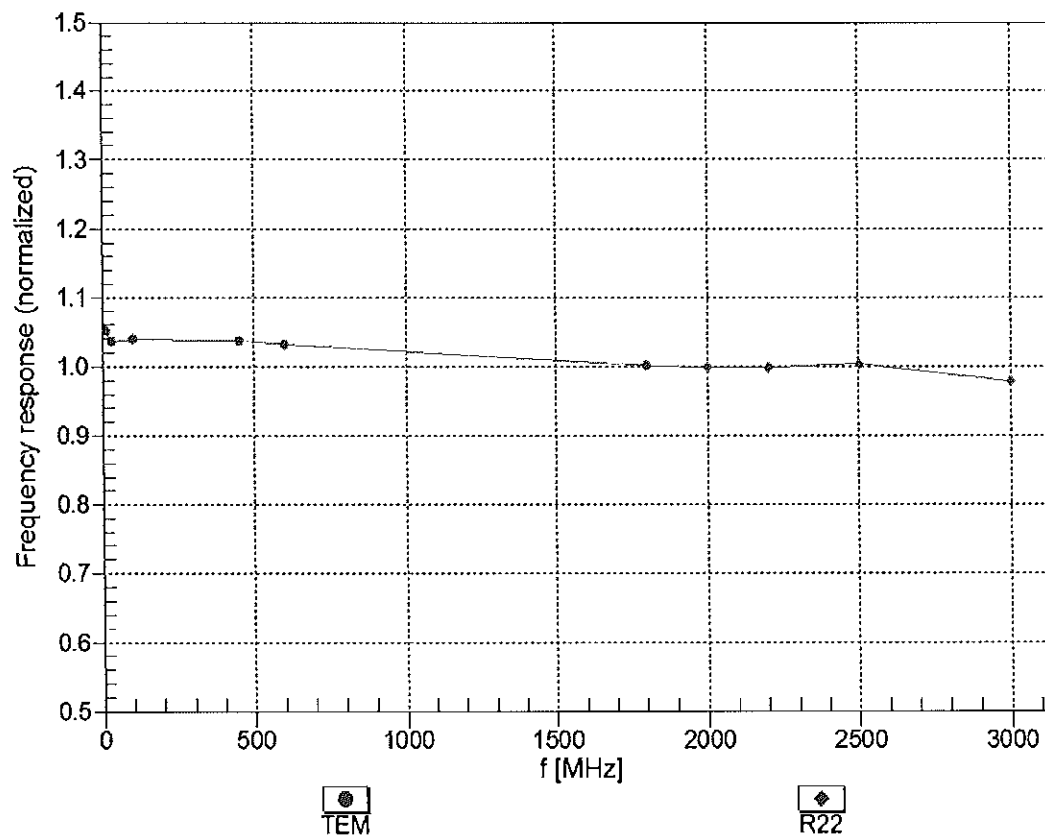
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

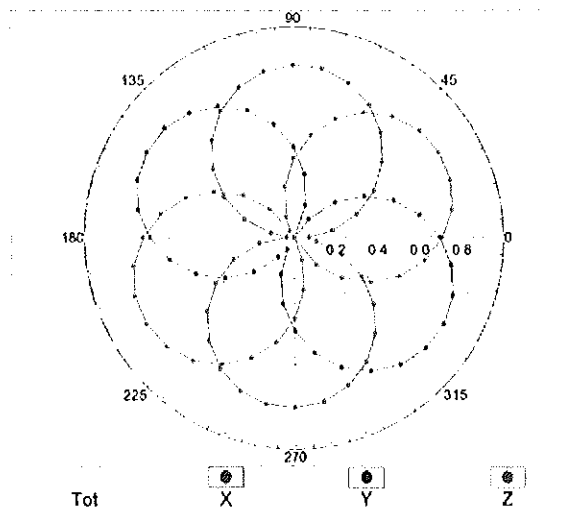
(TEM-Cell:ifi110 EXX, Waveguide: R22)



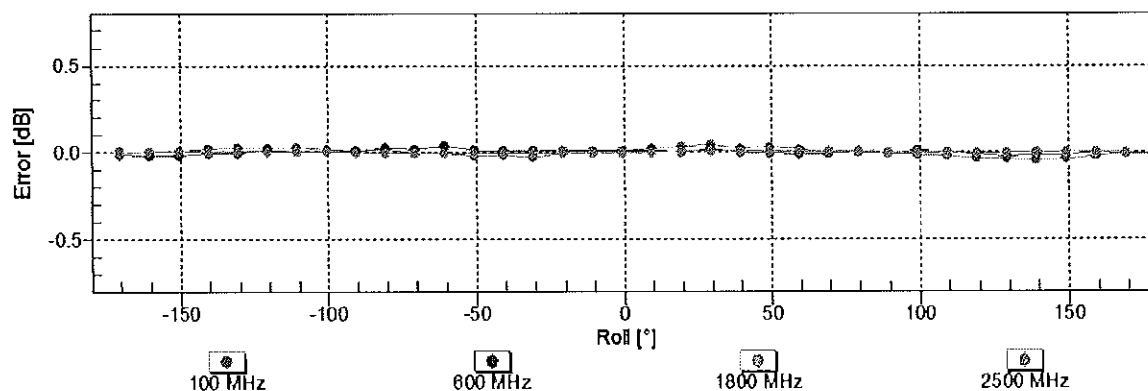
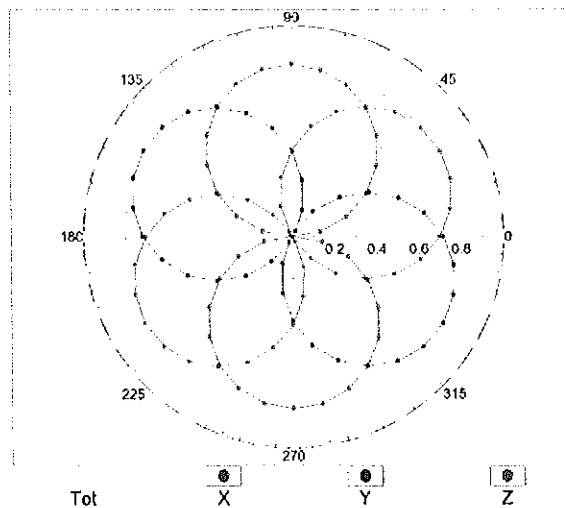
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

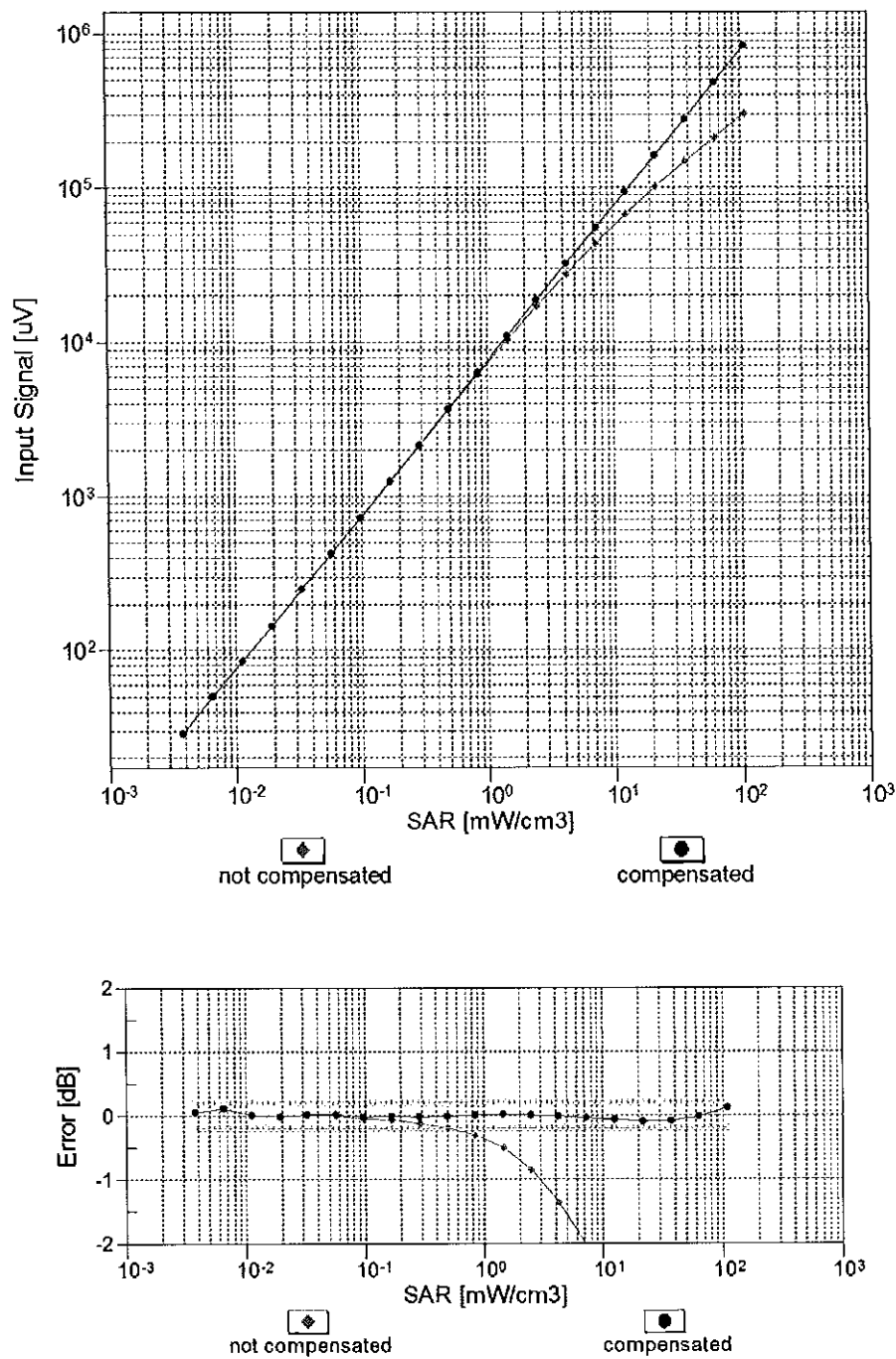
f=600 MHz,TEM



f=1800 MHz,R22

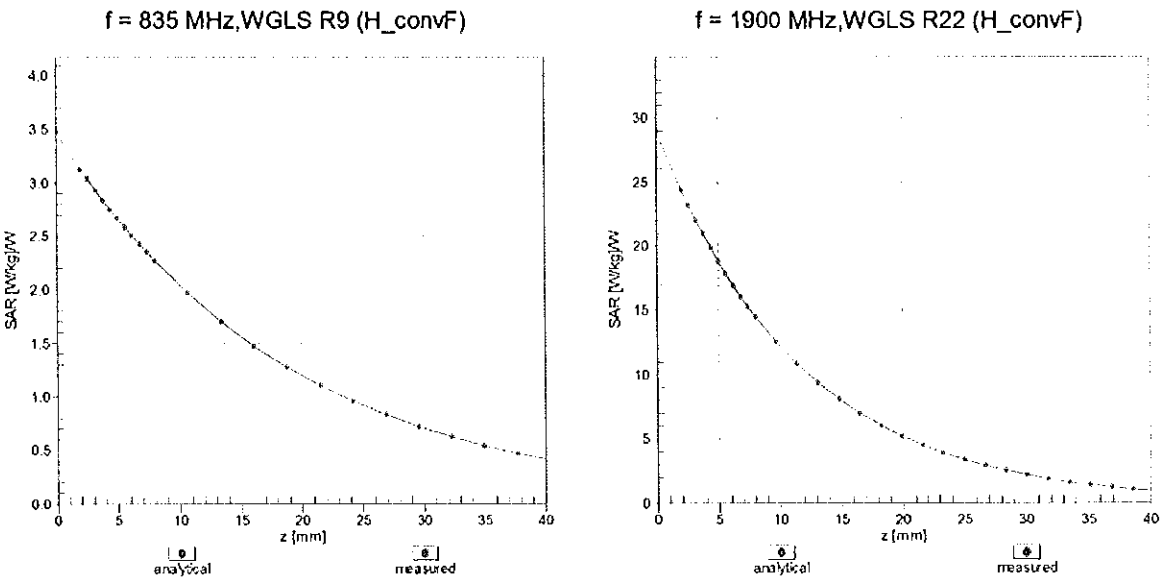
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

Dynamic Range f(SAR<sub>head</sub>)  
(TEM cell , f<sub>eval</sub>= 1900 MHz)

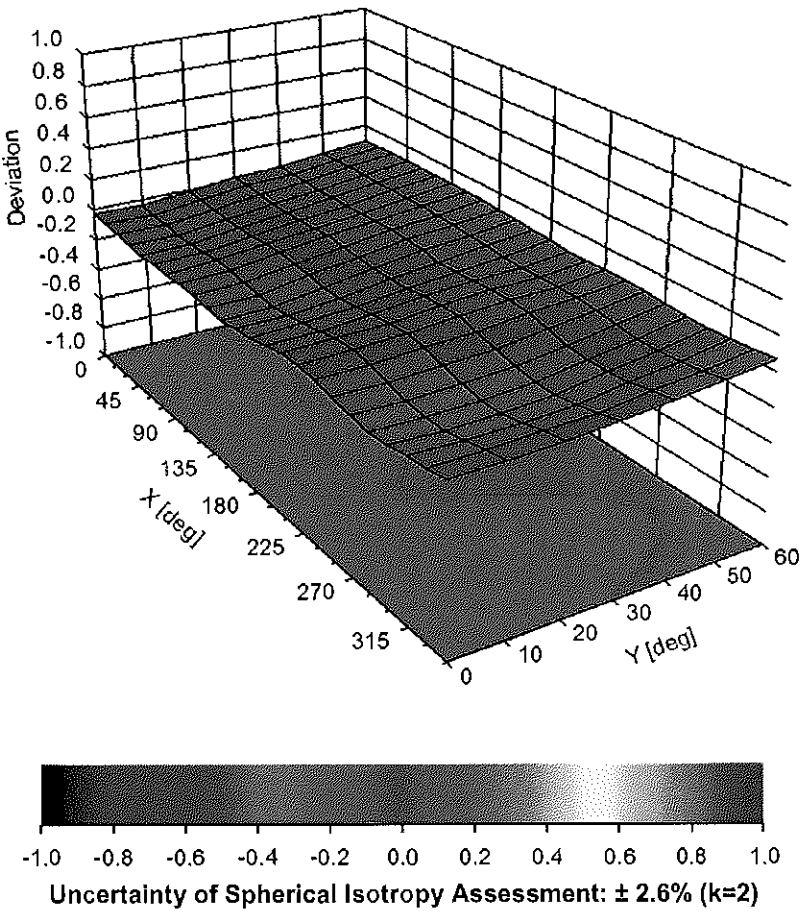


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

# Conversion Factor Assessment



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



## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3318

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 79.3       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 10 mm      |
| Tip Diameter                                  | 4 mm       |
| Probe Tip to Sensor X Calibration Point       | 2 mm       |
| Probe Tip to Sensor Y Calibration Point       | 2 mm       |
| Probe Tip to Sensor Z Calibration Point       | 2 mm       |
| Recommended Measurement Distance from Surface | 3 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    | 207.9    | $\pm 3.3 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 188.2    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 201.5    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 10.65   | 83.39                  | 20.62 | 10.00   | 25.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 8.27    | 79.56                  | 18.19 |         | 25.0     |                                  |
|               |                                               | Z | 9.41    | 81.26                  | 20.29 |         | 25.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.26    | 70.62                  | 17.25 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.14    | 69.56                  | 16.54 |         | 150.0    |                                  |
|               |                                               | Z | 1.10    | 67.80                  | 15.49 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.36    | 66.00                  | 16.64 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.31    | 65.69                  | 16.25 |         | 150.0    |                                  |
|               |                                               | Z | 1.33    | 65.14                  | 15.84 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.21    | 67.34                  | 17.59 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.03    | 67.33                  | 17.37 |         | 150.0    |                                  |
|               |                                               | Z | 5.21    | 67.28                  | 17.47 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 30.30   | 102.62                 | 28.60 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 85.74   | 117.41                 | 31.25 |         | 50.0     |                                  |
|               |                                               | Z | 16.72   | 92.33                  | 25.82 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 25.90   | 99.89                  | 27.85 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 53.57   | 110.04                 | 29.42 |         | 50.0     |                                  |
|               |                                               | Z | 15.58   | 90.96                  | 25.42 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 119.72                 | 31.24 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 116.42                 | 29.08 |         | 60.0     |                                  |
|               |                                               | Z | 69.15   | 114.71                 | 30.44 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 21.22   | 110.03                 | 42.06 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 14.02   | 98.31                  | 37.05 |         | 50.0     |                                  |
|               |                                               | Z | 20.65   | 107.68                 | 41.04 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 22.74   | 107.18                 | 37.14 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 17.09   | 100.87                 | 34.58 |         | 60.0     |                                  |
|               |                                               | Z | 19.56   | 102.47                 | 35.45 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 118.87                 | 29.89 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 115.45                 | 27.78 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 119.07                 | 30.22 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 119.42                 | 29.31 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 115.85                 | 27.21 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 119.09                 | 29.37 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 14.97   | 97.57                  | 32.79 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 11.33   | 91.85                  | 30.38 |         | 80.0     |                                  |
|               |                                               | Z | 13.70   | 94.63                  | 31.63 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 118.36                 | 30.01 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 114.74                 | 27.76 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 118.80                 | 30.46 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 121.98                 | 28.84 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 117.00                 | 26.24 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 120.23                 | 28.25 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 128.67 | 30.50 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 122.90 | 27.66 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 124.38 | 28.87 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 24.23  | 102.94 | 29.00 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 23.03  | 100.70 | 27.25 |       | 70.0  |         |
|           |                                                     | Z | 13.78  | 92.43  | 25.72 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 11.07  | 94.32  | 25.04 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 10.51  | 92.09  | 23.22 |       | 100.0 |         |
|           |                                                     | Z | 6.22   | 84.45  | 21.59 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 5.82   | 86.43  | 22.33 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.46   | 84.67  | 20.69 |       | 100.0 |         |
|           |                                                     | Z | 3.82   | 79.09  | 19.43 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 30.87  | 107.24 | 30.28 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 31.94  | 106.09 | 28.82 |       | 70.0  |         |
|           |                                                     | Z | 15.75  | 94.83  | 26.54 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 10.70  | 93.84  | 24.85 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 9.44   | 90.62  | 22.74 |       | 100.0 |         |
|           |                                                     | Z | 6.06   | 84.12  | 21.44 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 6.09   | 87.40  | 22.75 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.73   | 85.66  | 21.12 |       | 100.0 |         |
|           |                                                     | Z | 3.92   | 79.69  | 19.73 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.51   | 76.10  | 18.44 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.58   | 77.34  | 18.13 |       | 150.0 |         |
|           |                                                     | Z | 1.93   | 71.68  | 16.25 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 118.55 | 30.95 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 115.26 | 28.77 |       | 50.0  |         |
|           |                                                     | Z | 30.52  | 101.01 | 26.83 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.01   | 122.84 | 6.61  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 101.52 | 0.76  |       | 150.0 |         |
|           |                                                     | Z | 0.01   | 121.65 | 1.51  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 12.97  | 86.24  | 25.23 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 16.21  | 90.42  | 25.53 |       | 25.0  |         |
|           |                                                     | Z | 11.00  | 82.40  | 24.22 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 16.11  | 91.33  | 25.58 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 21.17  | 95.34  | 25.70 |       | 40.0  |         |
|           |                                                     | Z | 12.51  | 86.41  | 24.27 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 14.93  | 90.68  | 26.04 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 15.30  | 90.91  | 25.15 |       | 50.0  |         |
|           |                                                     | Z | 12.28  | 86.39  | 24.64 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 10.77  | 90.92  | 29.72 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 8.37   | 86.08  | 27.58 |       | 100.0 |         |
|           |                                                     | Z | 10.19  | 88.91  | 28.83 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.56   | 68.48  | 17.84 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.47   | 67.87  | 17.29 |       | 110.0 |         |
|           |                                                     | Z | 1.52   | 67.28  | 16.88 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 133.74 | 34.89 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 132.17 | 33.87 |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 130.92 | 33.73 |       | 110.0 |         |

|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 16.46 | 105.21 | 30.01 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 11.67 | 99.37  | 27.84 |      | 110.0 |         |
|           |                                                | Z | 8.39  | 92.33  | 25.80 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.94  | 67.14  | 16.89 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.78  | 67.19  | 16.74 |      | 100.0 |         |
|           |                                                | Z | 4.92  | 67.01  | 16.73 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.98  | 67.31  | 17.04 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.81  | 67.33  | 16.86 |      | 100.0 |         |
|           |                                                | Z | 4.96  | 67.18  | 16.88 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.32  | 67.65  | 17.30 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.11  | 67.60  | 17.09 |      | 100.0 |         |
|           |                                                | Z | 5.31  | 67.54  | 17.16 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.22  | 67.69  | 17.47 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.01  | 67.59  | 17.23 |      | 100.0 |         |
|           |                                                | Z | 5.22  | 67.59  | 17.34 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.28  | 67.82  | 17.71 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.05  | 67.68  | 17.43 |      | 100.0 |         |
|           |                                                | Z | 5.28  | 67.74  | 17.58 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.59  | 67.95  | 18.15 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.36  | 67.86  | 17.87 |      | 100.0 |         |
|           |                                                | Z | 5.61  | 67.93  | 18.06 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.74  | 68.35  | 18.54 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.47  | 68.07  | 18.17 |      | 100.0 |         |
|           |                                                | Z | 5.77  | 68.35  | 18.47 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.82  | 68.26  | 18.71 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.55  | 68.05  | 18.34 |      | 100.0 |         |
|           |                                                | Z | 5.85  | 68.30  | 18.66 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.35  | 67.58  | 17.97 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.16  | 67.52  | 17.72 |      | 100.0 |         |
|           |                                                | Z | 5.37  | 67.56  | 17.88 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.42  | 68.17  | 18.31 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.20  | 68.01  | 18.01 |      | 100.0 |         |
|           |                                                | Z | 5.45  | 68.15  | 18.22 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.56  | 68.52  | 18.74 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.32  | 68.31  | 18.39 |      | 100.0 |         |
|           |                                                | Z | 5.60  | 68.54  | 18.67 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.59  | 68.60  | 19.01 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.35  | 68.34  | 18.61 |      | 100.0 |         |
|           |                                                | Z | 5.65  | 68.66  | 18.95 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.76  | 69.14  | 19.54 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.46  | 68.68  | 19.02 |      | 90.0  |         |
|           |                                                | Z | 5.83  | 69.24  | 19.50 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.75  | 68.91  | 19.64 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.48  | 68.50  | 19.14 |      | 90.0  |         |
|           |                                                | Z | 5.84  | 69.05  | 19.63 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.79  | 69.00  | 19.75 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.52  | 68.61  | 19.25 |      | 90.0  |         |
|           |                                                | Z | 5.89  | 69.15  | 19.74 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.18   | 70.18  | 15.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.02   | 69.06  | 14.35 |      | 150.0 |         |
|           |                                                     | Z | 0.97   | 66.70  | 13.60 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.27   | 64.65  | 9.36  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 1.70   | 62.49  | 7.53  |      | 80.0  |         |
|           |                                                     | Z | 2.45   | 65.05  | 9.86  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 119.81 | 31.30 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 116.49 | 29.13 |      | 60.0  |         |
|           |                                                     | Z | 65.88  | 114.04 | 30.31 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.98   | 68.72  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.94   | 68.99  | 16.45 |      | 150.0 |         |
|           |                                                     | Z | 1.87   | 67.43  | 15.70 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.94   | 68.72  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.90   | 68.95  | 16.42 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 67.41  | 15.68 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 22.60  | 106.99 | 37.08 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 17.07  | 100.80 | 34.55 |      | 60.0  |         |
|           |                                                     | Z | 19.45  | 102.29 | 35.39 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.50   | 71.91  | 17.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.32   | 71.58  | 17.29 |      | 150.0 |         |
|           |                                                     | Z | 3.29   | 70.63  | 16.73 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.47   | 68.41  | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.33   | 68.22  | 16.28 |      | 150.0 |         |
|           |                                                     | Z | 3.39   | 67.84  | 16.04 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.56   | 68.27  | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.43   | 68.17  | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 3.49   | 67.75  | 16.11 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 8.90   | 78.76  | 21.58 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.47   | 78.68  | 21.35 |      | 65.0  |         |
|           |                                                     | Z | 8.34   | 77.15  | 20.86 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.80   | 77.42  | 21.93 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.21   | 76.81  | 21.41 |      | 65.0  |         |
|           |                                                     | Z | 8.69   | 76.77  | 21.58 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 7.68   | 74.71  | 21.04 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.62   | 75.33  | 21.07 |      | 65.0  |         |
|           |                                                     | Z | 7.87   | 74.75  | 20.97 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.09   | 71.08  | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.90   | 70.80  | 17.14 |      | 150.0 |         |
|           |                                                     | Z | 2.90   | 69.83  | 16.56 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.14   | 68.25  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.99   | 68.15  | 16.24 |      | 150.0 |         |
|           |                                                     | Z | 3.05   | 67.61  | 15.95 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.54   | 70.21  | 17.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.36   | 69.95  | 16.81 |      | 150.0 |         |
|           |                                                     | Z | 2.39   | 68.91  | 16.24 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.84   | 68.87  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.74   | 69.25  | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 2.73   | 68.00  | 16.14 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.25 | 68.12 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.11 | 68.10 | 16.28 |      | 150.0 |         |
|           |                                                | Z | 3.17 | 67.53 | 15.98 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.99 | 68.87 | 16.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.90 | 69.34 | 16.82 |      | 150.0 |         |
|           |                                                | Z | 2.88 | 68.07 | 16.24 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.29 | 67.49 | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.18 | 67.60 | 16.59 |      | 150.0 |         |
|           |                                                | Z | 5.26 | 67.32 | 16.47 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.67 | 67.81 | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.49 | 67.77 | 16.68 |      | 150.0 |         |
|           |                                                | Z | 5.63 | 67.65 | 16.65 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.43 | 67.78 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.29 | 67.82 | 16.63 |      | 150.0 |         |
|           |                                                | Z | 5.39 | 67.60 | 16.54 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.30 | 67.53 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.48 | 16.55 |      | 150.0 |         |
|           |                                                | Z | 5.27 | 67.35 | 16.51 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.73 | 67.95 | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.58 | 67.98 | 16.80 |      | 150.0 |         |
|           |                                                | Z | 5.71 | 67.82 | 16.74 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.40 | 67.74 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.26 | 67.75 | 16.61 |      | 150.0 |         |
|           |                                                | Z | 5.37 | 67.56 | 16.53 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.61 | 68.27 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.47 | 68.16 | 16.27 |      | 150.0 |         |
|           |                                                | Z | 3.54 | 67.76 | 16.04 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.73 | 68.28 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.59 | 68.25 | 16.43 |      | 150.0 |         |
|           |                                                | Z | 3.65 | 67.79 | 16.17 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.33 | 70.29 | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.16 | 70.21 | 16.65 |      | 150.0 |         |
|           |                                                | Z | 2.16 | 68.78 | 16.01 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.74 | 69.72 | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.67 | 70.41 | 16.67 |      | 150.0 |         |
|           |                                                | Z | 2.59 | 68.55 | 15.97 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.56 | 67.80 | 15.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.37 | 67.67 | 14.84 |      | 150.0 |         |
|           |                                                | Z | 2.45 | 66.93 | 14.76 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.73 | 69.15 | 15.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.44 | 67.55 | 13.30 |      | 150.0 |         |
|           |                                                | Z | 1.51 | 66.84 | 13.63 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 4.00 | 75.69 | 17.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.68 | 70.09 | 13.45 |      | 150.0 |         |
|           |                                                | Z | 3.36 | 72.93 | 16.09 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 5.35 | 79.98 | 19.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.76 | 74.33 | 15.35 |      | 150.0 |         |
|           |                                                | Z | 4.15 | 75.99 | 17.51 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.15 | 68.30 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.00 | 68.22 | 16.29 |      | 150.0 |         |
|           |                                            | Z | 3.06 | 67.66 | 15.99 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.26 | 68.16 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.12 | 68.16 | 16.32 |      | 150.0 |         |
|           |                                            | Z | 3.18 | 67.57 | 16.02 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 9.51 | 81.17 | 22.64 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 9.26 | 81.54 | 22.52 |      | 65.0  |         |
|           |                                            | Z | 9.00 | 79.66 | 21.96 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.48 | 77.76 | 21.88 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 7.81 | 76.97 | 21.19 |      | 65.0  |         |
|           |                                            | Z | 8.33 | 76.97 | 21.46 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.81 | 78.38 | 22.46 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.28 | 78.00 | 21.97 |      | 65.0  |         |
|           |                                            | Z | 8.64 | 77.56 | 22.02 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.61 | 70.67 | 17.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.43 | 70.50 | 17.14 |      | 150.0 |         |
|           |                                            | Z | 2.44 | 69.28 | 16.48 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.84 | 68.87 | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.74 | 69.26 | 16.73 |      | 150.0 |         |
|           |                                            | Z | 2.73 | 68.00 | 16.15 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.21 | 70.73 | 17.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.04 | 70.63 | 16.63 |      | 150.0 |         |
|           |                                            | Z | 2.02 | 68.93 | 15.94 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.42 | 68.64 | 15.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.25 | 68.58 | 15.08 |      | 150.0 |         |
|           |                                            | Z | 2.28 | 67.47 | 14.87 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.99 | 68.92 | 16.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.90 | 69.42 | 16.87 |      | 150.0 |         |
|           |                                            | Z | 2.89 | 68.11 | 16.28 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.54 | 69.05 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.38 | 69.17 | 15.42 |      | 150.0 |         |
|           |                                            | Z | 2.38 | 67.83 | 15.11 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.02 | 69.72 | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.87 | 69.64 | 16.82 |      | 150.0 |         |
|           |                                            | Z | 2.89 | 68.80 | 16.35 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.15 | 68.06 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.02 | 68.13 | 16.28 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.45 | 15.95 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.25 | 68.09 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.13 | 68.25 | 16.37 |      | 150.0 |         |
|           |                                            | Z | 3.18 | 67.52 | 16.02 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.03 | 70.84 | 19.96 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.83 | 71.14 | 19.84 |      | 150.0 |         |
|           |                                            | Z | 4.01 | 70.55 | 19.74 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.25 | 74.55 | 20.76 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.14 | 75.60 | 20.85 |      | 150.0 |         |
|           |                                            | Z | 5.18 | 74.06 | 20.47 |      | 150.0 |         |

|           |                                            |   |        |        |       |      |       |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.75   | 76.52  | 21.89 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.00   | 78.90  | 22.58 |      | 150.0 |         |
|           |                                            | Z | 5.63   | 75.85  | 21.52 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.71   | 72.74  | 20.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.37   | 72.07  | 20.29 |      | 150.0 |         |
|           |                                            | Z | 3.67   | 72.12  | 20.45 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 5.90   | 81.03  | 23.83 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.20   | 83.55  | 24.55 |      | 150.0 |         |
|           |                                            | Z | 5.54   | 79.34  | 23.04 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 4.69   | 76.04  | 20.92 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.32   | 75.87  | 20.46 |      | 150.0 |         |
|           |                                            | Z | 4.54   | 75.03  | 20.42 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 39.66  | 116.21 | 35.79 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 26.05  | 109.12 | 33.27 |      | 65.0  |         |
|           |                                            | Z | 30.93  | 110.22 | 33.96 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 52.84  | 115.80 | 33.80 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 100.00 | 126.65 | 35.61 |      | 65.0  |         |
|           |                                            | Z | 32.54  | 106.36 | 31.18 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 36.42  | 107.54 | 31.02 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 52.24  | 113.81 | 31.84 |      | 65.0  |         |
|           |                                            | Z | 25.50  | 100.70 | 29.05 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.66   | 72.37  | 20.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.31   | 71.62  | 19.97 |      | 150.0 |         |
|           |                                            | Z | 3.62   | 71.80  | 20.21 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 5.91   | 81.06  | 23.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.22   | 83.59  | 24.56 |      | 150.0 |         |
|           |                                            | Z | 5.55   | 79.36  | 23.05 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.70   | 72.55  | 20.68 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.35   | 71.84  | 20.10 |      | 150.0 |         |
|           |                                            | Z | 3.65   | 71.95  | 20.31 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 5.81   | 80.70  | 23.67 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.07   | 83.11  | 24.35 |      | 150.0 |         |
|           |                                            | Z | 5.47   | 79.07  | 22.91 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 5.24   | 78.36  | 22.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.11   | 79.33  | 22.28 |      | 150.0 |         |
|           |                                            | Z | 5.00   | 77.05  | 21.59 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 4.67   | 75.92  | 20.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.29   | 75.73  | 20.38 |      | 150.0 |         |
|           |                                            | Z | 4.52   | 74.94  | 20.36 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.69   | 72.54  | 20.68 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.34   | 71.81  | 20.09 |      | 150.0 |         |
|           |                                            | Z | 3.65   | 71.94  | 20.30 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 5.80   | 80.67  | 23.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.06   | 83.07  | 24.33 |      | 150.0 |         |
|           |                                            | Z | 5.46   | 79.04  | 22.90 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 4.66   | 75.89  | 20.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.28   | 75.70  | 20.36 |      | 150.0 |         |
|           |                                            | Z | 4.51   | 74.92  | 20.35 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.70 | 72.58 | 20.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.35 | 71.87 | 20.12 |      | 150.0 |         |
|           |                                               | Z | 3.66 | 71.98 | 20.32 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 5.83 | 80.75 | 23.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.11 | 83.20 | 24.39 |      | 150.0 |         |
|           |                                               | Z | 5.49 | 79.12 | 22.93 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 4.69 | 75.98 | 20.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.31 | 75.80 | 20.41 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 74.99 | 20.38 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.71 | 72.62 | 20.75 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.36 | 71.93 | 20.19 |      | 150.0 |         |
|           |                                               | Z | 3.67 | 72.03 | 20.37 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 6.08 | 81.63 | 24.13 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.51 | 84.55 | 25.01 |      | 150.0 |         |
|           |                                               | Z | 5.69 | 79.85 | 23.31 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 4.82 | 76.52 | 21.19 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.47 | 76.53 | 20.81 |      | 150.0 |         |
|           |                                               | Z | 4.65 | 75.46 | 20.66 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.72 | 66.91 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.58 | 67.02 | 16.33 |      | 150.0 |         |
|           |                                               | Z | 4.68 | 66.73 | 16.24 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.92 | 67.29 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.76 | 67.35 | 16.45 |      | 150.0 |         |
|           |                                               | Z | 4.88 | 67.10 | 16.36 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.96 | 67.30 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.80 | 67.37 | 16.46 |      | 150.0 |         |
|           |                                               | Z | 4.92 | 67.11 | 16.37 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.74 | 67.02 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.59 | 67.09 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.70 | 66.83 | 16.28 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.93 | 67.31 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.37 | 16.46 |      | 150.0 |         |
|           |                                               | Z | 4.90 | 67.12 | 16.37 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.96 | 67.32 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.80 | 67.39 | 16.47 |      | 150.0 |         |
|           |                                               | Z | 4.93 | 67.13 | 16.38 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.69 | 67.04 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.54 | 67.11 | 16.31 |      | 150.0 |         |
|           |                                               | Z | 4.65 | 66.84 | 16.24 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.93 | 67.31 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.34 | 16.45 |      | 150.0 |         |
|           |                                               | Z | 4.90 | 67.11 | 16.37 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.97 | 67.25 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.81 | 67.32 | 16.45 |      | 150.0 |         |
|           |                                               | Z | 4.93 | 67.06 | 16.37 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.28 | 67.55 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.13 | 67.49 | 16.55 |      | 150.0 |         |
|           |                                               | Z | 5.25 | 67.37 | 16.50 |      | 150.0 |         |

|           |                                           |   |        |        |       |      |       |         |
|-----------|-------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.67   | 67.92  | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.43   | 67.67  | 16.66 |      | 150.0 |         |
|           |                                           | Z | 5.63   | 67.75  | 16.72 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.33   | 67.64  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.17   | 67.60  | 16.53 |      | 150.0 |         |
|           |                                           | Z | 5.29   | 67.46  | 16.47 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.99   | 66.62  | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.87   | 66.77  | 15.69 |      | 150.0 |         |
|           |                                           | Z | 2.94   | 66.17  | 15.53 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 56.85  | 117.30 | 34.28 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 126.89 | 35.76 |      | 65.0  |         |
|           |                                           | Z | 34.18  | 107.38 | 31.54 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 39.67  | 109.19 | 31.57 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 88.35  | 122.59 | 34.09 |      | 65.0  |         |
|           |                                           | Z | 26.95  | 101.76 | 29.43 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 48.41  | 120.61 | 37.08 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 45.84  | 120.16 | 36.35 |      | 65.0  |         |
|           |                                           | Z | 31.93  | 111.39 | 34.43 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 52.77  | 115.76 | 33.79 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 126.65 | 35.62 |      | 65.0  |         |
|           |                                           | Z | 32.55  | 106.35 | 31.18 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 37.48  | 108.07 | 31.19 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 75.87  | 119.84 | 33.34 |      | 65.0  |         |
|           |                                           | Z | 25.90  | 100.97 | 29.14 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 45.44  | 119.21 | 36.63 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 41.18  | 117.91 | 35.67 |      | 65.0  |         |
|           |                                           | Z | 30.52  | 110.38 | 34.07 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 52.80  | 115.78 | 33.80 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 126.66 | 35.62 |      | 65.0  |         |
|           |                                           | Z | 32.54  | 106.35 | 31.18 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 37.54  | 108.11 | 31.20 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 75.89  | 119.86 | 33.34 |      | 65.0  |         |
|           |                                           | Z | 25.92  | 100.99 | 29.14 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 42.47  | 117.63 | 36.10 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 37.31  | 115.74 | 34.97 |      | 65.0  |         |
|           |                                           | Z | 29.08  | 109.25 | 33.65 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 53.08  | 115.89 | 33.83 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 126.67 | 35.62 |      | 65.0  |         |
|           |                                           | Z | 32.64  | 106.42 | 31.20 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 37.96  | 108.28 | 31.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 77.12  | 120.09 | 33.39 |      | 65.0  |         |
|           |                                           | Z | 26.14  | 101.12 | 29.18 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 46.10  | 119.52 | 36.72 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 41.64  | 118.15 | 35.73 |      | 65.0  |         |
|           |                                           | Z | 30.82  | 110.60 | 34.14 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 52.89  | 115.82 | 33.81 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 126.66 | 35.62 |      | 65.0  |         |
|           |                                           | Z | 32.55  | 106.37 | 31.18 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 37.59 | 108.15 | 31.21 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 75.87 | 119.87 | 33.34 |      | 65.0 |         |
|           |                                            | Z | 25.93 | 101.02 | 29.15 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 45.90 | 119.44 | 36.69 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 41.47 | 118.08 | 35.71 |      | 65.0 |         |
|           |                                            | Z | 30.71 | 110.54 | 34.12 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 13.10 | 88.25  | 28.31 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 12.64 | 88.66  | 27.87 |      | 65.0 |         |
|           |                                            | Z | 13.02 | 87.59  | 27.99 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 11.52 | 85.34  | 27.10 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.36 | 84.46  | 26.20 |      | 65.0 |         |
|           |                                            | Z | 12.32 | 86.33  | 27.43 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 9.39  | 82.67  | 26.96 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.89  | 80.01  | 25.32 |      | 65.0 |         |
|           |                                            | Z | 10.15 | 83.98  | 27.43 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 10.37 | 82.39  | 22.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.21  | 80.31  | 20.18 |      | 65.0 |         |
|           |                                            | Z | 9.60  | 80.54  | 21.38 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 10.20 | 81.86  | 21.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.91  | 79.56  | 19.85 |      | 65.0 |         |
|           |                                            | Z | 9.50  | 80.13  | 21.18 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 10.29 | 85.01  | 23.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.28  | 83.44  | 21.56 |      | 65.0 |         |
|           |                                            | Z | 8.83  | 81.79  | 21.72 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 8.11  | 78.82  | 21.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.33  | 77.58  | 19.99 |      | 65.0 |         |
|           |                                            | Z | 7.71  | 77.37  | 20.55 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 8.09  | 78.31  | 21.04 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.21  | 76.86  | 19.68 |      | 65.0 |         |
|           |                                            | Z | 7.75  | 77.03  | 20.41 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 11.01 | 86.29  | 24.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.81 | 86.39  | 23.39 |      | 65.0 |         |
|           |                                            | Z | 9.54  | 83.16  | 22.78 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 8.83  | 80.24  | 22.94 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.38  | 80.07  | 22.43 |      | 65.0 |         |
|           |                                            | Z | 8.48  | 78.94  | 22.29 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 8.37  | 78.15  | 21.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.73  | 77.46  | 21.06 |      | 65.0 |         |
|           |                                            | Z | 8.17  | 77.24  | 21.36 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 10.43 | 84.63  | 24.00 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.38 | 85.34  | 23.87 |      | 65.0 |         |
|           |                                            | Z | 9.48  | 82.30  | 23.02 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 8.24  | 77.12  | 21.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.62  | 76.41  | 20.97 |      | 65.0 |         |
|           |                                            | Z | 8.12  | 76.42  | 21.28 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.59  | 77.78  | 22.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.06  | 77.36  | 21.67 |      | 65.0 |         |
|           |                                            | Z | 8.46  | 77.05  | 21.81 |      | 65.0 |         |

|           |                                             |   |       |       |       |      |      |         |
|-----------|---------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 9.19  | 80.79 | 22.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.89  | 81.04 | 22.54 |      | 65.0 |         |
|           |                                             | Z | 8.75  | 79.38 | 22.09 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 9.46  | 80.54 | 20.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.26  | 76.12 | 17.61 |      | 65.0 |         |
|           |                                             | Z | 8.73  | 78.73 | 19.97 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 9.23  | 79.78 | 20.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.96  | 75.17 | 17.14 |      | 65.0 |         |
|           |                                             | Z | 8.59  | 78.13 | 19.66 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 9.10  | 82.63 | 21.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.16  | 78.79 | 19.11 |      | 65.0 |         |
|           |                                             | Z | 7.85  | 79.60 | 20.38 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 8.39  | 79.27 | 21.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.73  | 78.47 | 20.85 |      | 65.0 |         |
|           |                                             | Z | 8.02  | 77.92 | 21.16 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 8.39  | 78.99 | 21.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.70  | 78.11 | 20.72 |      | 65.0 |         |
|           |                                             | Z | 8.05  | 77.71 | 21.09 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 10.34 | 84.95 | 23.83 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 10.04 | 85.03 | 23.28 |      | 65.0 |         |
|           |                                             | Z | 9.23  | 82.32 | 22.74 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 8.82  | 80.21 | 22.91 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.36  | 80.01 | 22.38 |      | 65.0 |         |
|           |                                             | Z | 8.47  | 78.91 | 22.26 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 8.36  | 78.15 | 21.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.72  | 77.44 | 21.06 |      | 65.0 |         |
|           |                                             | Z | 8.17  | 77.23 | 21.37 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 10.37 | 84.50 | 23.93 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 10.27 | 85.13 | 23.77 |      | 65.0 |         |
|           |                                             | Z | 9.43  | 82.19 | 22.96 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.48  | 77.76 | 21.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.81  | 76.97 | 21.20 |      | 65.0 |         |
|           |                                             | Z | 8.32  | 76.97 | 21.47 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.81  | 78.38 | 22.45 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.27  | 77.98 | 21.97 |      | 65.0 |         |
|           |                                             | Z | 8.64  | 77.56 | 22.02 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 9.50  | 81.14 | 22.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.25  | 81.50 | 22.50 |      | 65.0 |         |
|           |                                             | Z | 8.99  | 79.63 | 21.95 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.86  | 77.06 | 21.92 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.31  | 76.56 | 21.43 |      | 65.0 |         |
|           |                                             | Z | 8.78  | 76.48 | 21.59 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.77  | 76.63 | 21.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.23  | 76.12 | 21.32 |      | 65.0 |         |
|           |                                             | Z | 8.71  | 76.12 | 21.52 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 8.91  | 78.30 | 21.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.57  | 78.39 | 21.47 |      | 65.0 |         |
|           |                                             | Z | 8.67  | 77.36 | 21.19 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.73  | 66.93 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.66  | 67.19 | 15.64 |      | 150.0 |         |
|           |                                                                    | Z | 2.67  | 66.38 | 15.35 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.85  | 69.82 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.73  | 69.48 | 16.43 |      | 150.0 |         |
|           |                                                                    | Z | 1.70  | 68.07 | 15.69 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 5.86  | 70.53 | 14.71 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.40  | 66.90 | 11.75 |      | 50.0  |         |
|           |                                                                    | Z | 6.19  | 70.94 | 15.24 |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 10.27 | 82.27 | 21.99 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 7.88  | 77.57 | 18.90 |      | 50.0  |         |
|           |                                                                    | Z | 9.35  | 79.97 | 21.25 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 10.47 | 82.49 | 22.08 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 8.00  | 77.73 | 18.99 |      | 50.0  |         |
|           |                                                                    | Z | 9.52  | 80.18 | 21.35 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 2.00  | 72.56 | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.81  | 72.10 | 15.72 |      | 150.0 |         |
|           |                                                                    | Z | 1.64  | 69.27 | 14.92 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.15  | 69.82 | 15.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.99  | 68.71 | 14.17 |      | 150.0 |         |
|           |                                                                    | Z | 0.95  | 66.46 | 13.46 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.59  | 75.79 | 18.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.63  | 76.74 | 18.06 |      | 150.0 |         |
|           |                                                                    | Z | 1.13  | 69.78 | 15.46 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 2.45  | 82.81 | 21.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.29  | 91.48 | 23.73 |      | 150.0 |         |
|           |                                                                    | Z | 1.46  | 73.68 | 17.64 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 11.26 | 85.50 | 25.18 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 11.00 | 85.02 | 23.98 |      | 50.0  |         |
|           |                                                                    | Z | 10.64 | 83.52 | 24.39 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.10  | 71.18 | 17.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.91  | 70.92 | 17.21 |      | 150.0 |         |
|           |                                                                    | Z | 2.91  | 69.91 | 16.61 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 2.01  | 70.53 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.80  | 70.02 | 15.42 |      | 150.0 |         |
|           |                                                                    | Z | 1.78  | 68.34 | 15.01 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 4.29  | 76.33 | 18.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.82  | 74.61 | 16.37 |      | 150.0 |         |
|           |                                                                    | Z | 3.76  | 74.04 | 17.28 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 3.03  | 70.18 | 15.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.35  | 67.31 | 12.44 |      | 150.0 |         |
|           |                                                                    | Z | 2.84  | 69.06 | 14.39 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 5.75  | 68.04 | 18.85 | 4.17 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.34  | 67.59 | 18.38 |      | 80.0  |         |
|           |                                                                    | Z | 6.02  | 68.99 | 19.26 |      | 80.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 6.35  | 69.28 | 19.97 | 4.96 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.77  | 67.89 | 18.92 |      | 80.0  |         |
|           |                                                                    | Z | 6.57  | 69.95 | 20.23 |      | 80.0  |         |

|           |                                                                     |   |       |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 6.22  | 69.45 | 20.09 | 4.96  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.58  | 67.78 | 18.88 |       | 80.0  |         |
|           |                                                                     | Z | 6.47  | 70.23 | 20.40 |       | 80.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.82  | 68.59 | 19.17 | 4.17  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.30  | 67.36 | 18.23 |       | 80.0  |         |
|           |                                                                     | Z | 6.00  | 69.14 | 19.36 |       | 80.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 7.58  | 77.08 | 24.20 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.71  | 75.99 | 23.36 |       | 50.0  |         |
|           |                                                                     | Z | 8.94  | 80.39 | 25.44 |       | 50.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 6.74  | 72.69 | 22.39 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.02  | 71.61 | 21.57 |       | 50.0  |         |
|           |                                                                     | Z | 7.38  | 74.60 | 23.18 |       | 50.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 6.88  | 73.57 | 22.61 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.12  | 72.48 | 21.82 |       | 50.0  |         |
|           |                                                                     | Z | 7.63  | 75.68 | 23.46 |       | 50.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 6.95  | 74.06 | 22.85 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.19  | 73.01 | 22.10 |       | 50.0  |         |
|           |                                                                     | Z | 7.77  | 76.32 | 23.75 |       | 50.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 6.88  | 73.08 | 22.59 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 5.75  | 69.67 | 20.38 |       | 50.0  |         |
|           |                                                                     | Z | 7.54  | 75.02 | 23.39 |       | 50.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 6.76  | 72.98 | 22.43 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.05  | 71.97 | 21.66 |       | 50.0  |         |
|           |                                                                     | Z | 7.45  | 74.97 | 23.24 |       | 50.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.46  | 70.38 | 16.96 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.29  | 70.15 | 16.82 |       | 150.0 |         |
|           |                                                                     | Z | 3.26  | 69.20 | 16.26 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 8.57  | 80.77 | 19.81 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 7.42  | 78.97 | 18.59 |       | 70.0  |         |
|           |                                                                     | Z | 7.51  | 78.37 | 19.04 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 11.07 | 87.09 | 24.45 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 12.16 | 89.30 | 24.68 |       | 30.0  |         |
|           |                                                                     | Z | 8.76  | 82.33 | 22.85 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.21  | 65.47 | 16.38 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.17  | 65.32 | 16.10 |       | 150.0 |         |
|           |                                                                     | Z | 1.18  | 64.56 | 15.52 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.82  | 67.11 | 16.64 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.66  | 67.15 | 16.49 |       | 150.0 |         |
|           |                                                                     | Z | 4.80  | 66.95 | 16.46 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.82  | 67.11 | 16.64 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.66  | 67.15 | 16.49 |       | 150.0 |         |
|           |                                                                     | Z | 4.80  | 66.95 | 16.46 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.93  | 67.37 | 16.55 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75  | 67.39 | 16.43 |       | 150.0 |         |
|           |                                                                     | Z | 4.90  | 67.18 | 16.37 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.56  | 67.43 | 16.63 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.44  | 67.54 | 16.57 |       | 150.0 |         |
|           |                                                                     | Z | 5.53  | 67.31 | 16.49 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.86   | 67.95  | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.70   | 67.88  | 16.59 |      | 150.0 |         |
|           |                                                                                | Z | 5.83   | 67.79  | 16.56 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 2.00   | 72.56  | 16.71 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.81   | 72.10  | 15.72 |      | 115.0 |         |
|           |                                                                                | Z | 1.64   | 69.27  | 14.92 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 2.00   | 72.56  | 16.71 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.81   | 72.10  | 15.72 |      | 115.0 |         |
|           |                                                                                | Z | 1.64   | 69.27  | 14.92 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 125.12 | 32.45 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 117.90 | 28.49 |      | 100.0 |         |
|           |                                                                                | Z | 100.00 | 124.11 | 32.05 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 100.00 | 121.42 | 31.29 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 118.14 | 29.02 |      | 80.0  |         |
|           |                                                                                | Z | 100.00 | 121.09 | 31.26 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.05   | 63.84  | 15.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.03   | 63.83  | 15.26 |      | 150.0 |         |
|           |                                                                                | Z | 1.03   | 63.06  | 14.64 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.72   | 66.95  | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.58   | 67.06  | 16.39 |      | 150.0 |         |
|           |                                                                                | Z | 4.69   | 66.77  | 16.29 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.72   | 66.95  | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.58   | 67.06  | 16.39 |      | 150.0 |         |
|           |                                                                                | Z | 4.69   | 66.77  | 16.29 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.71   | 67.09  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.57   | 67.23  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.67   | 66.90  | 16.28 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.73   | 67.05  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.59   | 67.17  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.70   | 66.86  | 16.30 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.86   | 67.05  | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.71   | 67.16  | 16.42 |      | 150.0 |         |
|           |                                                                                | Z | 4.82   | 66.88  | 16.32 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 5.07   | 67.45  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.88   | 67.49  | 16.53 |      | 150.0 |         |
|           |                                                                                | Z | 5.03   | 67.26  | 16.46 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.97   | 67.38  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.80   | 67.44  | 16.51 |      | 150.0 |         |
|           |                                                                                | Z | 4.94   | 67.19  | 16.42 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.55   | 67.72  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.40   | 67.74  | 16.67 |      | 150.0 |         |
|           |                                                                                | Z | 5.52   | 67.56  | 16.60 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.56   | 67.76  | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.41   | 67.76  | 16.67 |      | 150.0 |         |
|           |                                                                                | Z | 5.53   | 67.59  | 16.61 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.58   | 67.76  | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.42   | 67.74  | 16.66 |      | 150.0 |         |
|           |                                                                | Z | 5.55   | 67.59  | 16.61 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.39   | 70.34  | 18.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.45   | 71.92  | 18.77 |      | 150.0 |         |
|           |                                                                | Z | 4.28   | 69.73  | 17.80 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.47   | 67.55  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.28   | 67.68  | 16.44 |      | 150.0 |         |
|           |                                                                | Z | 4.42   | 67.30  | 16.33 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.75   | 67.43  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.57   | 67.51  | 16.47 |      | 150.0 |         |
|           |                                                                | Z | 4.71   | 67.22  | 16.38 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.99   | 67.43  | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.82   | 67.48  | 16.53 |      | 150.0 |         |
|           |                                                                | Z | 4.95   | 67.24  | 16.45 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.48   | 71.07  | 18.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.62   | 73.01  | 18.85 |      | 150.0 |         |
|           |                                                                | Z | 4.34   | 70.35  | 17.75 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 121.26 | 31.21 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 117.94 | 28.93 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 120.94 | 31.19 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.79   | 67.68  | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.59   | 67.83  | 15.87 |      | 150.0 |         |
|           |                                                                | Z | 3.72   | 67.28  | 15.81 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.28   | 67.32  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.12   | 67.46  | 16.30 |      | 150.0 |         |
|           |                                                                | Z | 4.23   | 67.06  | 16.18 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.53   | 67.25  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.38   | 67.35  | 16.38 |      | 150.0 |         |
|           |                                                                | Z | 4.49   | 67.03  | 16.27 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.71   | 67.18  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.57   | 67.25  | 16.39 |      | 150.0 |         |
|           |                                                                | Z | 4.68   | 66.98  | 16.29 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.73   | 68.01  | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.50   | 68.08  | 15.53 |      | 150.0 |         |
|           |                                                                | Z | 3.65   | 67.53  | 15.55 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.41   | 68.33  | 16.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.26   | 68.26  | 16.79 |      | 150.0 |         |
|           |                                                                | Z | 6.38   | 68.19  | 16.79 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.89   | 65.58  | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.82   | 65.69  | 16.10 |      | 150.0 |         |
|           |                                                                | Z | 3.87   | 65.41  | 16.01 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.54   | 67.26  | 15.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.31   | 67.35  | 14.92 |      | 150.0 |         |
|           |                                                                | Z | 3.47   | 66.87  | 15.11 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.64   | 65.34  | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.30   | 65.17  | 15.60 |      | 150.0 |         |
|           |                                                                | Z | 4.52   | 64.85  | 15.72 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.11   | 71.80  | 18.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.02   | 70.94  | 17.72 |      | 150.0 |         |
|           |                                                                   | Z | 0.94   | 68.21  | 16.13 |      | 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 | 125.25 | 33.13 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 123.29 | 31.43 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.80 | 32.59 |      | 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 | 111.09 | 26.31 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 103.84 | 22.21 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.71 | 26.28 |      | 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 | 108.22 | 24.94 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 4.72   | 73.15  | 13.51 |      | 80.0  |         |
|           |                                                                   | Z | 72.14  | 104.46 | 24.20 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.51 | 32.16 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 120.82 | 30.14 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.14 | 31.67 |      | 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 | 110.62 | 26.08 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 27.97  | 91.21  | 19.17 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.30 | 26.07 |      | 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 | 107.77 | 24.72 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.48   | 70.24  | 12.45 |      | 80.0  |         |
|           |                                                                   | Z | 39.27  | 97.36  | 22.41 |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.71 | 32.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.09 | 30.25 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.32 | 31.75 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.77 | 26.14 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 40.47  | 94.85  | 20.08 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.43 | 26.13 |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 107.78 | 24.72 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.50   | 70.33  | 12.47 |      | 80.0  |         |
|           |                                                                   | Z | 40.62  | 97.74  | 22.51 |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.74 | 32.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.11 | 30.26 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.35 | 31.76 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.72 | 26.12 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 38.79  | 94.39  | 19.96 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.39 | 26.11 |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.74 | 24.69 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.46   | 70.20  | 12.41 |      | 80.0  |         |
|           |                                                                   | Z | 40.93  | 97.80  | 22.51 |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.71 | 32.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.07 | 30.24 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.32 | 31.75 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.73 | 26.12 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 37.59  | 94.10  | 19.89 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.40 | 26.11 |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.75 | 24.70 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.43   | 70.14  | 12.40 |      | 80.0  |         |
|           |                                                                   | Z | 40.21  | 97.61  | 22.46 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 110.58 | 26.05 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 28.26  | 91.26  | 19.16 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 110.26 | 26.05 |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 107.71 | 24.68 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.38   | 69.99  | 12.33 |      | 80.0 |         |
|           |                                                                     | Z | 39.53  | 97.39  | 22.40 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 16.61  | 96.96  | 27.34 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 32.48  | 106.45 | 28.76 |      | 80.0 |         |
|           |                                                                     | Z | 11.40  | 90.02  | 25.04 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 20.13  | 94.40  | 24.94 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 34.21  | 99.63  | 24.79 |      | 80.0 |         |
|           |                                                                     | Z | 12.99  | 87.40  | 22.71 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 17.26  | 91.33  | 23.70 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 20.52  | 91.89  | 22.28 |      | 80.0 |         |
|           |                                                                     | Z | 11.58  | 85.08  | 21.67 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.19   | 82.36  | 21.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.22   | 80.40  | 19.88 |      | 80.0 |         |
|           |                                                                     | Z | 5.41   | 77.39  | 19.43 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 10.36  | 84.69  | 22.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.30   | 82.35  | 20.02 |      | 80.0 |         |
|           |                                                                     | Z | 8.11   | 80.45  | 20.55 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.50   | 83.16  | 21.63 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 8.10   | 80.30  | 19.34 |      | 80.0 |         |
|           |                                                                     | Z | 7.64   | 79.37  | 20.17 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.05   | 82.24  | 22.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.34   | 81.22  | 21.08 |      | 80.0 |         |
|           |                                                                     | Z | 5.64   | 78.03  | 20.28 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.27   | 74.77  | 19.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.82   | 74.06  | 18.02 |      | 80.0 |         |
|           |                                                                     | Z | 4.76   | 72.67  | 17.96 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.20   | 74.21  | 18.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.72   | 73.41  | 17.75 |      | 80.0 |         |
|           |                                                                     | Z | 4.74   | 72.26  | 17.79 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.49   | 79.45  | 21.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.74   | 78.36  | 20.74 |      | 80.0 |         |
|           |                                                                     | Z | 5.67   | 76.65  | 20.18 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.12   | 73.18  | 19.22 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.72   | 72.73  | 18.67 |      | 80.0 |         |
|           |                                                                     | Z | 4.87   | 71.89  | 18.50 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.15   | 72.75  | 19.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.76   | 72.36  | 18.54 |      | 80.0 |         |
|           |                                                                     | Z | 4.93   | 71.59  | 18.41 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.99   | 76.19  | 20.30 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.39   | 75.34  | 19.75 |      | 80.0 |         |
|           |                                                                     | Z | 5.53   | 74.37  | 19.41 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.26   | 71.76  | 18.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.86   | 71.30  | 18.38 |      | 80.0 |         |
|           |                                                                     | Z | 5.11   | 70.90  | 18.33 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.30 | 71.51 | 18.76 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.91 | 71.07 | 18.30 |      | 80.0 |         |
|           |                                                                      | Z | 5.17 | 70.71 | 18.27 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.84 | 78.43 | 20.95 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.08 | 77.35 | 20.35 |      | 80.0 |         |
|           |                                                                      | Z | 6.10 | 76.07 | 19.88 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.38 | 72.41 | 19.10 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.95 | 71.82 | 18.61 |      | 80.0 |         |
|           |                                                                      | Z | 5.20 | 71.44 | 18.53 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.39 | 71.89 | 18.93 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.98 | 71.37 | 18.47 |      | 80.0 |         |
|           |                                                                      | Z | 5.24 | 71.04 | 18.41 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 5.97 | 79.48 | 19.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.38 | 75.06 | 17.02 |      | 80.0 |         |
|           |                                                                      | Z | 4.42 | 74.52 | 17.73 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.17 | 71.56 | 15.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.60 | 65.94 | 12.29 |      | 80.0 |         |
|           |                                                                      | Z | 3.55 | 68.95 | 14.65 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.06 | 70.87 | 15.52 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.47 | 65.10 | 11.77 |      | 80.0 |         |
|           |                                                                      | Z | 3.49 | 68.43 | 14.31 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.49 | 80.29 | 21.53 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.83 | 79.38 | 20.74 |      | 80.0 |         |
|           |                                                                      | Z | 5.49 | 76.96 | 20.08 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.17 | 73.94 | 19.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.77 | 73.47 | 18.24 |      | 80.0 |         |
|           |                                                                      | Z | 4.79 | 72.25 | 18.12 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.19 | 73.61 | 18.84 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.79 | 73.16 | 18.07 |      | 80.0 |         |
|           |                                                                      | Z | 4.83 | 72.02 | 17.99 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.41 | 79.23 | 21.35 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.64 | 78.08 | 20.63 |      | 80.0 |         |
|           |                                                                      | Z | 5.60 | 76.47 | 20.11 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.09 | 73.10 | 19.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.69 | 72.61 | 18.60 |      | 80.0 |         |
|           |                                                                      | Z | 4.85 | 71.82 | 18.46 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.13 | 72.66 | 19.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.73 | 72.25 | 18.47 |      | 80.0 |         |
|           |                                                                      | Z | 4.91 | 71.52 | 18.36 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.78 | 78.28 | 20.88 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.01 | 77.16 | 20.27 |      | 80.0 |         |
|           |                                                                      | Z | 6.06 | 75.95 | 19.82 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.36 | 72.35 | 19.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.93 | 71.74 | 18.57 |      | 80.0 |         |
|           |                                                                      | Z | 5.18 | 71.38 | 18.50 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.37 | 71.83 | 18.89 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.96 | 71.29 | 18.42 |      | 80.0  |         |
|           |                                                                     | Z | 5.23 | 70.98 | 18.38 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.48 | 75.49 | 19.83 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.91 | 74.73 | 19.37 |      | 80.0  |         |
|           |                                                                     | Z | 6.04 | 73.93 | 19.06 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.74 | 71.59 | 18.80 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.32 | 71.00 | 18.37 |      | 80.0  |         |
|           |                                                                     | Z | 5.62 | 70.87 | 18.36 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.74 | 71.18 | 18.68 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.33 | 70.64 | 18.26 |      | 80.0  |         |
|           |                                                                     | Z | 5.63 | 70.53 | 18.27 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 7.25 | 77.99 | 20.61 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.50 | 76.91 | 20.04 |      | 80.0  |         |
|           |                                                                     | Z | 6.53 | 75.84 | 19.64 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.72 | 72.19 | 19.03 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.25 | 71.45 | 18.54 |      | 80.0  |         |
|           |                                                                     | Z | 5.56 | 71.34 | 18.53 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.63 | 71.53 | 18.83 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.21 | 70.89 | 18.37 |      | 80.0  |         |
|           |                                                                     | Z | 5.51 | 70.80 | 18.38 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.02 | 64.11 | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.00 | 64.07 | 15.36 |      | 150.0 |         |
|           |                                                                     | Z | 0.99 | 63.25 | 14.70 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.98 | 79.68 | 22.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.77 | 75.78 | 20.20 |      | 150.0 |         |
|           |                                                                     | Z | 0.64 | 70.56 | 17.22 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.91 | 67.05 | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87 | 66.61 | 16.37 |      | 150.0 |         |
|           |                                                                     | Z | 0.85 | 65.23 | 15.33 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.72 | 67.03 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 67.14 | 16.37 |      | 150.0 |         |
|           |                                                                     | Z | 4.68 | 66.84 | 16.27 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.94 | 67.33 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.77 | 67.38 | 16.49 |      | 150.0 |         |
|           |                                                                     | Z | 4.90 | 67.14 | 16.41 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.79 | 67.32 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.62 | 67.35 | 16.42 |      | 150.0 |         |
|           |                                                                     | Z | 4.75 | 67.11 | 16.33 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.72 | 67.33 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 67.35 | 16.41 |      | 150.0 |         |
|           |                                                                     | Z | 4.68 | 67.11 | 16.32 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.76 | 67.29 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.61 | 67.43 | 16.49 |      | 150.0 |         |
|           |                                                                     | Z | 4.73 | 67.10 | 16.35 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.64 | 67.20 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.49 | 67.31 | 16.34 |      | 150.0 |         |
|           |                                                            | Z | 4.60 | 66.98 | 16.20 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.72 | 67.26 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.55 | 67.35 | 16.45 |      | 150.0 |         |
|           |                                                            | Z | 4.68 | 67.06 | 16.34 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.67 | 66.28 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.54 | 66.41 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 4.64 | 66.07 | 15.92 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.88 | 66.69 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.71 | 66.78 | 16.19 |      | 150.0 |         |
|           |                                                            | Z | 4.84 | 66.48 | 16.07 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.79 | 66.67 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.75 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.75 | 66.45 | 16.02 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.81 | 66.69 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.76 | 16.17 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 66.47 | 16.05 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.81 | 66.69 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.76 | 16.17 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 66.47 | 16.05 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.83 | 66.85 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.88 | 16.19 |      | 150.0 |         |
|           |                                                            | Z | 4.78 | 66.62 | 16.08 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.68 | 66.72 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.51 | 66.74 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.47 | 16.02 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.83 | 66.71 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.66 | 66.81 | 16.16 |      | 150.0 |         |
|           |                                                            | Z | 4.78 | 66.49 | 16.03 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.33 | 66.83 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.18 | 66.84 | 16.20 |      | 150.0 |         |
|           |                                                            | Z | 5.29 | 66.64 | 16.12 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.40 | 66.97 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.25 | 67.01 | 16.28 |      | 150.0 |         |
|           |                                                            | Z | 5.36 | 66.78 | 16.17 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.27 | 66.97 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.12 | 66.97 | 16.25 |      | 150.0 |         |
|           |                                                            | Z | 5.23 | 66.76 | 16.15 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.33 | 66.94 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.18 | 66.94 | 16.23 |      | 150.0 |         |
|           |                                                            | Z | 5.29 | 66.75 | 16.14 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.45 | 67.02 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.27 | 66.95 | 16.28 |      | 150.0 |         |
|           |                                                            | Z | 5.41 | 66.83 | 16.23 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.35 | 66.96 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.20 | 66.97 | 16.30 |      | 150.0 |         |
|           |                                                            | Z | 5.31 | 66.77 | 16.21 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.33 | 66.87 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.17 | 66.84 | 16.23 |      | 150.0 |         |
|           |                                                     | Z | 5.29 | 66.67 | 16.16 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.48 | 66.90 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.32 | 66.90 | 16.27 |      | 150.0 |         |
|           |                                                     | Z | 5.44 | 66.72 | 16.20 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.56 | 66.90 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.40 | 66.93 | 16.30 |      | 150.0 |         |
|           |                                                     | Z | 5.52 | 66.73 | 16.22 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.60 | 66.92 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.49 | 66.94 | 16.19 |      | 150.0 |         |
|           |                                                     | Z | 5.57 | 66.75 | 16.10 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.82 | 67.35 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.68 | 67.35 | 16.34 |      | 150.0 |         |
|           |                                                     | Z | 5.79 | 67.18 | 16.26 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.71 | 67.23 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.56 | 67.16 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.67 | 67.04 | 16.21 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.79 | 67.29 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.63 | 67.19 | 16.27 |      | 150.0 |         |
|           |                                                     | Z | 5.75 | 67.11 | 16.24 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 6.16 | 68.54 | 17.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.89 | 68.14 | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 6.10 | 68.32 | 16.82 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.72 | 67.17 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.58 | 67.16 | 16.27 |      | 150.0 |         |
|           |                                                     | Z | 5.68 | 66.99 | 16.19 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.74 | 67.28 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.59 | 67.21 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.70 | 67.08 | 16.20 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.64 | 67.02 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.50 | 67.01 | 16.17 |      | 150.0 |         |
|           |                                                     | Z | 5.60 | 66.83 | 16.09 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.73 | 67.06 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.58 | 67.04 | 16.21 |      | 150.0 |         |
|           |                                                     | Z | 5.69 | 66.89 | 16.15 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 6.01 | 67.31 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.89 | 67.29 | 16.27 |      | 150.0 |         |
|           |                                                     | Z | 5.97 | 67.14 | 16.21 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.16 | 67.66 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.02 | 67.59 | 16.39 |      | 150.0 |         |
|           |                                                     | Z | 6.12 | 67.49 | 16.35 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.17 | 67.67 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.04 | 67.64 | 16.41 |      | 150.0 |         |
|           |                                                     | Z | 6.14 | 67.50 | 16.35 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.16 | 67.64 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.01 | 67.55 | 16.38 |      | 150.0 |         |
|           |                                                     | Z | 6.12 | 67.46 | 16.36 |      | 150.0 |         |

|           |                                                                 |   |       |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.23  | 67.85  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.06  | 67.71  | 16.48 |      | 150.0 |         |
|           |                                                                 | Z | 6.19  | 67.66  | 16.47 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.21  | 67.65  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.05  | 67.56  | 16.44 |      | 150.0 |         |
|           |                                                                 | Z | 6.17  | 67.48  | 16.42 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 6.12  | 67.61  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.97  | 67.52  | 16.46 |      | 150.0 |         |
|           |                                                                 | Z | 6.09  | 67.44  | 16.44 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.30  | 68.15  | 16.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.10  | 67.92  | 16.66 |      | 150.0 |         |
|           |                                                                 | Z | 6.26  | 67.96  | 16.71 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.62  | 68.62  | 17.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.35  | 68.25  | 16.78 |      | 150.0 |         |
|           |                                                                 | Z | 6.58  | 68.47  | 16.91 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 5.06  | 67.17  | 16.65 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.90  | 67.19  | 16.50 |      | 150.0 |         |
|           |                                                                 | Z | 5.03  | 67.02  | 16.49 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.32  | 67.64  | 16.96 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.14  | 67.66  | 16.84 |      | 150.0 |         |
|           |                                                                 | Z | 5.29  | 67.48  | 16.80 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 5.16  | 67.53  | 16.80 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.97  | 67.52  | 16.66 |      | 150.0 |         |
|           |                                                                 | Z | 5.12  | 67.36  | 16.63 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.18  | 67.87  | 17.11 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.01  | 67.94  | 17.03 |      | 150.0 |         |
|           |                                                                 | Z | 5.14  | 67.68  | 16.93 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 5.07  | 67.28  | 16.58 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.89  | 67.27  | 16.41 |      | 150.0 |         |
|           |                                                                 | Z | 5.04  | 67.14  | 16.42 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 5.11  | 67.89  | 17.13 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.97  | 68.06  | 17.11 |      | 150.0 |         |
|           |                                                                 | Z | 5.08  | 67.69  | 16.94 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.16  | 67.75  | 17.08 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.00  | 67.87  | 17.02 |      | 150.0 |         |
|           |                                                                 | Z | 5.13  | 67.56  | 16.90 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.41  | 67.04  | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.34  | 66.60  | 16.67 |      | 130.0 |         |
|           |                                                                 | Z | 1.38  | 66.01  | 16.24 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.44  | 67.79  | 17.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.37  | 67.37  | 17.11 |      | 130.0 |         |
|           |                                                                 | Z | 1.40  | 66.61  | 16.58 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 48.76 | 135.45 | 36.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 13.63 | 114.31 | 31.46 |      | 130.0 |         |
|           |                                                                 | Z | 3.91  | 91.83  | 24.74 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.88  | 76.30  | 21.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.78  | 75.95  | 21.10 |      | 130.0 |         |
|           |                                                                 | Z | 1.63  | 72.68  | 19.39 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.87 | 67.03 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.71 | 67.06 | 16.59 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 66.89 | 16.59 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.90 | 67.18 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.74 | 67.24 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.88 | 67.03 | 16.63 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 5.14 | 67.51 | 16.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.95 | 67.52 | 16.83 |      | 130.0 |         |
|           |                                                                 | Z | 5.11 | 67.36 | 16.82 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 5.03 | 67.68 | 17.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.72 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 5.00 | 67.50 | 16.89 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.82 | 67.12 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.61 | 66.97 | 16.24 |      | 130.0 |         |
|           |                                                                 | Z | 4.79 | 66.96 | 16.33 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.86 | 67.08 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.99 | 16.25 |      | 130.0 |         |
|           |                                                                 | Z | 4.84 | 66.94 | 16.33 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.94 | 67.77 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 67.79 | 16.91 |      | 130.0 |         |
|           |                                                                 | Z | 4.91 | 67.57 | 16.84 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.77 | 66.89 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.70 | 16.01 |      | 130.0 |         |
|           |                                                                 | Z | 4.75 | 66.75 | 16.15 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.87 | 67.03 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.71 | 67.06 | 16.59 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 66.89 | 16.59 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.90 | 67.18 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.74 | 67.24 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.88 | 67.03 | 16.63 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 5.14 | 67.51 | 16.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.95 | 67.52 | 16.83 |      | 130.0 |         |
|           |                                                                 | Z | 5.11 | 67.36 | 16.82 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 5.03 | 67.68 | 17.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.72 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 5.00 | 67.50 | 16.89 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.82 | 67.12 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.61 | 66.97 | 16.24 |      | 130.0 |         |
|           |                                                                 | Z | 4.79 | 66.96 | 16.33 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.86 | 67.08 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.99 | 16.25 |      | 130.0 |         |
|           |                                                                 | Z | 4.84 | 66.94 | 16.33 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.94 | 67.77 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 67.79 | 16.91 |      | 130.0 |         |
|           |                                                                 | Z | 4.91 | 67.57 | 16.84 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.77 | 66.89 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.70 | 16.01 |      | 130.0 |         |
|           |                                                                 | Z | 4.75 | 66.75 | 16.15 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 5.02 | 67.07 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.86 | 67.11 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 5.00 | 66.93 | 16.67 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.20 | 67.42 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.02 | 67.45 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.17 | 67.28 | 16.79 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 5.13 | 67.39 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.94 | 67.36 | 16.70 |      | 130.0 |         |
|           |                                                       | Z | 5.11 | 67.24 | 16.71 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 5.18 | 67.52 | 17.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.00 | 67.54 | 16.86 |      | 130.0 |         |
|           |                                                       | Z | 5.15 | 67.37 | 16.84 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 5.16 | 67.51 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.97 | 67.49 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 5.13 | 67.35 | 16.75 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 5.10 | 67.51 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.90 | 67.49 | 16.76 |      | 130.0 |         |
|           |                                                       | Z | 5.07 | 67.36 | 16.76 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 5.05 | 67.46 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.85 | 67.39 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 5.02 | 67.30 | 16.67 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 5.03 | 67.69 | 17.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.84 | 67.66 | 16.92 |      | 130.0 |         |
|           |                                                       | Z | 5.00 | 67.51 | 16.90 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.70 | 67.69 | 17.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.52 | 67.61 | 16.86 |      | 130.0 |         |
|           |                                                       | Z | 5.67 | 67.57 | 16.89 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.93 | 68.39 | 17.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.66 | 68.03 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.89 | 68.22 | 17.20 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.76 | 67.96 | 17.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.79 | 16.94 |      | 130.0 |         |
|           |                                                       | Z | 5.73 | 67.82 | 17.01 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.85 | 67.98 | 17.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.64 | 67.79 | 16.85 |      | 130.0 |         |
|           |                                                       | Z | 5.82 | 67.84 | 16.94 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.95 | 68.31 | 17.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.73 | 68.12 | 17.15 |      | 130.0 |         |
|           |                                                       | Z | 5.91 | 68.13 | 17.20 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.70 | 67.66 | 17.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.53 | 67.58 | 16.87 |      | 130.0 |         |
|           |                                                       | Z | 5.68 | 67.53 | 16.89 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.82 | 67.98 | 17.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.64 | 67.90 | 17.03 |      | 130.0 |         |
|           |                                                       | Z | 5.79 | 67.85 | 17.07 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.59 | 67.45 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.39 | 67.26 | 16.56 |      | 130.0 |         |
|           |                                                       | Z | 5.56 | 67.33 | 16.68 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.85 | 66.37 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.70 | 66.44 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.82 | 66.20 | 16.26 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 5.07 | 66.80 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.89 | 66.85 | 16.48 |      | 130.0 |         |
|           |                                                   | Z | 5.04 | 66.63 | 16.42 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.96 | 66.70 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.70 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.93 | 66.52 | 16.29 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 5.01 | 66.84 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.83 | 66.87 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 4.98 | 66.66 | 16.44 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.94 | 66.69 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.75 | 66.67 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 4.91 | 66.51 | 16.31 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.96 | 66.85 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.83 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 4.92 | 66.67 | 16.36 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.97 | 66.79 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.71 | 16.26 |      | 130.0 |         |
|           |                                                   | Z | 4.94 | 66.60 | 16.27 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.90 | 66.94 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.71 | 66.92 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 4.86 | 66.73 | 16.46 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.94 | 66.52 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.48 | 16.10 |      | 130.0 |         |
|           |                                                   | Z | 4.91 | 66.36 | 16.12 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.51 | 66.93 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.34 | 66.89 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 5.48 | 66.77 | 16.47 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.57 | 67.04 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 67.05 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 5.54 | 66.88 | 16.49 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.46 | 67.12 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.30 | 67.08 | 16.57 |      | 130.0 |         |
|           |                                                   | Z | 5.43 | 66.94 | 16.53 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.49 | 66.94 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.31 | 66.88 | 16.40 |      | 130.0 |         |
|           |                                                   | Z | 5.46 | 66.78 | 16.40 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.61 | 67.07 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 66.92 | 16.47 |      | 130.0 |         |
|           |                                                   | Z | 5.58 | 66.91 | 16.51 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.57 | 67.08 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 67.05 | 16.66 |      | 130.0 |         |
|           |                                                   | Z | 5.54 | 66.91 | 16.62 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.58 | 67.21 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 67.22 | 16.74 |      | 130.0 |         |
|           |                                                   | Z | 5.54 | 67.04 | 16.67 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.47 | 66.83 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.29 | 66.72 | 16.36 |      | 130.0 |         |
|           |                                                     | Z | 5.44 | 66.67 | 16.38 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.65 | 66.97 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.48 | 66.92 | 16.52 |      | 130.0 |         |
|           |                                                     | Z | 5.63 | 66.83 | 16.52 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 6.08 | 68.09 | 17.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.86 | 67.92 | 17.07 |      | 130.0 |         |
|           |                                                     | Z | 6.05 | 67.95 | 17.14 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.76 | 66.94 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.63 | 66.92 | 16.43 |      | 130.0 |         |
|           |                                                     | Z | 5.73 | 66.80 | 16.40 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 6.03 | 67.53 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.87 | 67.49 | 16.67 |      | 130.0 |         |
|           |                                                     | Z | 6.00 | 67.38 | 16.65 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.84 | 67.16 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.67 | 67.02 | 16.37 |      | 130.0 |         |
|           |                                                     | Z | 5.81 | 67.01 | 16.41 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.93 | 67.23 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.75 | 67.09 | 16.40 |      | 130.0 |         |
|           |                                                     | Z | 5.90 | 67.08 | 16.43 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.57 | 69.29 | 17.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.20 | 68.62 | 17.15 |      | 130.0 |         |
|           |                                                     | Z | 6.52 | 69.09 | 17.44 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 6.37 | 68.79 | 17.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.10 | 68.43 | 17.26 |      | 130.0 |         |
|           |                                                     | Z | 6.32 | 68.57 | 17.35 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 6.00 | 67.56 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.85 | 67.56 | 16.85 |      | 130.0 |         |
|           |                                                     | Z | 5.96 | 67.39 | 16.77 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.94 | 67.43 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.73 | 67.19 | 16.48 |      | 130.0 |         |
|           |                                                     | Z | 5.91 | 67.25 | 16.55 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.91 | 67.37 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.72 | 67.22 | 16.56 |      | 130.0 |         |
|           |                                                     | Z | 5.87 | 67.19 | 16.57 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.80 | 66.77 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.59 | 66.52 | 15.94 |      | 130.0 |         |
|           |                                                     | Z | 5.77 | 66.64 | 16.07 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.17 | 67.34 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.04 | 67.28 | 16.50 |      | 130.0 |         |
|           |                                                     | Z | 6.15 | 67.20 | 16.51 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.35 | 67.76 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.20 | 67.66 | 16.68 |      | 130.0 |         |
|           |                                                     | Z | 6.32 | 67.61 | 16.69 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.35 | 67.72 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.20 | 67.63 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 6.32 | 67.58 | 16.65 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.35  | 67.74  | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.18  | 67.59  | 16.66 |      | 130.0 |         |
|           |                                                        | Z | 6.32  | 67.59  | 16.70 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.39  | 67.87  | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.18  | 67.60  | 16.61 |      | 130.0 |         |
|           |                                                        | Z | 6.36  | 67.71  | 16.72 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.37  | 67.56  | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.22  | 67.48  | 16.57 |      | 130.0 |         |
|           |                                                        | Z | 6.34  | 67.42  | 16.59 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.43  | 67.86  | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.27  | 67.76  | 16.88 |      | 130.0 |         |
|           |                                                        | Z | 6.40  | 67.70  | 16.88 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.27  | 67.59  | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.10  | 67.43  | 16.61 |      | 130.0 |         |
|           |                                                        | Z | 6.24  | 67.44  | 16.67 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.52  | 68.35  | 17.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.27  | 67.95  | 16.89 |      | 130.0 |         |
|           |                                                        | Z | 6.48  | 68.18  | 17.06 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.86  | 68.85  | 17.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.65  | 68.64  | 17.18 |      | 130.0 |         |
|           |                                                        | Z | 6.84  | 68.75  | 17.29 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 42.01 | 120.68 | 39.91 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 39.04 | 120.15 | 39.21 |      | 60.0  |         |
|           |                                                        | Z | 32.57 | 113.89 | 37.85 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 44.40 | 122.83 | 40.67 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 37.67 | 120.23 | 39.39 |      | 60.0  |         |
|           |                                                        | Z | 34.51 | 116.06 | 38.63 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.92  | 66.62  | 13.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.77  | 65.29  | 11.91 |      | 150.0 |         |
|           |                                                        | Z | 0.81  | 64.38  | 11.88 |      | 150.0 |         |

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



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Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA  
 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **ES3-3287\_Sep16**

## CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3287**

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

*BN✓*  
*09-28-2016*

Calibration date: **September 19, 2016**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-15 (No. ES3-3013_Dec15)    | Dec-16                 |
| DAE4                       | SN: 660          | 23-Dec-15 (No. DAE4-660_Dec15)    | Dec-16                 |
| 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-15) | In house check: Oct-16 |

|                                                                                                                                                          |                             |                                          |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|---------------|
| Calibrated by:                                                                                                                                           | Name<br><b>Leif Klysner</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:                                                                                                                                             | <b>Katja Pokovic</b>        | <b>Technical Manager</b>                 |               |
| <p>Issued: September 20, 2016</p> <p>This calibration certificate shall not be reproduced except in full without written approval of the laboratory.</p> |                             |                                          |               |



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

## Glossary:

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

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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  $E^2$ -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 ES3DV3

## SN:3287

Manufactured: June 7, 2010  
Calibrated: September 19, 2016

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

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3287

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.87     | 0.98     | 1.00     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 101.9    | 101.4    | 106.1    |               |

### 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    | 198.4    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 189.6    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 184.8    |                           |

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 | 65.67    | 459.4    | 34.07                       | 29.08                               | 2.68                                | 5.077    | 2                     | 0.308                 | 1.009 |
| Y | 71.46    | 511.8    | 35.31                       | 29.86                               | 3.707                               | 5.1      | 0.748                 | 0.607                 | 1.009 |
| Z | 50.48    | 357.3    | 34.55                       | 27.84                               | 2.262                               | 5.1      | 1.583                 | 0.279                 | 1.01  |

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: ES3DV3 - SN:3287

### 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                            | 6.96    | 6.96    | 6.96    | 0.44               | 1.36                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 6.67    | 6.67    | 6.67    | 0.29               | 1.69                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 5.49    | 5.49    | 5.49    | 0.43               | 1.42                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 5.27    | 5.27    | 5.27    | 0.41               | 1.45                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 4.86    | 4.86    | 4.86    | 0.61               | 1.28                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 4.54    | 4.54    | 4.54    | 0.47               | 1.51                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 4.41    | 4.41    | 4.41    | 0.77               | 1.18                    | ± 12.0 %  |

<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: ES3DV3 - SN:3287

### 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                            | 6.64    | 6.64    | 6.64    | 0.27               | 1.86                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 6.55    | 6.55    | 6.55    | 0.50               | 1.37                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 5.11    | 5.11    | 5.11    | 0.33               | 1.85                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 4.94    | 4.94    | 4.94    | 0.42               | 1.59                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 4.55    | 4.55    | 4.55    | 0.55               | 1.42                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 4.35    | 4.35    | 4.35    | 0.80               | 1.09                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 4.12    | 4.12    | 4.12    | 0.80               | 1.10                    | ± 12.0 %  |

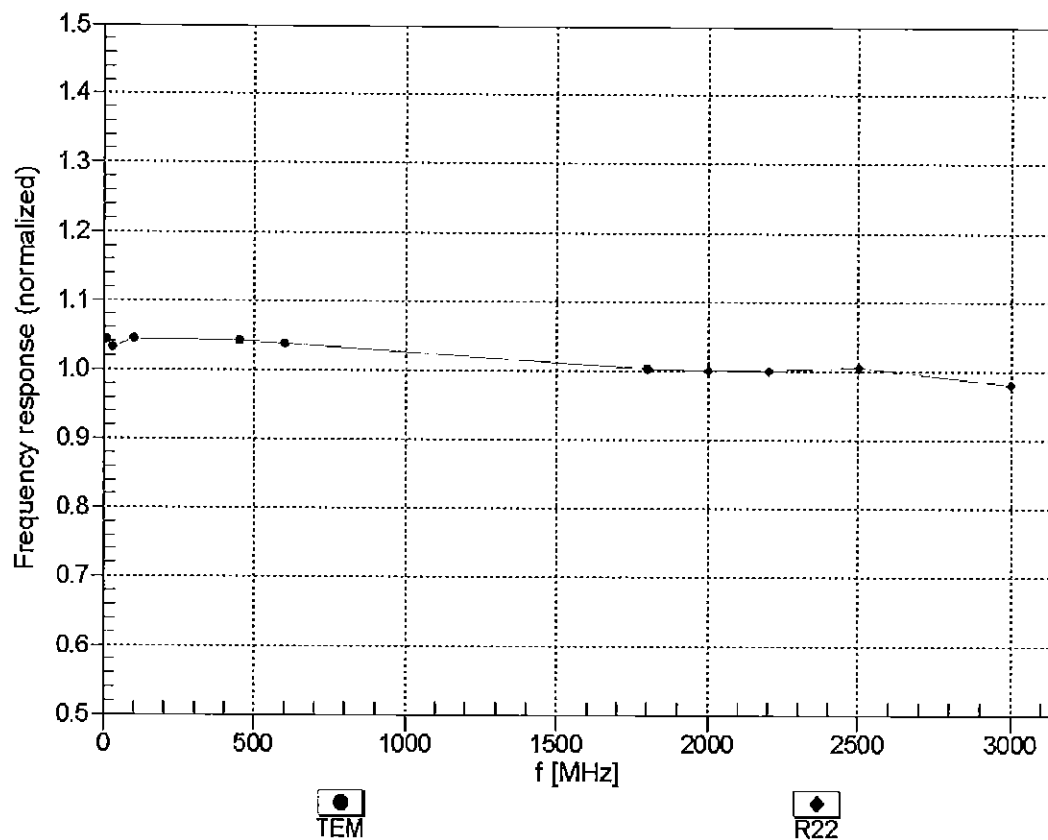
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

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

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

## Frequency Response of E-Field

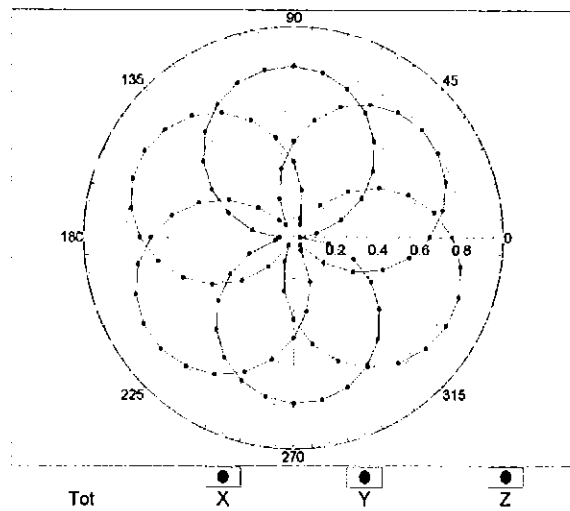
(TEM-Cell:ifi110 EXX, Waveguide: R22)



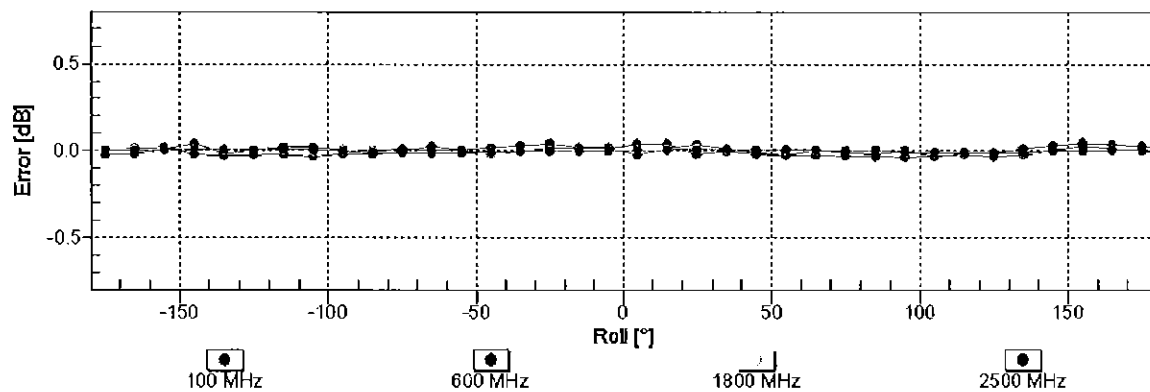
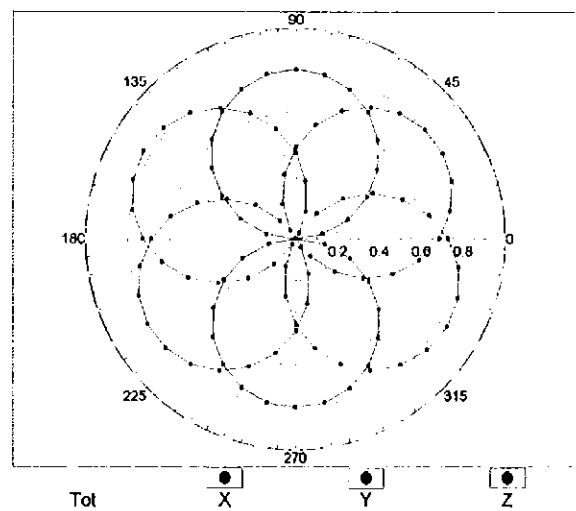
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

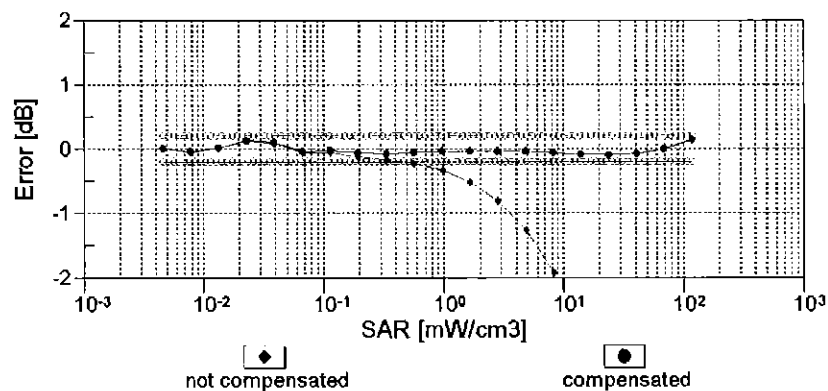
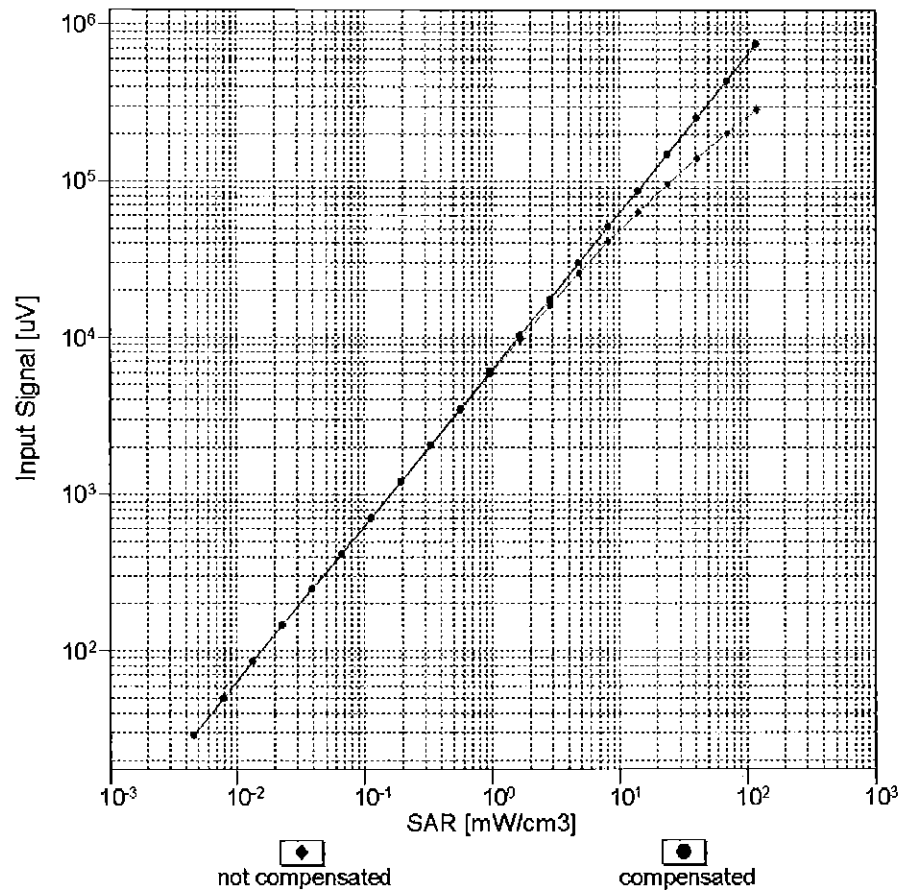


f=1800 MHz,R22



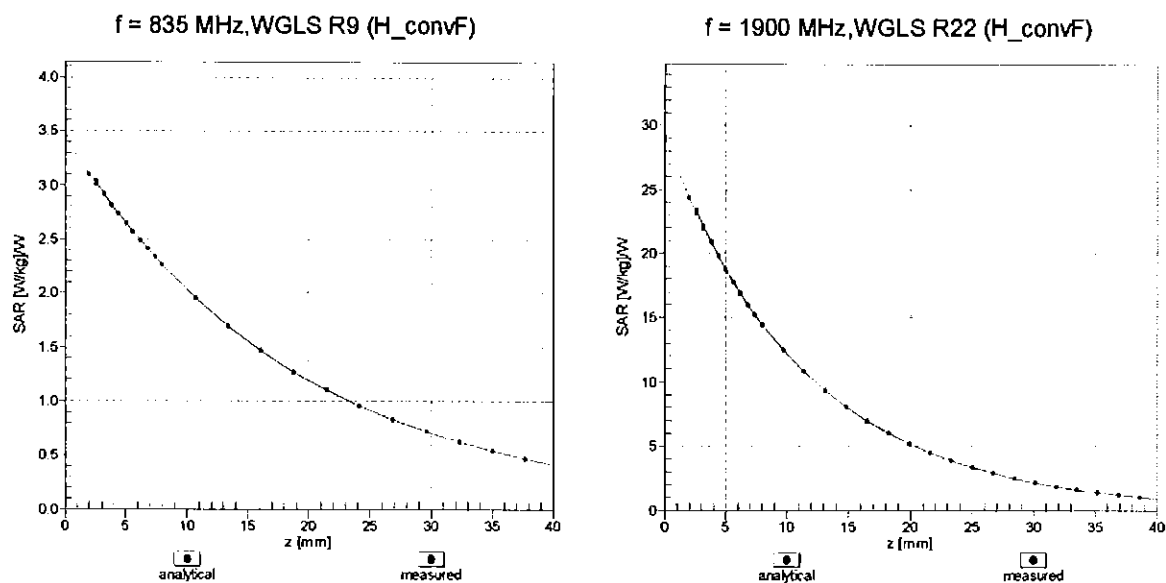
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



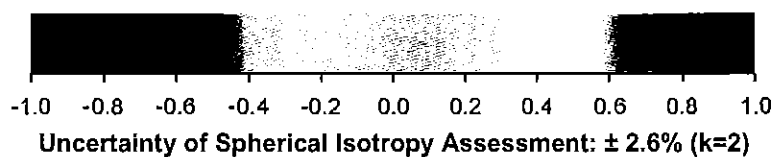
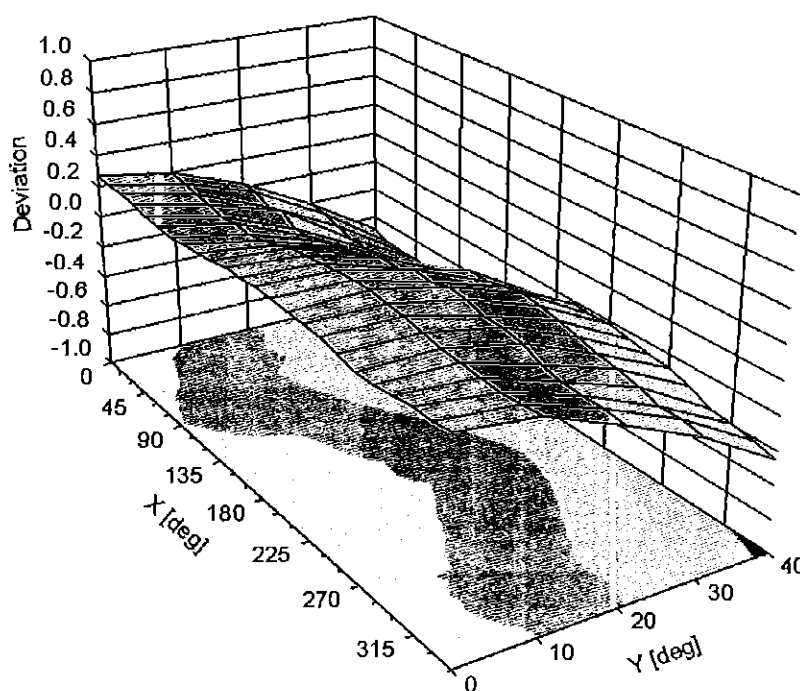
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3287

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 84.9       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 10 mm      |
| Tip Diameter                                  | 4 mm       |
| Probe Tip to Sensor X Calibration Point       | 2 mm       |
| Probe Tip to Sensor Y Calibration Point       | 2 mm       |
| Probe Tip to Sensor Z Calibration Point       | 2 mm       |
| Recommended Measurement Distance from Surface | 3 mm       |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\mu$ V | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|-----------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00            | 1.00  | 0.00    | 198.4    | $\pm 3.5\%$                      |
|               |                                               | Y | 0.00    | 0.00            | 1.00  |         | 189.6    |                                  |
|               |                                               | Z | 0.00    | 0.00            | 1.00  |         | 184.8    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 9.57    | 81.27           | 19.66 | 10.00   | 25.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 9.48    | 81.17           | 20.59 |         | 25.0     |                                  |
|               |                                               | Z | 11.44   | 84.72           | 20.81 |         | 25.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.41    | 73.12           | 18.60 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.09    | 67.36           | 15.29 |         | 150.0    |                                  |
|               |                                               | Z | 1.04    | 67.24           | 15.12 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.39    | 66.79           | 17.15 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.33    | 64.98           | 15.75 |         | 150.0    |                                  |
|               |                                               | Z | 1.31    | 64.97           | 15.66 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.20    | 67.40           | 17.54 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 5.27    | 67.18           | 17.41 |         | 150.0    |                                  |
|               |                                               | Z | 5.09    | 67.33           | 17.40 |         | 150.0    |                                  |
| 10021-<br>DAB | GSM-FDD (TDMA, GMSK)                          | X | 25.12   | 98.64           | 27.15 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 16.05   | 91.61           | 25.96 |         | 50.0     |                                  |
|               |                                               | Z | 54.58   | 112.47          | 31.02 |         | 50.0     |                                  |
| 10023-<br>DAB | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 21.90   | 96.28           | 26.48 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 15.04   | 90.31           | 25.57 |         | 50.0     |                                  |
|               |                                               | Z | 40.95   | 107.64          | 29.77 |         | 50.0     |                                  |
| 10024-<br>DAB | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 118.44          | 30.60 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 56.85   | 112.42          | 30.28 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 119.26          | 30.80 |         | 60.0     |                                  |
| 10025-<br>DAB | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 15.98   | 100.03          | 37.68 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 12.36   | 89.89           | 33.32 |         | 50.0     |                                  |
|               |                                               | Z | 14.92   | 100.13          | 38.33 |         | 50.0     |                                  |
| 10026-<br>DAB | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 19.89   | 102.72          | 35.15 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 15.11   | 94.49           | 32.22 |         | 60.0     |                                  |
|               |                                               | Z | 21.16   | 106.39          | 36.94 |         | 60.0     |                                  |
| 10027-<br>DAB | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 117.46          | 29.21 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 119.97          | 30.83 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 118.35          | 29.47 |         | 80.0     |                                  |
| 10028-<br>DAB | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 117.97          | 28.63 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 119.91          | 29.91 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 118.74          | 28.84 |         | 100.0    |                                  |
| 10029-<br>DAB | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 14.03   | 95.19           | 31.54 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 11.54   | 89.32           | 29.33 |         | 80.0     |                                  |
|               |                                               | Z | 13.09   | 95.17           | 31.96 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 117.04          | 29.36 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 119.78          | 31.12 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 117.69          | 29.49 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 120.90          | 28.34 | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 121.14          | 28.78 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 119.84          | 27.78 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 128.75 | 30.50 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 125.19 | 29.33 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 124.54 | 28.68 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 24.47  | 102.44 | 28.62 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 12.93  | 91.34  | 25.64 |       | 70.0  |         |
|           |                                                     | Z | 20.22  | 99.06  | 27.27 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 15.75  | 99.73  | 26.60 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 6.06   | 84.29  | 21.90 |       | 100.0 |         |
|           |                                                     | Z | 7.41   | 86.87  | 21.79 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 8.06   | 91.60  | 24.06 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.71   | 78.74  | 19.66 |       | 100.0 |         |
|           |                                                     | Z | 4.06   | 80.00  | 19.16 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 31.59  | 106.91 | 29.95 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 14.71  | 93.73  | 26.48 |       | 70.0  |         |
|           |                                                     | Z | 25.49  | 103.04 | 28.49 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 15.02  | 99.00  | 26.34 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.91   | 83.93  | 21.74 |       | 100.0 |         |
|           |                                                     | Z | 6.95   | 86.01  | 21.48 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 8.64   | 92.97  | 24.58 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.82   | 79.37  | 19.97 |       | 100.0 |         |
|           |                                                     | Z | 4.16   | 80.58  | 19.47 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 3.32   | 80.83  | 20.52 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.99   | 71.59  | 16.56 |       | 150.0 |         |
|           |                                                     | Z | 1.78   | 71.38  | 15.53 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 93.96  | 116.51 | 30.17 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 28.36  | 100.31 | 27.04 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 118.01 | 30.46 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 110.81 | 0.68  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 94.68  | 0.92  |       | 150.0 |         |
|           |                                                     | Z | 0.01   | 95.27  | 0.89  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 12.13  | 84.40  | 24.33 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 11.03  | 81.88  | 24.36 |       | 25.0  |         |
|           |                                                     | Z | 15.47  | 90.17  | 26.32 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 14.56  | 88.92  | 24.53 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 12.34  | 85.94  | 24.48 |       | 40.0  |         |
|           |                                                     | Z | 20.46  | 95.78  | 26.73 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 13.90  | 88.80  | 25.15 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 11.60  | 84.93  | 24.34 |       | 50.0  |         |
|           |                                                     | Z | 15.96  | 92.01  | 26.12 |       | 50.0  |         |
| 10058-DAB | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 10.54  | 89.79  | 28.95 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 9.17   | 85.43  | 27.21 |       | 100.0 |         |
|           |                                                     | Z | 9.28   | 88.15  | 28.66 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.62   | 69.54  | 18.42 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.52   | 67.09  | 16.78 |       | 110.0 |         |
|           |                                                     | Z | 1.47   | 67.00  | 16.67 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 133.57 | 34.76 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 47.37  | 119.92 | 31.34 |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 131.70 | 33.88 |       | 110.0 |         |

|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 24.29 | 111.37 | 31.49 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 7.57  | 90.21  | 25.12 |      | 110.0 |         |
|           |                                                | Z | 8.96  | 94.42  | 26.47 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.94  | 67.26  | 16.92 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.99  | 66.94  | 16.70 |      | 100.0 |         |
|           |                                                | Z | 4.80  | 67.06  | 16.67 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.98  | 67.42  | 17.05 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.03  | 67.12  | 16.85 |      | 100.0 |         |
|           |                                                | Z | 4.84  | 67.22  | 16.80 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.33  | 67.75  | 17.30 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.40  | 67.50  | 17.13 |      | 100.0 |         |
|           |                                                | Z | 5.14  | 67.52  | 17.06 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.22  | 67.77  | 17.45 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.30  | 67.55  | 17.30 |      | 100.0 |         |
|           |                                                | Z | 5.05  | 67.55  | 17.23 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.28  | 67.89  | 17.67 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.37  | 67.69  | 17.54 |      | 100.0 |         |
|           |                                                | Z | 5.11  | 67.69  | 17.47 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.58  | 67.96  | 18.07 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.70  | 67.83  | 17.99 |      | 100.0 |         |
|           |                                                | Z | 5.44  | 67.94  | 17.97 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.73  | 68.36  | 18.44 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.86  | 68.26  | 18.38 |      | 100.0 |         |
|           |                                                | Z | 5.56  | 68.20  | 18.31 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.80  | 68.22  | 18.58 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.93  | 68.12  | 18.53 |      | 100.0 |         |
|           |                                                | Z | 5.64  | 68.21  | 18.51 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.34  | 67.61  | 17.91 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.43  | 67.44  | 17.80 |      | 100.0 |         |
|           |                                                | Z | 5.23  | 67.57  | 17.79 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.41  | 68.20  | 18.23 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.52  | 68.04  | 18.13 |      | 100.0 |         |
|           |                                                | Z | 5.28  | 68.10  | 18.11 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.54  | 68.52  | 18.63 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.67  | 68.41  | 18.56 |      | 100.0 |         |
|           |                                                | Z | 5.42  | 68.46  | 18.55 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.57  | 68.60  | 18.89 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.71  | 68.53  | 18.84 |      | 100.0 |         |
|           |                                                | Z | 5.46  | 68.55  | 18.80 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.74  | 69.13  | 19.40 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.91  | 69.12  | 19.39 |      | 90.0  |         |
|           |                                                | Z | 5.60  | 68.97  | 19.28 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.73  | 68.87  | 19.48 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.91  | 68.89  | 19.48 |      | 90.0  |         |
|           |                                                | Z | 5.64  | 68.84  | 19.44 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.76  | 68.96  | 19.58 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.95  | 68.98  | 19.59 |      | 90.0  |         |
|           |                                                | Z | 5.68  | 68.95  | 19.55 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.45   | 73.74  | 17.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.01   | 66.70  | 13.93 |      | 150.0 |         |
|           |                                                     | Z | 0.86   | 65.95  | 12.65 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.22   | 64.23  | 9.03  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 2.60   | 65.39  | 10.25 |      | 80.0  |         |
|           |                                                     | Z | 2.07   | 64.06  | 8.86  |      | 80.0  |         |
| 10090-DAB | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 118.52 | 30.65 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 54.54  | 111.83 | 30.17 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 119.33 | 30.85 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 2.07   | 69.87  | 17.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.87   | 67.25  | 15.70 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 67.53  | 15.55 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 2.03   | 69.88  | 17.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.83   | 67.20  | 15.65 |      | 150.0 |         |
|           |                                                     | Z | 1.80   | 67.49  | 15.52 |      | 150.0 |         |
| 10099-DAB | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 19.79  | 102.55 | 35.10 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 15.06  | 94.38  | 32.19 |      | 60.0  |         |
|           |                                                     | Z | 21.07  | 106.24 | 36.89 |      | 60.0  |         |
| 10100-CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.71   | 73.15  | 18.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.34   | 70.68  | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 3.15   | 70.31  | 16.60 |      | 150.0 |         |
| 10101-CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.53   | 68.94  | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.44   | 67.88  | 16.03 |      | 150.0 |         |
|           |                                                     | Z | 3.28   | 67.66  | 15.91 |      | 150.0 |         |
| 10102-CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.62   | 68.78  | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.55   | 67.81  | 16.12 |      | 150.0 |         |
|           |                                                     | Z | 3.38   | 67.61  | 16.00 |      | 150.0 |         |
| 10103-CAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 9.03   | 78.84  | 21.45 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.52   | 77.08  | 20.81 |      | 65.0  |         |
|           |                                                     | Z | 8.79   | 79.04  | 21.64 |      | 65.0  |         |
| 10104-CAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.83   | 77.31  | 21.70 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.68   | 76.21  | 21.28 |      | 65.0  |         |
|           |                                                     | Z | 8.45   | 77.10  | 21.68 |      | 65.0  |         |
| 10105-CAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 8.12   | 75.63  | 21.27 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.58   | 73.53  | 20.37 |      | 65.0  |         |
|           |                                                     | Z | 7.68   | 75.16  | 21.11 |      | 65.0  |         |
| 10108-CAC | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.26   | 72.24  | 17.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.97   | 69.86  | 16.52 |      | 150.0 |         |
|           |                                                     | Z | 2.76   | 69.54  | 16.43 |      | 150.0 |         |
| 10109-CAC | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.21   | 68.83  | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.12   | 67.65  | 15.97 |      | 150.0 |         |
|           |                                                     | Z | 2.93   | 67.47  | 15.80 |      | 150.0 |         |
| 10110-CAC | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.68   | 71.31  | 17.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.45   | 68.82  | 16.19 |      | 150.0 |         |
|           |                                                     | Z | 2.25   | 68.65  | 16.05 |      | 150.0 |         |
| 10111-CAC | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.94   | 69.70  | 17.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.81   | 68.04  | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 2.63   | 68.09  | 16.01 |      | 150.0 |         |

|           |                                                |   |       |       |       |      |       |         |
|-----------|------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10112-CAC | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.32  | 68.66 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.24  | 67.56 | 16.01 |      | 150.0 |         |
|           |                                                | Z | 3.06  | 67.45 | 15.85 |      | 150.0 |         |
| 10113-CAC | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 3.09  | 69.65 | 17.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.97  | 68.11 | 16.35 |      | 150.0 |         |
|           |                                                | Z | 2.78  | 68.22 | 16.13 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.30  | 67.67 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.32  | 67.34 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 5.18  | 67.41 | 16.46 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.68  | 67.95 | 16.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.74  | 67.75 | 16.66 |      | 150.0 |         |
|           |                                                | Z | 5.49  | 67.60 | 16.57 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.43  | 67.93 | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.45  | 67.58 | 16.50 |      | 150.0 |         |
|           |                                                | Z | 5.29  | 67.63 | 16.50 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.31  | 67.69 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.33  | 67.35 | 16.48 |      | 150.0 |         |
|           |                                                | Z | 5.15  | 67.28 | 16.42 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.73  | 68.05 | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.76  | 67.71 | 16.65 |      | 150.0 |         |
|           |                                                | Z | 5.58  | 67.82 | 16.69 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.40  | 67.88 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.42  | 67.54 | 16.49 |      | 150.0 |         |
|           |                                                | Z | 5.26  | 67.56 | 16.48 |      | 150.0 |         |
| 10140-CAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.67  | 68.77 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.60  | 67.81 | 16.05 |      | 150.0 |         |
|           |                                                | Z | 3.42  | 67.62 | 15.92 |      | 150.0 |         |
| 10141-CAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.79  | 68.75 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.72  | 67.84 | 16.19 |      | 150.0 |         |
|           |                                                | Z | 3.54  | 67.70 | 16.08 |      | 150.0 |         |
| 10142-CAC | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.48  | 71.58 | 17.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.22  | 68.66 | 16.03 |      | 150.0 |         |
|           |                                                | Z | 2.02  | 68.57 | 15.71 |      | 150.0 |         |
| 10143-CAC | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.90  | 70.86 | 17.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.68  | 68.61 | 16.20 |      | 150.0 |         |
|           |                                                | Z | 2.48  | 68.71 | 15.71 |      | 150.0 |         |
| 10144-CAC | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.65  | 68.53 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.53  | 66.90 | 14.94 |      | 150.0 |         |
|           |                                                | Z | 2.29  | 66.75 | 14.27 |      | 150.0 |         |
| 10145-CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 2.00  | 71.65 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.64  | 67.49 | 14.42 |      | 150.0 |         |
|           |                                                | Z | 1.28  | 65.53 | 12.17 |      | 150.0 |         |
| 10146-CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 6.65  | 82.42 | 19.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.51  | 73.00 | 16.51 |      | 150.0 |         |
|           |                                                | Z | 2.73  | 70.16 | 13.72 |      | 150.0 |         |
| 10147-CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 11.62 | 90.60 | 22.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.34  | 76.22 | 18.03 |      | 150.0 |         |
|           |                                                | Z | 3.53  | 73.44 | 15.25 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.22 | 68.90 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.13 | 67.70 | 16.01 |      | 150.0 |         |
|           |                                            | Z | 2.94 | 67.52 | 15.84 |      | 150.0 |         |
| 10150-CAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.33 | 68.71 | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.25 | 67.61 | 16.05 |      | 150.0 |         |
|           |                                            | Z | 3.06 | 67.50 | 15.89 |      | 150.0 |         |
| 10151-CAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 9.59 | 81.08 | 22.43 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.87 | 78.87 | 21.64 |      | 65.0  |         |
|           |                                            | Z | 9.33 | 81.38 | 22.62 |      | 65.0  |         |
| 10152-CAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.50 | 77.58 | 21.63 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.30 | 76.31 | 21.16 |      | 65.0  |         |
|           |                                            | Z | 8.08 | 77.33 | 21.50 |      | 65.0  |         |
| 10153-CAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.85 | 78.28 | 22.25 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.62 | 76.95 | 21.75 |      | 65.0  |         |
|           |                                            | Z | 8.48 | 78.15 | 22.17 |      | 65.0  |         |
| 10154-CAC | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.77 | 71.95 | 18.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.51 | 69.32 | 16.50 |      | 150.0 |         |
|           |                                            | Z | 2.29 | 69.01 | 16.28 |      | 150.0 |         |
| 10155-CAC | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.94 | 69.69 | 17.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.80 | 68.03 | 16.25 |      | 150.0 |         |
|           |                                            | Z | 2.63 | 68.10 | 16.02 |      | 150.0 |         |
| 10156-CAC | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.40 | 72.31 | 17.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.09 | 68.89 | 16.05 |      | 150.0 |         |
|           |                                            | Z | 1.86 | 68.62 | 15.51 |      | 150.0 |         |
| 10157-CAC | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.55 | 69.65 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.36 | 67.46 | 15.11 |      | 150.0 |         |
|           |                                            | Z | 2.12 | 67.25 | 14.30 |      | 150.0 |         |
| 10158-CAC | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 3.10 | 69.70 | 17.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.97 | 68.15 | 16.39 |      | 150.0 |         |
|           |                                            | Z | 2.78 | 68.27 | 16.17 |      | 150.0 |         |
| 10159-CAC | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.69 | 70.18 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48 | 67.89 | 15.40 |      | 150.0 |         |
|           |                                            | Z | 2.22 | 67.66 | 14.56 |      | 150.0 |         |
| 10160-CAB | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.10 | 70.43 | 17.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.94 | 68.69 | 16.29 |      | 150.0 |         |
|           |                                            | Z | 2.78 | 68.69 | 16.25 |      | 150.0 |         |
| 10161-CAB | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.22 | 68.62 | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.14 | 67.48 | 16.00 |      | 150.0 |         |
|           |                                            | Z | 2.96 | 67.42 | 15.82 |      | 150.0 |         |
| 10162-CAB | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.32 | 68.61 | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.24 | 67.49 | 16.04 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.56 | 15.92 |      | 150.0 |         |
| 10166-CAC | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.32 | 72.20 | 20.50 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.09 | 70.13 | 19.37 |      | 150.0 |         |
|           |                                            | Z | 3.89 | 71.03 | 19.86 |      | 150.0 |         |
| 10167-CAC | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 6.13 | 77.20 | 21.71 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.31 | 73.40 | 20.02 |      | 150.0 |         |
|           |                                            | Z | 5.17 | 75.28 | 20.82 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAC | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.94  | 79.87  | 23.11 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.79  | 75.28  | 21.14 |      | 150.0 |         |
|           |                                            | Z | 5.82  | 77.80  | 22.20 |      | 150.0 |         |
| 10169-CAB | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 4.47  | 76.31  | 22.20 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.93  | 72.42  | 20.26 |      | 150.0 |         |
|           |                                            | Z | 3.45  | 71.87  | 20.27 |      | 150.0 |         |
| 10170-CAB | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 9.97  | 90.37  | 26.89 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.08  | 79.64  | 22.84 |      | 150.0 |         |
|           |                                            | Z | 5.69  | 81.07  | 23.66 |      | 150.0 |         |
| 10171-AAB | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 6.58  | 81.51  | 22.72 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.82  | 74.69  | 19.94 |      | 150.0 |         |
|           |                                            | Z | 4.39  | 75.54  | 20.48 |      | 150.0 |         |
| 10172-CAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 73.64 | 126.23 | 37.77 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 18.65 | 98.22  | 29.94 |      | 65.0  |         |
|           |                                            | Z | 50.70 | 122.38 | 37.42 |      | 65.0  |         |
| 10173-CAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 94.74 | 123.96 | 35.21 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 22.61 | 98.04  | 28.47 |      | 65.0  |         |
|           |                                            | Z | 96.90 | 127.66 | 36.64 |      | 65.0  |         |
| 10174-CAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 56.11 | 113.11 | 31.91 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 18.59 | 93.53  | 26.66 |      | 65.0  |         |
|           |                                            | Z | 65.46 | 118.77 | 33.84 |      | 65.0  |         |
| 10175-CAC | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 4.37  | 75.74  | 21.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.86  | 71.99  | 19.97 |      | 150.0 |         |
|           |                                            | Z | 3.41  | 71.52  | 20.02 |      | 150.0 |         |
| 10176-CAC | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 9.99  | 90.41  | 26.90 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.09  | 79.66  | 22.85 |      | 150.0 |         |
|           |                                            | Z | 5.70  | 81.10  | 23.67 |      | 150.0 |         |
| 10177-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 4.43  | 76.02  | 22.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.90  | 72.21  | 20.10 |      | 150.0 |         |
|           |                                            | Z | 3.44  | 71.69  | 20.11 |      | 150.0 |         |
| 10178-CAC | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 9.65  | 89.71  | 26.63 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.97  | 79.26  | 22.66 |      | 150.0 |         |
|           |                                            | Z | 5.62  | 80.80  | 23.53 |      | 150.0 |         |
| 10179-CAC | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 7.97  | 85.43  | 24.54 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.36  | 76.88  | 21.19 |      | 150.0 |         |
|           |                                            | Z | 4.98  | 78.13  | 21.92 |      | 150.0 |         |
| 10180-CAC | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 6.51  | 81.29  | 22.61 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.79  | 74.55  | 19.86 |      | 150.0 |         |
|           |                                            | Z | 4.38  | 75.44  | 20.42 |      | 150.0 |         |
| 10181-CAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 4.42  | 75.99  | 21.99 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.90  | 72.19  | 20.09 |      | 150.0 |         |
|           |                                            | Z | 3.43  | 71.67  | 20.11 |      | 150.0 |         |
| 10182-CAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 9.63  | 89.67  | 26.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.96  | 79.23  | 22.65 |      | 150.0 |         |
|           |                                            | Z | 5.61  | 80.77  | 23.51 |      | 150.0 |         |
| 10183-AAA | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 6.50  | 81.25  | 22.60 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.78  | 74.53  | 19.85 |      | 150.0 |         |
|           |                                            | Z | 4.37  | 75.41  | 20.41 |      | 150.0 |         |

|           |                                               |   |       |       |       |      |       |         |
|-----------|-----------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10184-CAC | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 4.44  | 76.05 | 22.02 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.91  | 72.24 | 20.12 |      | 150.0 |         |
|           |                                               | Z | 3.45  | 71.72 | 20.13 |      | 150.0 |         |
| 10185-CAC | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 9.70  | 89.80 | 26.67 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.99  | 79.32 | 22.68 |      | 150.0 |         |
|           |                                               | Z | 5.64  | 80.86 | 23.56 |      | 150.0 |         |
| 10186-AAC | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 6.54  | 81.37 | 22.64 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.81  | 74.60 | 19.88 |      | 150.0 |         |
|           |                                               | Z | 4.39  | 75.50 | 20.45 |      | 150.0 |         |
| 10187-CAC | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 4.45  | 76.10 | 22.07 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.92  | 72.26 | 20.15 |      | 150.0 |         |
|           |                                               | Z | 3.46  | 71.78 | 20.19 |      | 150.0 |         |
| 10188-CAC | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 10.51 | 91.45 | 27.34 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.26  | 80.23 | 23.14 |      | 150.0 |         |
|           |                                               | Z | 5.89  | 81.76 | 24.00 |      | 150.0 |         |
| 10189-AAC | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 6.85  | 82.27 | 23.07 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.94  | 75.14 | 20.19 |      | 150.0 |         |
|           |                                               | Z | 4.52  | 76.06 | 20.77 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.73  | 67.10 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.75  | 66.68 | 16.23 |      | 150.0 |         |
|           |                                               | Z | 4.57  | 66.79 | 16.16 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.94  | 67.48 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.96  | 67.08 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.75  | 67.11 | 16.28 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.98  | 67.48 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.00  | 67.07 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.79  | 67.14 | 16.30 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.76  | 67.21 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78  | 66.80 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.58  | 66.86 | 16.18 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.96  | 67.50 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.98  | 67.09 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.76  | 67.14 | 16.30 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.99  | 67.50 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.01  | 67.09 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.79  | 67.16 | 16.31 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.71  | 67.23 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.73  | 66.82 | 16.24 |      | 150.0 |         |
|           |                                               | Z | 4.53  | 66.87 | 16.14 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.96  | 67.50 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.98  | 67.10 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.76  | 67.11 | 16.29 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.99  | 67.43 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.01  | 67.03 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.80  | 67.09 | 16.30 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.29  | 67.72 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.31  | 67.38 | 16.49 |      | 150.0 |         |
|           |                                               | Z | 5.12  | 67.29 | 16.41 |      | 150.0 |         |

|           |                                           |   |        |        |       |      |       |         |
|-----------|-------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.67   | 68.03  | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.70   | 67.71  | 16.67 |      | 150.0 |         |
|           |                                           | Z | 5.43   | 67.50  | 16.54 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.35   | 67.84  | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.37   | 67.51  | 16.48 |      | 150.0 |         |
|           |                                           | Z | 5.17   | 67.40  | 16.39 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 3.03   | 67.01  | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 3.00   | 66.12  | 15.59 |      | 150.0 |         |
|           |                                           | Z | 2.84   | 66.23  | 15.31 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 100.00 | 125.13 | 35.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 23.60  | 98.91  | 28.82 |      | 65.0  |         |
|           |                                           | Z | 100.00 | 128.43 | 36.91 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 61.16  | 114.83 | 32.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 19.96  | 94.87  | 27.16 |      | 65.0  |         |
|           |                                           | Z | 73.77  | 120.96 | 34.46 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 72.18  | 126.53 | 38.01 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 21.44  | 101.40 | 31.05 |      | 65.0  |         |
|           |                                           | Z | 53.16  | 123.89 | 37.96 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 94.57  | 123.93 | 35.21 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 22.66  | 98.06  | 28.49 |      | 65.0  |         |
|           |                                           | Z | 96.87  | 127.65 | 36.65 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 56.39  | 113.28 | 31.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 19.26  | 94.16  | 26.88 |      | 65.0  |         |
|           |                                           | Z | 66.99  | 119.13 | 33.93 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 66.18  | 124.67 | 37.45 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 20.62  | 100.55 | 30.72 |      | 65.0  |         |
|           |                                           | Z | 48.89  | 122.07 | 37.41 |      | 65.0  |         |
| 10232-CAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 94.69  | 123.96 | 35.21 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 22.64  | 98.05  | 28.48 |      | 65.0  |         |
|           |                                           | Z | 97.00  | 127.68 | 36.66 |      | 65.0  |         |
| 10233-CAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 56.52  | 113.33 | 32.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 19.26  | 94.17  | 26.88 |      | 65.0  |         |
|           |                                           | Z | 67.07  | 119.16 | 33.94 |      | 65.0  |         |
| 10234-CAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 60.26  | 122.59 | 36.81 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 19.81  | 99.63  | 30.34 |      | 65.0  |         |
|           |                                           | Z | 45.11  | 120.21 | 36.81 |      | 65.0  |         |
| 10235-CAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 95.38  | 124.09 | 35.25 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 22.67  | 98.09  | 28.50 |      | 65.0  |         |
|           |                                           | Z | 97.77  | 127.84 | 36.70 |      | 65.0  |         |
| 10236-CAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 57.18  | 113.50 | 32.04 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 19.38  | 94.26  | 26.90 |      | 65.0  |         |
|           |                                           | Z | 68.10  | 119.39 | 33.99 |      | 65.0  |         |
| 10237-CAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 67.28  | 125.01 | 37.54 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 20.74  | 100.68 | 30.76 |      | 65.0  |         |
|           |                                           | Z | 49.59  | 122.38 | 37.49 |      | 65.0  |         |
| 10238-CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 95.00  | 124.02 | 35.23 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 22.64  | 98.06  | 28.49 |      | 65.0  |         |
|           |                                           | Z | 97.19  | 127.73 | 36.66 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 56.67 | 113.39 | 32.01 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 19.26 | 94.19  | 26.88 |      | 65.0 |         |
|           |                                            | Z | 67.13 | 119.19 | 33.94 |      | 65.0 |         |
| 10240-CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 67.00 | 124.93 | 37.52 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 20.68 | 100.63 | 30.74 |      | 65.0 |         |
|           |                                            | Z | 49.37 | 122.30 | 37.47 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 14.43 | 89.77  | 28.56 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 12.31 | 85.00  | 26.80 |      | 65.0 |         |
|           |                                            | Z | 13.89 | 90.56  | 28.94 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 13.70 | 88.57  | 28.03 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.82 | 82.08  | 25.53 |      | 65.0 |         |
|           |                                            | Z | 13.16 | 89.30  | 28.37 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 10.55 | 84.90  | 27.56 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.88  | 79.49  | 25.25 |      | 65.0 |         |
|           |                                            | Z | 9.99  | 85.03  | 27.70 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 11.43 | 83.67  | 22.47 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.78  | 80.48  | 21.64 |      | 65.0 |         |
|           |                                            | Z | 9.76  | 81.22  | 20.90 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 11.21 | 83.09  | 22.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.71  | 80.13  | 21.47 |      | 65.0 |         |
|           |                                            | Z | 9.48  | 80.50  | 20.58 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 10.58 | 85.22  | 23.00 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.86  | 81.57  | 21.94 |      | 65.0 |         |
|           |                                            | Z | 9.16  | 83.05  | 21.67 |      | 65.0 |         |
| 10247-CAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 8.25  | 78.94  | 21.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.85  | 77.32  | 20.79 |      | 65.0 |         |
|           |                                            | Z | 7.47  | 77.61  | 20.18 |      | 65.0 |         |
| 10248-CAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 8.20  | 78.37  | 20.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.89  | 76.93  | 20.61 |      | 65.0 |         |
|           |                                            | Z | 7.41  | 77.03  | 19.93 |      | 65.0 |         |
| 10249-CAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 11.20 | 86.28  | 23.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.29  | 82.26  | 22.62 |      | 65.0 |         |
|           |                                            | Z | 10.48 | 85.66  | 23.36 |      | 65.0 |         |
| 10250-CAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 8.93  | 80.25  | 22.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.46  | 78.37  | 22.14 |      | 65.0 |         |
|           |                                            | Z | 8.46  | 79.88  | 22.48 |      | 65.0 |         |
| 10251-CAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 8.39  | 77.98  | 21.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.12  | 76.54  | 21.14 |      | 65.0 |         |
|           |                                            | Z | 7.98  | 77.74  | 21.34 |      | 65.0 |         |
| 10252-CAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 10.53 | 84.51  | 23.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.19  | 81.18  | 22.63 |      | 65.0 |         |
|           |                                            | Z | 10.24 | 84.82  | 23.86 |      | 65.0 |         |
| 10253-CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 8.25  | 76.95  | 21.44 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.10  | 75.77  | 21.00 |      | 65.0 |         |
|           |                                            | Z | 7.89  | 76.78  | 21.28 |      | 65.0 |         |
| 10254-CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.62  | 77.66  | 22.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.44  | 76.43  | 21.56 |      | 65.0 |         |
|           |                                            | Z | 8.28  | 77.57  | 21.89 |      | 65.0 |         |

|           |                                             |   |       |       |       |      |      |         |
|-----------|---------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10255-CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 9.25  | 80.67 | 22.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.61  | 78.53 | 21.74 |      | 65.0 |         |
|           |                                             | Z | 9.00  | 80.97 | 22.67 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 10.45 | 81.80 | 21.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.25  | 79.43 | 20.63 |      | 65.0 |         |
|           |                                             | Z | 8.10  | 77.76 | 18.69 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 10.14 | 80.97 | 20.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.17  | 78.95 | 20.38 |      | 65.0 |         |
|           |                                             | Z | 7.78  | 76.81 | 18.23 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 9.51  | 83.16 | 21.76 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.34  | 80.46 | 21.12 |      | 65.0 |         |
|           |                                             | Z | 7.35  | 79.00 | 19.46 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 8.50  | 79.32 | 21.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.08  | 77.61 | 21.22 |      | 65.0 |         |
|           |                                             | Z | 7.86  | 78.44 | 21.00 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 8.50  | 79.04 | 21.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.14  | 77.44 | 21.18 |      | 65.0 |         |
|           |                                             | Z | 7.85  | 78.11 | 20.87 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 10.46 | 84.88 | 23.66 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.99  | 81.35 | 22.49 |      | 65.0 |         |
|           |                                             | Z | 9.90  | 84.54 | 23.31 |      | 65.0 |         |
| 10262-CAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 8.92  | 80.22 | 22.77 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.45  | 78.35 | 22.11 |      | 65.0 |         |
|           |                                             | Z | 8.45  | 79.83 | 22.45 |      | 65.0 |         |
| 10263-CAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 8.39  | 77.98 | 21.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.12  | 76.54 | 21.14 |      | 65.0 |         |
|           |                                             | Z | 7.97  | 77.72 | 21.33 |      | 65.0 |         |
| 10264-CAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 10.46 | 84.37 | 23.71 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.15  | 81.08 | 22.57 |      | 65.0 |         |
|           |                                             | Z | 10.16 | 84.65 | 23.78 |      | 65.0 |         |
| 10265-CAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.50  | 77.59 | 21.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.29  | 76.32 | 21.16 |      | 65.0 |         |
|           |                                             | Z | 8.08  | 77.33 | 21.51 |      | 65.0 |         |
| 10266-CAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.85  | 78.27 | 22.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.62  | 76.95 | 21.75 |      | 65.0 |         |
|           |                                             | Z | 8.48  | 78.14 | 22.17 |      | 65.0 |         |
| 10267-CAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 9.58  | 81.04 | 22.42 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.86  | 78.85 | 21.63 |      | 65.0 |         |
|           |                                             | Z | 9.31  | 81.34 | 22.60 |      | 65.0 |         |
| 10268-CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.89  | 76.95 | 21.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.78  | 75.95 | 21.31 |      | 65.0 |         |
|           |                                             | Z | 8.54  | 76.83 | 21.69 |      | 65.0 |         |
| 10269-CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.79  | 76.51 | 21.59 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.71  | 75.58 | 21.23 |      | 65.0 |         |
|           |                                             | Z | 8.47  | 76.42 | 21.58 |      | 65.0 |         |
| 10270-CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 8.98  | 78.26 | 21.47 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.66  | 76.86 | 20.96 |      | 65.0 |         |
|           |                                             | Z | 8.70  | 78.39 | 21.61 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.76  | 67.40 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.68  | 66.20 | 15.35 |      | 150.0 |         |
|           |                                                                    | Z | 2.61  | 66.55 | 15.21 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.97  | 71.33 | 17.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.71  | 67.84 | 15.61 |      | 150.0 |         |
|           |                                                                    | Z | 1.63  | 67.82 | 15.44 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 5.79  | 70.12 | 14.44 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 6.71  | 72.04 | 16.24 |      | 50.0  |         |
|           |                                                                    | Z | 5.20  | 69.01 | 13.39 |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 10.14 | 81.72 | 21.64 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.00 | 81.13 | 22.16 |      | 50.0  |         |
|           |                                                                    | Z | 8.80  | 79.36 | 20.19 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 10.33 | 81.92 | 21.72 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.19 | 81.33 | 22.24 |      | 50.0  |         |
|           |                                                                    | Z | 8.92  | 79.53 | 20.27 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 2.41  | 75.76 | 18.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.70  | 69.18 | 15.23 |      | 150.0 |         |
|           |                                                                    | Z | 1.46  | 68.58 | 14.00 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.39  | 73.22 | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.98  | 66.45 | 13.79 |      | 150.0 |         |
|           |                                                                    | Z | 0.85  | 65.74 | 12.53 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 2.43  | 83.14 | 21.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.15  | 69.63 | 15.75 |      | 150.0 |         |
|           |                                                                    | Z | 1.04  | 69.40 | 14.71 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 5.22  | 96.14 | 26.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.48  | 73.58 | 17.97 |      | 150.0 |         |
|           |                                                                    | Z | 1.47  | 74.43 | 17.37 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 10.48 | 83.75 | 24.32 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.84  | 81.54 | 23.85 |      | 50.0  |         |
|           |                                                                    | Z | 11.88 | 86.37 | 24.91 |      | 50.0  |         |
| 10297-AAA | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.28  | 72.37 | 17.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.98  | 69.95 | 16.59 |      | 150.0 |         |
|           |                                                                    | Z | 2.77  | 69.63 | 16.49 |      | 150.0 |         |
| 10298-AAB | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 2.26  | 72.62 | 17.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.88  | 68.51 | 15.39 |      | 150.0 |         |
|           |                                                                    | Z | 1.59  | 67.65 | 14.14 |      | 150.0 |         |
| 10299-AAB | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 6.40  | 81.89 | 20.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.78  | 73.44 | 17.26 |      | 150.0 |         |
|           |                                                                    | Z | 3.62  | 73.66 | 16.18 |      | 150.0 |         |
| 10300-AAB | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 3.72  | 72.73 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.96  | 68.88 | 14.55 |      | 150.0 |         |
|           |                                                                    | Z | 2.44  | 67.52 | 12.75 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 5.70  | 68.03 | 18.84 | 4.17 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.77  | 67.36 | 18.35 |      | 80.0  |         |
|           |                                                                    | Z | 5.64  | 68.37 | 18.74 |      | 80.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 6.21  | 68.72 | 19.60 | 4.96 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 6.41  | 68.65 | 19.47 |      | 80.0  |         |
|           |                                                                    | Z | 6.13  | 69.05 | 19.54 |      | 80.0  |         |

|           |                                                                     |   |       |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 6.07  | 68.83 | 19.70 | 4.96  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.30  | 68.82 | 19.58 |       | 80.0  |         |
|           |                                                                     | Z | 5.97  | 69.08 | 19.56 |       | 80.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.71  | 68.13 | 18.89 | 4.17  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.89  | 68.01 | 18.73 |       | 80.0  |         |
|           |                                                                     | Z | 5.61  | 68.35 | 18.73 |       | 80.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 6.90  | 74.81 | 23.11 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 9.48  | 82.28 | 26.60 |       | 50.0  |         |
|           |                                                                     | Z | 9.03  | 82.45 | 26.20 |       | 50.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 6.40  | 71.34 | 21.64 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.75  | 71.50 | 21.57 |       | 50.0  |         |
|           |                                                                     | Z | 6.43  | 72.04 | 21.56 |       | 50.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 6.49  | 72.10 | 21.82 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.85  | 72.21 | 21.70 |       | 50.0  |         |
|           |                                                                     | Z | 6.50  | 72.67 | 21.67 |       | 50.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 6.53  | 72.49 | 22.02 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.89  | 72.58 | 21.88 |       | 50.0  |         |
|           |                                                                     | Z | 6.59  | 73.18 | 21.92 |       | 50.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 6.52  | 71.66 | 21.81 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.86  | 71.77 | 21.70 |       | 50.0  |         |
|           |                                                                     | Z | 6.53  | 72.35 | 21.74 |       | 50.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 6.41  | 71.57 | 21.66 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.75  | 71.71 | 21.56 |       | 50.0  |         |
|           |                                                                     | Z | 6.45  | 72.29 | 21.59 |       | 50.0  |         |
| 10311-AAA | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.66  | 71.55 | 17.51 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.33  | 69.32 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 3.12  | 68.94 | 16.14 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 8.19  | 79.62 | 19.16 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 7.35  | 77.72 | 18.90 |       | 70.0  |         |
|           |                                                                     | Z | 8.21  | 80.46 | 19.57 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 11.35 | 86.83 | 24.06 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 8.72  | 81.68 | 22.69 |       | 30.0  |         |
|           |                                                                     | Z | 10.81 | 87.34 | 24.49 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.24  | 66.34 | 16.99 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.18  | 64.44 | 15.46 |       | 150.0 |         |
|           |                                                                     | Z | 1.17  | 64.45 | 15.36 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.83  | 67.25 | 16.68 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.86  | 66.88 | 16.43 |       | 150.0 |         |
|           |                                                                     | Z | 4.68  | 66.99 | 16.39 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.83  | 67.25 | 16.68 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.86  | 66.88 | 16.43 |       | 150.0 |         |
|           |                                                                     | Z | 4.68  | 66.99 | 16.39 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.96  | 67.54 | 16.61 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.98  | 67.13 | 16.32 |       | 150.0 |         |
|           |                                                                     | Z | 4.75  | 67.19 | 16.29 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.54  | 67.49 | 16.61 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.56  | 67.14 | 16.37 |       | 150.0 |         |
|           |                                                                     | Z | 5.45  | 67.43 | 16.49 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.87   | 68.11  | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.89   | 67.80  | 16.54 |      | 150.0 |         |
|           |                                                                                | Z | 5.70   | 67.70  | 16.47 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 2.41   | 75.76  | 18.30 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.70   | 69.18  | 15.23 |      | 115.0 |         |
|           |                                                                                | Z | 1.46   | 68.58  | 14.00 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 2.41   | 75.76  | 18.30 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.70   | 69.18  | 15.23 |      | 115.0 |         |
|           |                                                                                | Z | 1.46   | 68.58  | 14.00 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 120.32 | 30.30 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 37.67  | 108.93 | 28.46 |      | 100.0 |         |
|           |                                                                                | Z | 100.00 | 119.28 | 29.39 |      | 100.0 |         |
| 10410-AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 100.00 | 118.51 | 29.90 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 119.74 | 30.88 |      | 80.0  |         |
|           |                                                                                | Z | 100.00 | 120.99 | 30.71 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.06   | 64.54  | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.03   | 62.90  | 14.57 |      | 150.0 |         |
|           |                                                                                | Z | 1.03   | 63.04  | 14.51 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.73   | 67.12  | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.75   | 66.70  | 16.25 |      | 150.0 |         |
|           |                                                                                | Z | 4.58   | 66.83  | 16.23 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.73   | 67.12  | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.75   | 66.70  | 16.25 |      | 150.0 |         |
|           |                                                                                | Z | 4.58   | 66.83  | 16.23 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.72   | 67.27  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.73   | 66.83  | 16.25 |      | 150.0 |         |
|           |                                                                                | Z | 4.56   | 66.98  | 16.24 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.75   | 67.23  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.76   | 66.80  | 16.26 |      | 150.0 |         |
|           |                                                                                | Z | 4.59   | 66.94  | 16.24 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.87   | 67.22  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.89   | 66.82  | 16.28 |      | 150.0 |         |
|           |                                                                                | Z | 4.71   | 66.94  | 16.26 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 5.09   | 67.62  | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.12   | 67.23  | 16.44 |      | 150.0 |         |
|           |                                                                                | Z | 4.88   | 67.27  | 16.38 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 5.00   | 67.56  | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.02   | 67.15  | 16.39 |      | 150.0 |         |
|           |                                                                                | Z | 4.80   | 67.22  | 16.35 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.55   | 67.83  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.59   | 67.55  | 16.57 |      | 150.0 |         |
|           |                                                                                | Z | 5.40   | 67.57  | 16.55 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.56   | 67.88  | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.60   | 67.58  | 16.58 |      | 150.0 |         |
|           |                                                                                | Z | 5.41   | 67.59  | 16.56 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.59   | 67.91  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.63   | 67.61  | 16.59 |      | 150.0 |         |
|           |                                                                | Z | 5.42   | 67.56  | 16.54 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.54   | 71.07  | 18.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.46   | 69.99  | 18.11 |      | 150.0 |         |
|           |                                                                | Z | 4.20   | 70.41  | 17.89 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.50   | 67.77  | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.51   | 67.23  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.26   | 67.36  | 16.21 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.78   | 67.63  | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.80   | 67.18  | 16.37 |      | 150.0 |         |
|           |                                                                | Z | 4.56   | 67.25  | 16.29 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 5.01   | 67.62  | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.04   | 67.21  | 16.43 |      | 150.0 |         |
|           |                                                                | Z | 4.81   | 67.25  | 16.37 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.66   | 71.93  | 18.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.53   | 70.61  | 18.11 |      | 150.0 |         |
|           |                                                                | Z | 4.27   | 71.15  | 17.82 |      | 150.0 |         |
| 10435-AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 118.35 | 29.82 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 119.61 | 30.82 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 120.81 | 30.62 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.85   | 68.02  | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.83   | 67.22  | 15.92 |      | 150.0 |         |
|           |                                                                | Z | 3.54   | 67.32  | 15.53 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.31   | 67.56  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.32   | 66.99  | 16.19 |      | 150.0 |         |
|           |                                                                | Z | 4.10   | 67.13  | 16.07 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.56   | 67.47  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.57   | 66.98  | 16.26 |      | 150.0 |         |
|           |                                                                | Z | 4.37   | 67.07  | 16.19 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.73   | 67.38  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.74   | 66.94  | 16.27 |      | 150.0 |         |
|           |                                                                | Z | 4.56   | 67.01  | 16.22 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.81   | 68.42  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.77   | 67.50  | 15.73 |      | 150.0 |         |
|           |                                                                | Z | 3.44   | 67.49  | 15.16 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.40   | 68.45  | 16.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.44   | 68.23  | 16.77 |      | 150.0 |         |
|           |                                                                | Z | 6.27   | 68.12  | 16.71 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.89   | 65.77  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.90   | 65.36  | 15.99 |      | 150.0 |         |
|           |                                                                | Z | 3.82   | 65.47  | 15.93 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.60   | 67.53  | 15.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.56   | 66.59  | 15.22 |      | 150.0 |         |
|           |                                                                | Z | 3.27   | 66.88  | 14.62 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.70   | 65.53  | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.63   | 64.60  | 15.71 |      | 150.0 |         |
|           |                                                                | Z | 4.27   | 64.85  | 15.38 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.28   | 75.29  | 20.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.92   | 67.71  | 15.91 |      | 150.0 |         |
|           |                                                                   | Z | 0.90   | 67.71  | 15.78 |      | 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 | 122.97 | 32.01 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.34 | 31.70 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.58 | 32.88 |      | 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 | 108.03 | 24.84 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.86 | 26.18 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.99 | 24.93 |      | 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 | 105.21 | 23.49 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 47.92  | 99.26  | 23.13 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 105.71 | 23.36 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 121.12 | 31.00 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 119.76 | 30.82 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.61 | 31.80 |      | 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 | 107.54 | 24.59 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 92.10  | 108.50 | 25.75 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.47 | 24.68 |      | 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 | 104.76 | 23.28 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 27.79  | 92.79  | 21.40 |      | 80.0  |         |
|           |                                                                   | Z | 53.71  | 98.96  | 21.73 |      | 80.0  |         |
| 10467-AAA | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 121.32 | 31.10 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 119.93 | 30.90 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.83 | 31.91 |      | 80.0  |         |
| 10468-AAA | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 107.68 | 24.66 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.58 | 26.02 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.64 | 24.75 |      | 80.0  |         |
| 10469-AAA | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 104.76 | 23.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 28.45  | 93.06  | 21.47 |      | 80.0  |         |
|           |                                                                   | Z | 57.15  | 99.60  | 21.88 |      | 80.0  |         |
| 10470-AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 121.35 | 31.10 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 119.95 | 30.90 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.86 | 31.91 |      | 80.0  |         |
| 10471-AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.63 | 24.63 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.54 | 26.00 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.59 | 24.73 |      | 80.0  |         |
| 10472-AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 104.72 | 23.24 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 28.52  | 93.08  | 21.46 |      | 80.0  |         |
|           |                                                                   | Z | 57.07  | 99.54  | 21.85 |      | 80.0  |         |
| 10473-AAA | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 121.32 | 31.09 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 119.92 | 30.89 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.84 | 31.90 |      | 80.0  |         |
| 10474-AAA | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.64 | 24.63 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.55 | 26.00 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.60 | 24.73 |      | 80.0  |         |
| 10475-AAA | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 104.73 | 23.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 28.13  | 92.93  | 21.42 |      | 80.0  |         |
|           |                                                                   | Z | 55.36  | 99.25  | 21.78 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 107.49 | 24.56 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 96.57  | 109.01 | 25.85 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 108.42 | 24.64 |      | 80.0 |         |
| 10478-AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 104.68 | 23.23 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 27.68  | 92.72  | 21.36 |      | 80.0 |         |
|           |                                                                     | Z | 53.23  | 98.81  | 21.67 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 26.63  | 104.01 | 29.13 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.63   | 86.48  | 23.96 |      | 80.0 |         |
|           |                                                                     | Z | 24.30  | 102.59 | 28.22 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 38.31  | 102.90 | 27.02 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 11.50  | 85.06  | 22.20 |      | 80.0 |         |
|           |                                                                     | Z | 29.11  | 98.49  | 25.10 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 30.40  | 98.59  | 25.52 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 10.74  | 83.47  | 21.41 |      | 80.0 |         |
|           |                                                                     | Z | 20.94  | 92.98  | 23.18 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 8.51   | 84.82  | 22.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.60   | 77.58  | 19.80 |      | 80.0 |         |
|           |                                                                     | Z | 5.41   | 78.09  | 19.19 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 14.01  | 88.92  | 23.41 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 8.14   | 80.18  | 20.73 |      | 80.0 |         |
|           |                                                                     | Z | 9.32   | 82.50  | 20.44 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 12.47  | 87.00  | 22.82 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.81   | 79.33  | 20.43 |      | 80.0 |         |
|           |                                                                     | Z | 8.26   | 80.64  | 19.81 |      | 80.0 |         |
| 10485-AAA | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 8.06   | 84.25  | 22.66 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.75   | 77.87  | 20.37 |      | 80.0 |         |
|           |                                                                     | Z | 5.68   | 79.10  | 20.42 |      | 80.0 |         |
| 10486-AAA | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.66   | 75.87  | 19.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.94   | 72.86  | 18.29 |      | 80.0 |         |
|           |                                                                     | Z | 4.62   | 73.05  | 17.69 |      | 80.0 |         |
| 10487-AAA | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.56   | 75.25  | 19.19 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.94   | 72.51  | 18.16 |      | 80.0 |         |
|           |                                                                     | Z | 4.56   | 72.51  | 17.46 |      | 80.0 |         |
| 10488-AAA | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.10   | 80.82  | 21.84 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.79   | 76.47  | 20.13 |      | 80.0 |         |
|           |                                                                     | Z | 5.49   | 77.19  | 20.36 |      | 80.0 |         |
| 10489-AAA | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.34   | 73.87  | 19.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.00   | 71.87  | 18.57 |      | 80.0 |         |
|           |                                                                     | Z | 4.68   | 72.17  | 18.47 |      | 80.0 |         |
| 10490-AAA | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.35   | 73.36  | 19.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.06   | 71.53  | 18.46 |      | 80.0 |         |
|           |                                                                     | Z | 4.74   | 71.87  | 18.36 |      | 80.0 |         |
| 10491-AAA | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.36   | 77.12  | 20.56 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.66   | 74.28  | 19.36 |      | 80.0 |         |
|           |                                                                     | Z | 5.31   | 74.67  | 19.54 |      | 80.0 |         |
| 10492-AAA | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.41   | 72.24  | 18.98 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.23   | 70.84  | 18.33 |      | 80.0 |         |
|           |                                                                     | Z | 4.89   | 71.01  | 18.29 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAA | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.44 | 71.94 | 18.88 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.28 | 70.63 | 18.27 |      | 80.0 |         |
|           |                                                                      | Z | 4.94 | 70.81 | 18.22 |      | 80.0 |         |
| 10494-AAA | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.43 | 79.70 | 21.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.30 | 76.13 | 19.88 |      | 80.0 |         |
|           |                                                                      | Z | 5.88 | 76.40 | 20.05 |      | 80.0 |         |
| 10495-AAA | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.56 | 72.97 | 19.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.33 | 71.45 | 18.55 |      | 80.0 |         |
|           |                                                                      | Z | 4.97 | 71.48 | 18.50 |      | 80.0 |         |
| 10496-AAA | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.54 | 72.39 | 19.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.37 | 71.03 | 18.42 |      | 80.0 |         |
|           |                                                                      | Z | 5.01 | 71.08 | 18.38 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 7.31 | 82.38 | 20.82 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.87 | 75.75 | 18.64 |      | 80.0 |         |
|           |                                                                      | Z | 4.03 | 73.68 | 16.68 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.73 | 73.29 | 16.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.12 | 70.77 | 15.97 |      | 80.0 |         |
|           |                                                                      | Z | 2.73 | 66.24 | 12.60 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.59 | 72.54 | 16.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.10 | 70.38 | 15.70 |      | 80.0 |         |
|           |                                                                      | Z | 2.62 | 65.47 | 12.11 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.19 | 81.83 | 22.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.57 | 76.69 | 20.07 |      | 80.0 |         |
|           |                                                                      | Z | 5.44 | 77.85 | 20.24 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.46 | 74.81 | 19.33 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.94 | 72.30 | 18.33 |      | 80.0 |         |
|           |                                                                      | Z | 4.65 | 72.67 | 17.97 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.46 | 74.43 | 19.15 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.98 | 72.05 | 18.20 |      | 80.0 |         |
|           |                                                                      | Z | 4.68 | 72.41 | 17.81 |      | 80.0 |         |
| 10503-AAA | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.99 | 80.56 | 21.73 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.72 | 76.28 | 20.04 |      | 80.0 |         |
|           |                                                                      | Z | 5.42 | 76.98 | 20.27 |      | 80.0 |         |
| 10504-AAA | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.31 | 73.78 | 19.39 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.98 | 71.79 | 18.52 |      | 80.0 |         |
|           |                                                                      | Z | 4.66 | 72.08 | 18.42 |      | 80.0 |         |
| 10505-AAA | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.32 | 73.26 | 19.21 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.03 | 71.44 | 18.41 |      | 80.0 |         |
|           |                                                                      | Z | 4.72 | 71.78 | 18.31 |      | 80.0 |         |
| 10506-AAA | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.35 | 79.52 | 21.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.24 | 75.99 | 19.82 |      | 80.0 |         |
|           |                                                                      | Z | 5.83 | 76.25 | 19.98 |      | 80.0 |         |
| 10507-AAA | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.53 | 72.90 | 19.22 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.31 | 71.39 | 18.51 |      | 80.0 |         |
|           |                                                                      | Z | 4.95 | 71.42 | 18.47 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAA | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.52 | 72.31 | 19.02 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.35 | 70.96 | 18.38 |      | 80.0  |         |
|           |                                                                     | Z | 4.99 | 71.02 | 18.34 |      | 80.0  |         |
| 10509-AAA | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.86 | 76.40 | 20.08 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.23 | 74.05 | 19.09 |      | 80.0  |         |
|           |                                                                     | Z | 5.83 | 74.13 | 19.18 |      | 80.0  |         |
| 10510-AAA | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.89 | 72.04 | 18.91 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.75 | 70.91 | 18.36 |      | 80.0  |         |
|           |                                                                     | Z | 5.36 | 70.80 | 18.32 |      | 80.0  |         |
| 10511-AAA | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.86 | 71.58 | 18.77 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.75 | 70.55 | 18.27 |      | 80.0  |         |
|           |                                                                     | Z | 5.39 | 70.48 | 18.23 |      | 80.0  |         |
| 10512-AAA | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 7.85 | 79.24 | 20.97 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.75 | 76.04 | 19.69 |      | 80.0  |         |
|           |                                                                     | Z | 6.30 | 76.05 | 19.77 |      | 80.0  |         |
| 10513-AAA | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.88 | 72.72 | 19.16 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.70 | 71.43 | 18.55 |      | 80.0  |         |
|           |                                                                     | Z | 5.29 | 71.21 | 18.47 |      | 80.0  |         |
| 10514-AAA | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.77 | 72.00 | 18.94 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.64 | 70.86 | 18.38 |      | 80.0  |         |
|           |                                                                     | Z | 5.26 | 70.69 | 18.32 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.03 | 64.88 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.99 | 63.07 | 14.62 |      | 150.0 |         |
|           |                                                                     | Z | 0.99 | 63.20 | 14.56 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 1.64 | 91.04 | 26.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.59 | 69.22 | 16.60 |      | 150.0 |         |
|           |                                                                     | Z | 0.59 | 69.23 | 16.57 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.96 | 68.68 | 17.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.84 | 64.94 | 15.18 |      | 150.0 |         |
|           |                                                                     | Z | 0.84 | 64.94 | 15.09 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.73 | 67.22 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75 | 66.79 | 16.24 |      | 150.0 |         |
|           |                                                                     | Z | 4.57 | 66.91 | 16.20 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.96 | 67.51 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.99 | 67.12 | 16.39 |      | 150.0 |         |
|           |                                                                     | Z | 4.76 | 67.15 | 16.33 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.82 | 67.52 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.84 | 67.09 | 16.32 |      | 150.0 |         |
|           |                                                                     | Z | 4.61 | 67.11 | 16.25 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.75 | 67.54 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.77 | 67.10 | 16.31 |      | 150.0 |         |
|           |                                                                     | Z | 4.54 | 67.10 | 16.23 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.79 | 67.47 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.80 | 67.00 | 16.30 |      | 150.0 |         |
|           |                                                                     | Z | 4.60 | 67.19 | 16.31 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.66 | 67.41 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.67 | 66.95 | 16.18 |      | 150.0 |         |
|           |                                                            | Z | 4.48 | 67.04 | 16.16 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.74 | 67.44 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.76 | 66.99 | 16.31 |      | 150.0 |         |
|           |                                                            | Z | 4.54 | 67.10 | 16.28 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.69 | 66.48 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.70 | 66.02 | 15.89 |      | 150.0 |         |
|           |                                                            | Z | 4.53 | 66.15 | 15.87 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.91 | 66.90 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.91 | 66.43 | 16.04 |      | 150.0 |         |
|           |                                                            | Z | 4.70 | 66.52 | 16.01 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.82 | 66.89 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.83 | 66.42 | 16.00 |      | 150.0 |         |
|           |                                                            | Z | 4.62 | 66.47 | 15.95 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.84 | 66.91 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.85 | 66.44 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.49 | 15.99 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.84 | 66.91 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.85 | 66.44 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.49 | 15.99 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.86 | 67.08 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.87 | 66.60 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.60 | 16.00 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.71 | 66.97 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.72 | 66.49 | 16.02 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.45 | 15.93 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.86 | 66.93 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.87 | 66.45 | 16.01 |      | 150.0 |         |
|           |                                                            | Z | 4.64 | 66.54 | 15.97 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.34 | 67.03 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.36 | 66.66 | 16.11 |      | 150.0 |         |
|           |                                                            | Z | 5.17 | 66.62 | 16.06 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.42 | 67.17 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.43 | 66.80 | 16.16 |      | 150.0 |         |
|           |                                                            | Z | 5.24 | 66.80 | 16.14 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.29 | 67.18 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.30 | 66.78 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 5.11 | 66.74 | 16.09 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.35 | 67.14 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.36 | 66.75 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 5.16 | 66.71 | 16.08 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.47 | 67.20 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.49 | 66.85 | 16.21 |      | 150.0 |         |
|           |                                                            | Z | 5.26 | 66.74 | 16.13 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.36 | 67.15 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.38 | 66.77 | 16.18 |      | 150.0 |         |
|           |                                                            | Z | 5.19 | 66.76 | 16.16 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.35 | 67.08 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.38 | 66.75 | 16.17 |      | 150.0 |         |
|           |                                                     | Z | 5.16 | 66.62 | 16.08 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.49 | 67.08 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.51 | 66.73 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.31 | 66.69 | 16.13 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.58 | 67.09 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.61 | 66.77 | 16.21 |      | 150.0 |         |
|           |                                                     | Z | 5.39 | 66.74 | 16.17 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.61 | 67.12 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.62 | 66.77 | 16.09 |      | 150.0 |         |
|           |                                                     | Z | 5.48 | 66.74 | 16.05 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.83 | 67.51 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.84 | 67.15 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.68 | 67.16 | 16.22 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.72 | 67.42 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.73 | 67.08 | 16.20 |      | 150.0 |         |
|           |                                                     | Z | 5.55 | 66.95 | 16.13 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.81 | 67.48 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.83 | 67.17 | 16.24 |      | 150.0 |         |
|           |                                                     | Z | 5.62 | 66.99 | 16.14 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 6.10 | 68.50 | 16.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.15 | 68.24 | 16.74 |      | 150.0 |         |
|           |                                                     | Z | 5.89 | 67.98 | 16.61 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.74 | 67.36 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.75 | 67.01 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.57 | 66.96 | 16.14 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.76 | 67.47 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.78 | 67.14 | 16.20 |      | 150.0 |         |
|           |                                                     | Z | 5.58 | 67.00 | 16.12 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.66 | 67.23 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.67 | 66.89 | 16.10 |      | 150.0 |         |
|           |                                                     | Z | 5.49 | 66.80 | 16.03 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.75 | 67.26 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.76 | 66.93 | 16.14 |      | 150.0 |         |
|           |                                                     | Z | 5.58 | 66.84 | 16.08 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 6.01 | 67.49 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.02 | 67.17 | 16.20 |      | 150.0 |         |
|           |                                                     | Z | 5.89 | 67.10 | 16.15 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.17 | 67.85 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.20 | 67.56 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 6.02 | 67.41 | 16.28 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.18 | 67.83 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.51 | 16.33 |      | 150.0 |         |
|           |                                                     | Z | 6.04 | 67.46 | 16.30 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.17 | 67.82 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.52 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 6.00 | 67.36 | 16.27 |      | 150.0 |         |

|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.23   | 68.01  | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.25   | 67.72  | 16.47 |      | 150.0 |         |
|           |                                                                 | Z | 6.05   | 67.53  | 16.37 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.22   | 67.85  | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.25   | 67.56  | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 6.05   | 67.37  | 16.33 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 6.13   | 67.79  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.15   | 67.49  | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 5.97   | 67.35  | 16.35 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.29   | 68.28  | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.33   | 68.01  | 16.70 |      | 150.0 |         |
|           |                                                                 | Z | 6.10   | 67.74  | 16.55 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.57   | 68.63  | 17.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.57   | 68.27  | 16.77 |      | 150.0 |         |
|           |                                                                 | Z | 6.35   | 68.10  | 16.68 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 5.07   | 67.31  | 16.69 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.10   | 66.95  | 16.44 |      | 150.0 |         |
|           |                                                                 | Z | 4.91   | 67.04  | 16.40 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.34   | 67.80  | 17.01 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.38   | 67.46  | 16.78 |      | 150.0 |         |
|           |                                                                 | Z | 5.14   | 67.47  | 16.71 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 5.17   | 67.69  | 16.85 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.21   | 67.33  | 16.61 |      | 150.0 |         |
|           |                                                                 | Z | 4.97   | 67.33  | 16.54 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.20   | 68.09  | 17.20 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.23   | 67.71  | 16.94 |      | 150.0 |         |
|           |                                                                 | Z | 5.00   | 67.68  | 16.86 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 5.08   | 67.38  | 16.59 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.11   | 67.01  | 16.33 |      | 150.0 |         |
|           |                                                                 | Z | 4.90   | 67.16  | 16.34 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 5.14   | 68.11  | 17.22 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.16   | 67.71  | 16.95 |      | 150.0 |         |
|           |                                                                 | Z | 4.96   | 67.77  | 16.91 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.18   | 67.92  | 17.15 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.21   | 67.52  | 16.88 |      | 150.0 |         |
|           |                                                                 | Z | 4.99   | 67.63  | 16.86 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.45   | 67.97  | 17.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.38   | 65.84  | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 1.34   | 65.80  | 16.05 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.49   | 68.86  | 18.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.40   | 66.47  | 16.51 |      | 130.0 |         |
|           |                                                                 | Z | 1.36   | 66.39  | 16.40 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 100.00 | 149.30 | 40.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.11   | 88.03  | 23.54 |      | 130.0 |         |
|           |                                                                 | Z | 3.23   | 89.37  | 24.00 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 2.21   | 80.01  | 23.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.65   | 72.75  | 19.44 |      | 130.0 |         |
|           |                                                                 | Z | 1.56   | 72.33  | 19.21 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.88 | 67.15 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.92 | 66.81 | 16.54 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 66.93 | 16.51 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.91 | 67.32 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.94 | 66.97 | 16.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.75 | 67.08 | 16.56 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 5.15 | 67.65 | 17.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.20 | 67.33 | 16.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.96 | 67.36 | 16.73 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 5.05 | 67.86 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.09 | 67.50 | 16.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 67.51 | 16.82 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.82 | 67.24 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.87 | 66.90 | 16.27 |      | 130.0 |         |
|           |                                                                 | Z | 4.63 | 66.89 | 16.19 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.86 | 67.17 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.83 | 16.25 |      | 130.0 |         |
|           |                                                                 | Z | 4.68 | 66.92 | 16.22 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.96 | 67.97 | 17.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.00 | 67.61 | 16.86 |      | 130.0 |         |
|           |                                                                 | Z | 4.76 | 67.57 | 16.77 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.78 | 66.97 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 66.64 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.67 | 16.00 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.88 | 67.15 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.92 | 66.81 | 16.54 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 66.93 | 16.51 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.91 | 67.32 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.94 | 66.97 | 16.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.75 | 67.08 | 16.56 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 5.15 | 67.65 | 17.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.20 | 67.33 | 16.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.96 | 67.36 | 16.73 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 5.05 | 67.86 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.09 | 67.50 | 16.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 67.51 | 16.82 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.82 | 67.24 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.87 | 66.90 | 16.27 |      | 130.0 |         |
|           |                                                                 | Z | 4.63 | 66.89 | 16.19 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.86 | 67.17 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.83 | 16.25 |      | 130.0 |         |
|           |                                                                 | Z | 4.68 | 66.92 | 16.22 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.96 | 67.97 | 17.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.00 | 67.61 | 16.86 |      | 130.0 |         |
|           |                                                                 | Z | 4.76 | 67.57 | 16.77 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.78 | 66.97 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 66.64 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.67 | 16.00 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 5.03 | 67.20 | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.07 | 66.88 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 4.88 | 66.97 | 16.60 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.21 | 67.55 | 16.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.26 | 67.23 | 16.76 |      | 130.0 |         |
|           |                                                       | Z | 5.03 | 67.30 | 16.73 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 5.14 | 67.52 | 16.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.19 | 67.20 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 4.96 | 67.23 | 16.62 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 5.19 | 67.66 | 17.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.24 | 67.33 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.01 | 67.38 | 16.76 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 5.17 | 67.65 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.23 | 67.33 | 16.73 |      | 130.0 |         |
|           |                                                       | Z | 4.98 | 67.35 | 16.67 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 5.11 | 67.64 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.16 | 67.30 | 16.71 |      | 130.0 |         |
|           |                                                       | Z | 4.92 | 67.35 | 16.67 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 5.06 | 67.59 | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.11 | 67.26 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 4.87 | 67.26 | 16.56 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 5.05 | 67.87 | 17.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.09 | 67.53 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 4.85 | 67.47 | 16.80 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.68 | 67.76 | 17.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.74 | 67.54 | 16.84 |      | 130.0 |         |
|           |                                                       | Z | 5.54 | 67.51 | 16.80 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.91 | 68.42 | 17.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 6.00 | 68.29 | 17.19 |      | 130.0 |         |
|           |                                                       | Z | 5.69 | 67.96 | 17.01 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.75 | 68.03 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.81 | 67.81 | 16.96 |      | 130.0 |         |
|           |                                                       | Z | 5.57 | 67.70 | 16.89 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.85 | 68.05 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.93 | 67.91 | 16.93 |      | 130.0 |         |
|           |                                                       | Z | 5.67 | 67.73 | 16.83 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.97 | 68.46 | 17.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 6.05 | 68.29 | 17.25 |      | 130.0 |         |
|           |                                                       | Z | 5.74 | 68.01 | 17.09 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.70 | 67.75 | 17.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.76 | 67.53 | 16.86 |      | 130.0 |         |
|           |                                                       | Z | 5.55 | 67.48 | 16.81 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.80 | 68.03 | 17.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.86 | 67.81 | 17.00 |      | 130.0 |         |
|           |                                                       | Z | 5.67 | 67.84 | 17.00 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.58 | 67.53 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.62 | 67.26 | 16.60 |      | 130.0 |         |
|           |                                                       | Z | 5.41 | 67.19 | 16.54 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.86 | 66.52 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.89 | 66.14 | 16.23 |      | 130.0 |         |
|           |                                                   | Z | 4.71 | 66.27 | 16.21 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 5.09 | 66.96 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.12 | 66.58 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 4.90 | 66.67 | 16.37 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.98 | 66.85 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.01 | 66.47 | 16.26 |      | 130.0 |         |
|           |                                                   | Z | 4.79 | 66.53 | 16.22 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 5.03 | 67.01 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.06 | 66.63 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 4.84 | 66.68 | 16.37 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.96 | 66.86 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.50 | 16.29 |      | 130.0 |         |
|           |                                                   | Z | 4.76 | 66.50 | 16.23 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.97 | 67.00 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.01 | 66.61 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 4.77 | 66.66 | 16.28 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.99 | 66.94 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.03 | 66.55 | 16.23 |      | 130.0 |         |
|           |                                                   | Z | 4.77 | 66.56 | 16.17 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.92 | 67.15 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.95 | 66.76 | 16.47 |      | 130.0 |         |
|           |                                                   | Z | 4.71 | 66.71 | 16.38 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.95 | 66.65 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.28 | 16.06 |      | 130.0 |         |
|           |                                                   | Z | 4.76 | 66.36 | 16.03 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.51 | 67.07 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.55 | 66.78 | 16.45 |      | 130.0 |         |
|           |                                                   | Z | 5.35 | 66.74 | 16.40 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.58 | 67.18 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.62 | 66.89 | 16.46 |      | 130.0 |         |
|           |                                                   | Z | 5.43 | 66.92 | 16.46 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.47 | 67.27 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.50 | 66.95 | 16.52 |      | 130.0 |         |
|           |                                                   | Z | 5.31 | 66.92 | 16.47 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.49 | 67.07 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.52 | 66.76 | 16.36 |      | 130.0 |         |
|           |                                                   | Z | 5.33 | 66.76 | 16.33 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.62 | 67.19 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.67 | 66.93 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 5.42 | 66.79 | 16.40 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.59 | 67.25 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.63 | 66.98 | 16.62 |      | 130.0 |         |
|           |                                                   | Z | 5.41 | 66.88 | 16.56 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.58 | 67.35 | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.62 | 67.06 | 16.66 |      | 130.0 |         |
|           |                                                   | Z | 5.43 | 67.06 | 16.64 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.48 | 66.99 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.54 | 66.75 | 16.40 |      | 130.0 |         |
|           |                                                     | Z | 5.31 | 66.61 | 16.29 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.65 | 67.09 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.69 | 66.81 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 5.50 | 66.79 | 16.45 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 6.03 | 68.01 | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.05 | 67.65 | 16.95 |      | 130.0 |         |
|           |                                                     | Z | 5.88 | 67.81 | 17.01 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.76 | 67.09 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.79 | 66.81 | 16.38 |      | 130.0 |         |
|           |                                                     | Z | 5.64 | 66.79 | 16.35 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 6.01 | 67.60 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.04 | 67.32 | 16.58 |      | 130.0 |         |
|           |                                                     | Z | 5.89 | 67.37 | 16.60 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.83 | 67.28 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.87 | 67.01 | 16.37 |      | 130.0 |         |
|           |                                                     | Z | 5.69 | 66.92 | 16.32 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.93 | 67.36 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.99 | 67.16 | 16.43 |      | 130.0 |         |
|           |                                                     | Z | 5.77 | 67.00 | 16.35 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.47 | 69.11 | 17.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.56 | 68.99 | 17.34 |      | 130.0 |         |
|           |                                                     | Z | 6.24 | 68.58 | 17.14 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 6.36 | 68.89 | 17.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.44 | 68.71 | 17.39 |      | 130.0 |         |
|           |                                                     | Z | 6.09 | 68.24 | 17.15 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 6.00 | 67.73 | 16.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.05 | 67.48 | 16.79 |      | 130.0 |         |
|           |                                                     | Z | 5.85 | 67.39 | 16.74 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.95 | 67.59 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.01 | 67.38 | 16.58 |      | 130.0 |         |
|           |                                                     | Z | 5.74 | 67.05 | 16.41 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.92 | 67.56 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.98 | 67.34 | 16.62 |      | 130.0 |         |
|           |                                                     | Z | 5.72 | 67.07 | 16.47 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.80 | 66.87 | 16.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.85 | 66.64 | 16.01 |      | 130.0 |         |
|           |                                                     | Z | 5.62 | 66.48 | 15.93 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.16 | 67.47 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.22 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 6.06 | 67.16 | 16.44 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.34 | 67.89 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.39 | 67.69 | 16.69 |      | 130.0 |         |
|           |                                                     | Z | 6.22 | 67.55 | 16.62 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.33 | 67.82 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.36 | 67.57 | 16.61 |      | 130.0 |         |
|           |                                                     | Z | 6.21 | 67.52 | 16.58 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.34  | 67.88  | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.38  | 67.64  | 16.70 |      | 130.0 |         |
|           |                                                        | Z | 6.19  | 67.47  | 16.60 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.37  | 67.96  | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.42  | 67.75  | 16.69 |      | 130.0 |         |
|           |                                                        | Z | 6.20  | 67.51  | 16.57 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.36  | 67.66  | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.40  | 67.44  | 16.56 |      | 130.0 |         |
|           |                                                        | Z | 6.24  | 67.40  | 16.53 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.44  | 68.03  | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.49  | 67.81  | 16.91 |      | 130.0 |         |
|           |                                                        | Z | 6.28  | 67.62  | 16.80 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.26  | 67.70  | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.31  | 67.48  | 16.64 |      | 130.0 |         |
|           |                                                        | Z | 6.12  | 67.34  | 16.57 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.50  | 68.41  | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.57  | 68.25  | 17.05 |      | 130.0 |         |
|           |                                                        | Z | 6.29  | 67.86  | 16.85 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.78  | 68.77  | 17.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.81  | 68.48  | 17.11 |      | 130.0 |         |
|           |                                                        | Z | 6.68  | 68.60  | 17.18 |      | 130.0 |         |
| 10646-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 37.14 | 116.21 | 38.03 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 19.95 | 100.33 | 33.06 |      | 60.0  |         |
|           |                                                        | Z | 62.05 | 131.91 | 43.22 |      | 60.0  |         |
| 10647-AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 38.52 | 117.84 | 38.64 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 20.25 | 101.35 | 33.50 |      | 60.0  |         |
|           |                                                        | Z | 63.43 | 133.45 | 43.81 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 1.03  | 68.68  | 14.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.85  | 64.54  | 12.30 |      | 150.0 |         |
|           |                                                        | Z | 0.71  | 63.65  | 10.90 |      | 150.0 |         |

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



Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **ES3-3213\_Feb17**

## CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3213**

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

Calibration date: **February 10, 2017**

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)

*Bny  
03-01-2017*

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| 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-16) | In house check: Oct-17 |

Calibrated by: **Name** Claudio Leubler **Function** Laboratory Technician **Signature** *[Signature]*

Approved by: **Name** Katja Pokovic **Function** Technical Manager **Signature** *[Signature]*

Issued: February 13, 2017

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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, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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  $E^2$ -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 ES3DV3

## SN:3213

Manufactured: October 14, 2008  
Calibrated: February 10, 2017

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

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3213

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 1.44     | 1.32     | 1.29     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 101.3    | 102.3    | 101.6    |               |

### 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    | 228.2    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 230.0    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 221.7    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms} \cdot \text{V}^{-2}$ | T2<br>$\text{ms} \cdot \text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|---------------------------------------|---------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 56.23    | 407.2    | 35.93                       | 28.85                                 | 2.251                                 | 5.1      | 1.129                 | 0.439                 | 1.012 |
| Y | 55.47    | 400.7    | 35.87                       | 28.65                                 | 2.277                                 | 5.1      | 1.321                 | 0.386                 | 1.013 |
| Z | 51.67    | 374.7    | 36                          | 28.45                                 | 2.103                                 | 5.1      | 0.358                 | 0.504                 | 1.009 |

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: ES3DV3 - SN:3213

### 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                            | 6.85    | 6.85    | 6.85    | 0.80               | 1.18                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 6.49    | 6.49    | 6.49    | 0.49               | 1.52                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 5.49    | 5.49    | 5.49    | 0.60               | 1.35                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 5.29    | 5.29    | 5.29    | 0.68               | 1.27                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 4.95    | 4.95    | 4.95    | 0.70               | 1.28                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 4.70    | 4.70    | 4.70    | 0.80               | 1.24                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 4.52    | 4.52    | 4.52    | 0.78               | 1.28                    | ± 12.0 %  |

<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: ES3DV3 - SN:3213

### 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                            | 6.38    | 6.38    | 6.38    | 0.60               | 1.31                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 6.28    | 6.28    | 6.28    | 0.80               | 1.20                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 5.09    | 5.09    | 5.09    | 0.66               | 1.33                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 4.94    | 4.94    | 4.94    | 0.40               | 1.85                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 4.69    | 4.69    | 4.69    | 0.80               | 1.24                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 4.53    | 4.53    | 4.53    | 0.72               | 1.28                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 4.32    | 4.32    | 4.32    | 0.80               | 1.20                    | ± 12.0 %  |

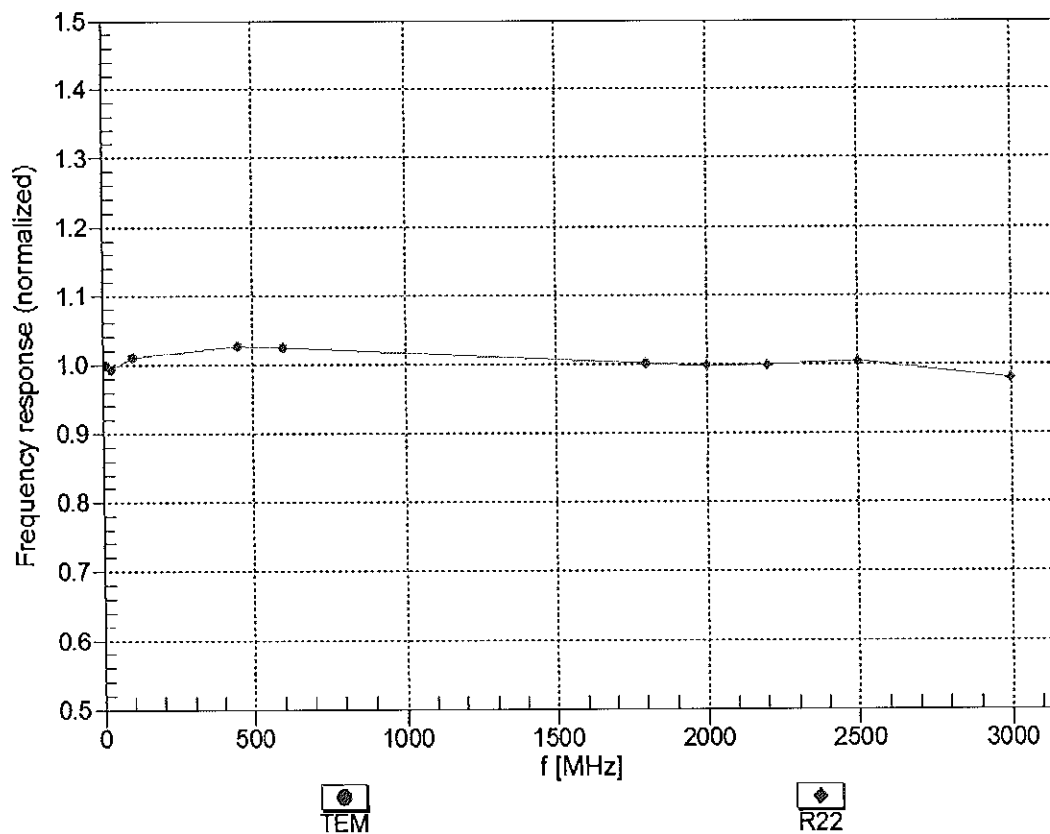
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

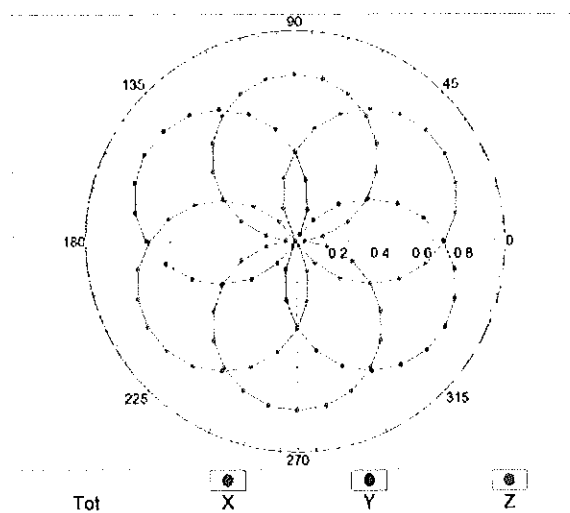
(TEM-Cell:ifi110 EXX, Waveguide: R22)



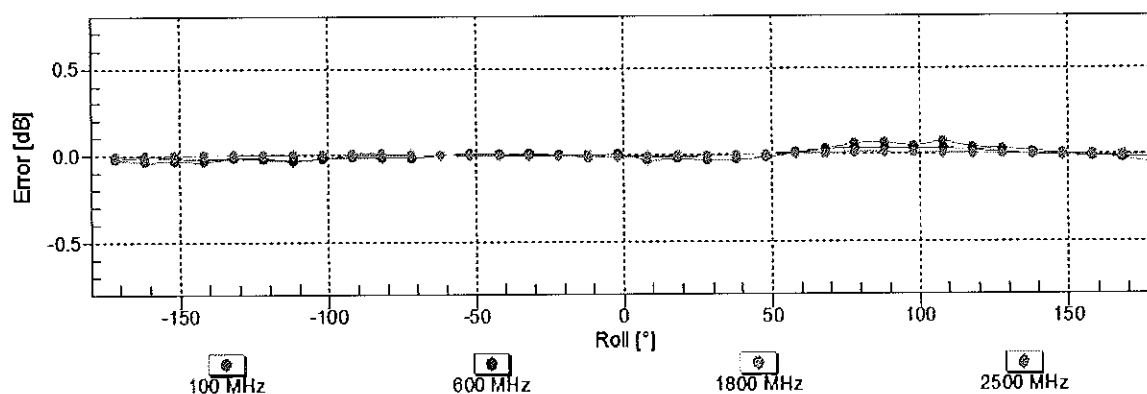
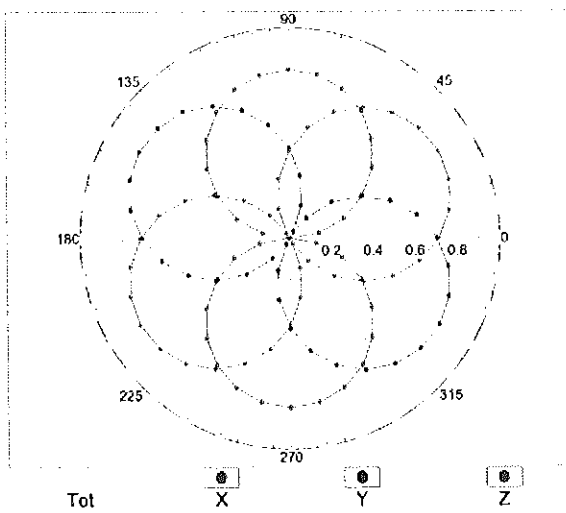
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz, TEM

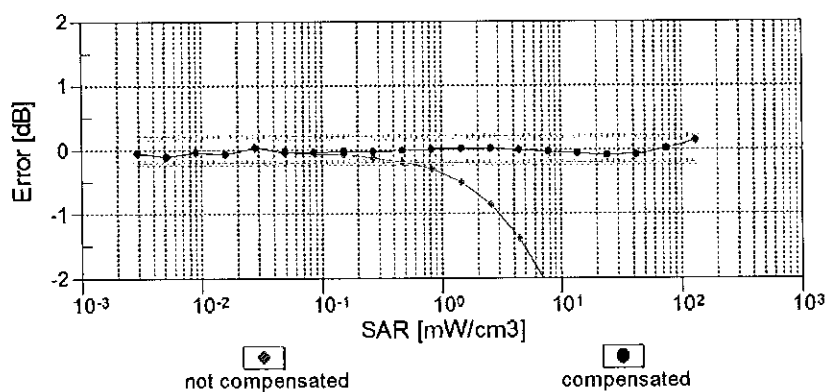
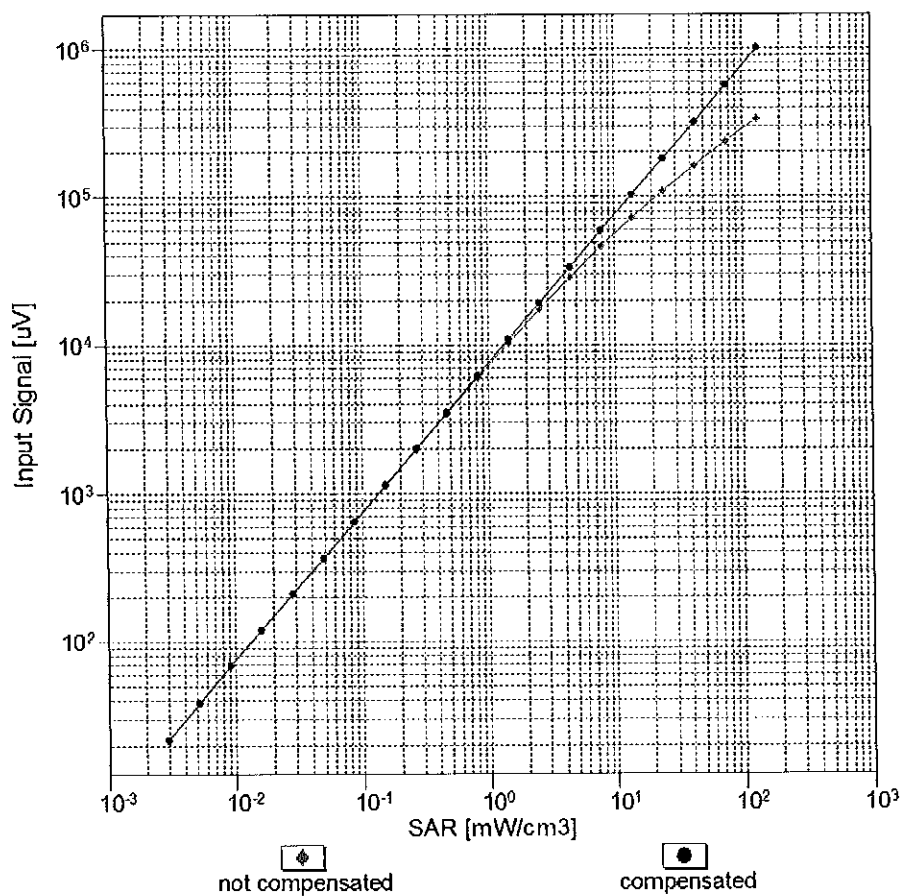


f=1800 MHz, R22



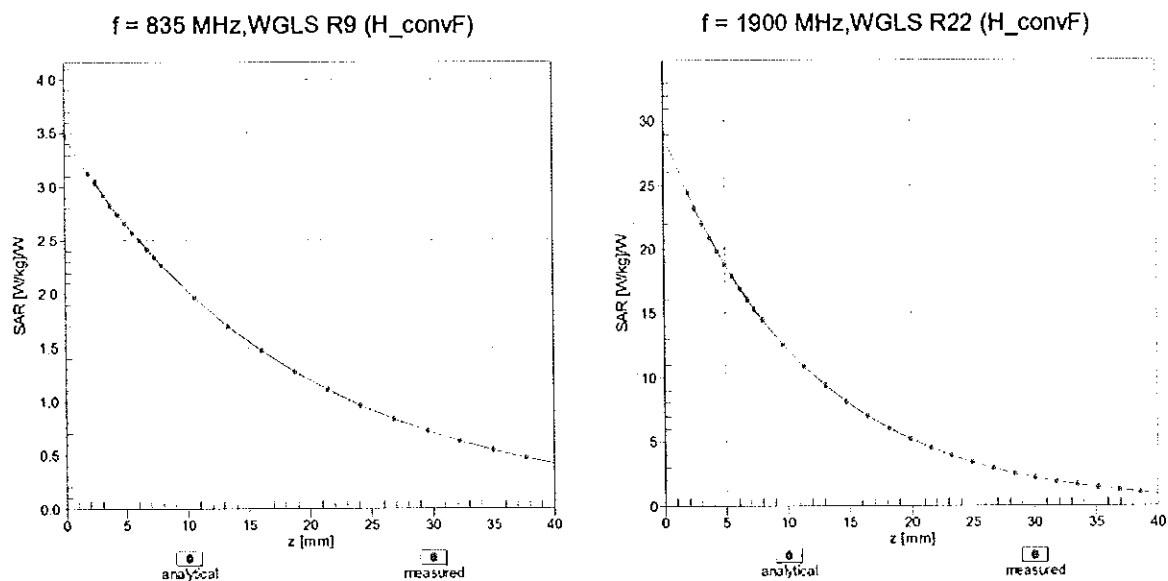
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



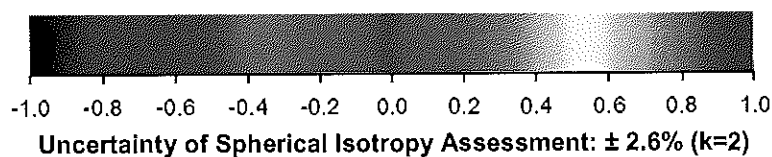
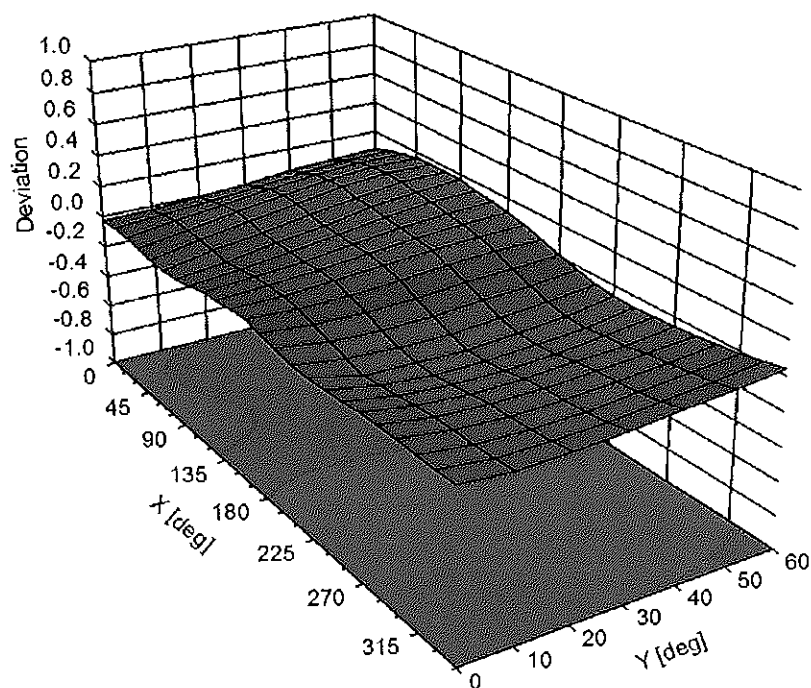
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3213

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 98.2       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 10 mm      |
| Tip Diameter                                  | 4 mm       |
| Probe Tip to Sensor X Calibration Point       | 2 mm       |
| Probe Tip to Sensor Y Calibration Point       | 2 mm       |
| Probe Tip to Sensor Z Calibration Point       | 2 mm       |
| Recommended Measurement Distance from Surface | 3 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    | 228.2    | $\pm 3.5 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 230.0    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 221.7    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 11.07   | 84.26                  | 20.62 | 10.00   | 25.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 10.49   | 83.36                  | 20.27 |         | 25.0     |                                  |
|               |                                               | Z | 11.03   | 84.22                  | 20.43 |         | 25.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.04    | 66.65                  | 14.82 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.16    | 69.13                  | 16.33 |         | 150.0    |                                  |
|               |                                               | Z | 1.01    | 66.30                  | 14.54 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.30    | 64.60                  | 15.49 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.33    | 65.49                  | 16.22 |         | 150.0    |                                  |
|               |                                               | Z | 1.28    | 64.47                  | 15.36 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.14    | 67.15                  | 17.39 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.14    | 67.35                  | 17.57 |         | 150.0    |                                  |
|               |                                               | Z | 5.09    | 67.17                  | 17.37 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 62.94   | 114.81                 | 31.61 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 41.95   | 107.82                 | 29.66 |         | 50.0     |                                  |
|               |                                               | Z | 94.76   | 121.25                 | 33.03 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 46.50   | 109.76                 | 30.33 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 33.70   | 104.15                 | 28.69 |         | 50.0     |                                  |
|               |                                               | Z | 62.69   | 114.46                 | 31.37 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 119.19                 | 30.75 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.97                 | 30.64 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 118.83                 | 30.48 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 18.95   | 107.68                 | 41.29 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 31.91   | 124.81                 | 47.58 |         | 50.0     |                                  |
|               |                                               | Z | 17.05   | 104.98                 | 40.36 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 20.29   | 105.23                 | 36.57 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 28.92   | 114.92                 | 39.99 |         | 60.0     |                                  |
|               |                                               | Z | 20.11   | 105.49                 | 36.71 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 118.17                 | 29.38 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.12                 | 29.34 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 117.81                 | 29.12 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 118.40                 | 28.68 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.60                 | 28.76 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 118.00                 | 28.41 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 12.78   | 94.46                  | 31.72 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 16.27   | 100.85                 | 34.22 |         | 80.0     |                                  |
|               |                                               | Z | 12.37   | 94.11                  | 31.64 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 117.61                 | 29.45 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 117.52                 | 29.40 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 117.17                 | 29.14 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 119.11                 | 27.47 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 120.30                 | 27.96 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 118.27                 | 27.02 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 123.13 | 28.10 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 125.86 | 29.19 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 121.81 | 27.46 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 19.81  | 99.27  | 27.58 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 23.75  | 102.32 | 28.48 |       | 70.0  |         |
|           |                                                     | Z | 20.10  | 99.19  | 27.31 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 6.18   | 84.61  | 21.36 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 8.74   | 90.01  | 23.19 |       | 100.0 |         |
|           |                                                     | Z | 6.07   | 84.02  | 20.83 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 3.50   | 78.04  | 18.75 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.77   | 82.88  | 20.59 |       | 100.0 |         |
|           |                                                     | Z | 3.40   | 77.42  | 18.19 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 25.06  | 103.36 | 28.83 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 30.48  | 106.66 | 29.76 |       | 70.0  |         |
|           |                                                     | Z | 25.78  | 103.46 | 28.61 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 5.91   | 84.02  | 21.13 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 8.37   | 89.43  | 22.97 |       | 100.0 |         |
|           |                                                     | Z | 5.74   | 83.28  | 20.55 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 3.58   | 78.59  | 19.05 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.93   | 83.62  | 20.94 |       | 100.0 |         |
|           |                                                     | Z | 3.47   | 77.94  | 18.48 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 1.75   | 70.49  | 15.41 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.11   | 73.63  | 16.88 |       | 150.0 |         |
|           |                                                     | Z | 1.63   | 69.80  | 14.78 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 117.99 | 30.44 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 117.70 | 30.30 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 117.57 | 30.13 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.01   | 92.86  | 0.28  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 128.30 | 10.22 |       | 150.0 |         |
|           |                                                     | Z | 0.01   | 91.94  | 0.27  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 16.43  | 91.36  | 26.72 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 14.26  | 88.55  | 25.69 |       | 25.0  |         |
|           |                                                     | Z | 18.21  | 93.36  | 27.20 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 21.81  | 96.95  | 27.09 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 18.36  | 93.74  | 25.99 |       | 40.0  |         |
|           |                                                     | Z | 24.94  | 99.20  | 27.59 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 16.12  | 92.43  | 26.40 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 16.40  | 92.69  | 26.46 |       | 50.0  |         |
|           |                                                     | Z | 16.84  | 93.23  | 26.48 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 9.13   | 87.64  | 28.49 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 10.85  | 92.11  | 30.40 |       | 100.0 |         |
|           |                                                     | Z | 8.80   | 87.14  | 28.33 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.45   | 66.53  | 16.46 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.51   | 67.75  | 17.33 |       | 110.0 |         |
|           |                                                     | Z | 1.43   | 66.36  | 16.31 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 71.32  | 126.43 | 32.69 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 133.00 | 34.47 |       | 110.0 |         |
|           |                                                     | Z | 56.46  | 122.77 | 31.74 |       | 110.0 |         |

|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 7.70  | 91.83  | 25.70 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 12.85 | 101.15 | 28.77 |      | 110.0 |         |
|           |                                                | Z | 7.42  | 91.30  | 25.47 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.86  | 66.91  | 16.67 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.87  | 67.10  | 16.85 |      | 100.0 |         |
|           |                                                | Z | 4.81  | 66.91  | 16.64 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.90  | 67.06  | 16.81 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.91  | 67.26  | 16.99 |      | 100.0 |         |
|           |                                                | Z | 4.85  | 67.06  | 16.78 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.22  | 67.40  | 17.08 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.23  | 67.59  | 17.25 |      | 100.0 |         |
|           |                                                | Z | 5.16  | 67.38  | 17.04 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.12  | 67.42  | 17.25 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.13  | 67.61  | 17.43 |      | 100.0 |         |
|           |                                                | Z | 5.06  | 67.40  | 17.21 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.18  | 67.55  | 17.48 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.19  | 67.76  | 17.66 |      | 100.0 |         |
|           |                                                | Z | 5.11  | 67.52  | 17.44 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.50  | 67.74  | 17.95 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.51  | 67.96  | 18.15 |      | 100.0 |         |
|           |                                                | Z | 5.44  | 67.76  | 17.93 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.63  | 68.06  | 18.32 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.64  | 68.30  | 18.53 |      | 100.0 |         |
|           |                                                | Z | 5.56  | 68.03  | 18.28 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.71  | 68.03  | 18.50 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.72  | 68.29  | 18.74 |      | 100.0 |         |
|           |                                                | Z | 5.64  | 68.03  | 18.48 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.28  | 67.38  | 17.78 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.29  | 67.59  | 17.97 |      | 100.0 |         |
|           |                                                | Z | 5.23  | 67.40  | 17.76 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.33  | 67.91  | 18.09 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.34  | 68.14  | 18.30 |      | 100.0 |         |
|           |                                                | Z | 5.28  | 67.91  | 18.07 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.46  | 68.24  | 18.51 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.48  | 68.51  | 18.74 |      | 100.0 |         |
|           |                                                | Z | 5.40  | 68.25  | 18.50 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.49  | 68.30  | 18.76 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.51  | 68.58  | 19.00 |      | 100.0 |         |
|           |                                                | Z | 5.44  | 68.31  | 18.74 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.63  | 68.74  | 19.25 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.66  | 69.06  | 19.51 |      | 90.0  |         |
|           |                                                | Z | 5.57  | 68.71  | 19.21 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.64  | 68.56  | 19.38 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.68  | 68.89  | 19.66 |      | 90.0  |         |
|           |                                                | Z | 5.60  | 68.57  | 19.36 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.68  | 68.64  | 19.49 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.71  | 68.99  | 19.77 |      | 90.0  |         |
|           |                                                | Z | 5.64  | 68.66  | 19.47 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.88   | 65.55  | 12.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.01   | 67.94  | 14.05 |      | 150.0 |         |
|           |                                                     | Z | 0.82   | 64.98  | 12.07 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.05   | 63.91  | 8.77  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 2.06   | 64.02  | 8.81  |      | 80.0  |         |
|           |                                                     | Z | 1.95   | 63.58  | 8.48  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 119.26 | 30.80 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 119.04 | 30.70 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 118.90 | 30.53 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.83   | 67.01  | 15.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.91   | 68.15  | 16.11 |      | 150.0 |         |
|           |                                                     | Z | 1.80   | 66.92  | 15.21 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.79   | 66.97  | 15.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.88   | 68.14  | 16.10 |      | 150.0 |         |
|           |                                                     | Z | 1.76   | 66.87  | 15.18 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 20.23  | 105.10 | 36.53 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 28.70  | 114.68 | 39.91 |      | 60.0  |         |
|           |                                                     | Z | 20.06  | 105.38 | 36.67 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.16   | 69.99  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.31   | 71.03  | 17.06 |      | 150.0 |         |
|           |                                                     | Z | 3.09   | 69.73  | 16.33 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.32   | 67.51  | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.38   | 68.00  | 16.23 |      | 150.0 |         |
|           |                                                     | Z | 3.27   | 67.36  | 15.78 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.43   | 67.46  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.47   | 67.89  | 16.28 |      | 150.0 |         |
|           |                                                     | Z | 3.37   | 67.33  | 15.88 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 8.65   | 78.54  | 21.48 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.85   | 79.12  | 21.77 |      | 65.0  |         |
|           |                                                     | Z | 8.48   | 78.45  | 21.46 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.46   | 76.91  | 21.67 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.66   | 77.60  | 22.06 |      | 65.0  |         |
|           |                                                     | Z | 8.34   | 76.89  | 21.66 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 7.58   | 74.70  | 20.99 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.79   | 75.45  | 21.40 |      | 65.0  |         |
|           |                                                     | Z | 7.31   | 74.25  | 20.79 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.79   | 69.24  | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.91   | 70.28  | 16.91 |      | 150.0 |         |
|           |                                                     | Z | 2.71   | 69.00  | 16.16 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.98   | 67.28  | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.03   | 67.83  | 16.15 |      | 150.0 |         |
|           |                                                     | Z | 2.92   | 67.15  | 15.65 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.28   | 68.31  | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.39   | 69.47  | 16.63 |      | 150.0 |         |
|           |                                                     | Z | 2.21   | 68.09  | 15.75 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.66   | 67.75  | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.72   | 68.40  | 16.37 |      | 150.0 |         |
|           |                                                     | Z | 2.60   | 67.66  | 15.80 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.11 | 67.26 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.15 | 67.75 | 16.17 |      | 150.0 |         |
|           |                                                | Z | 3.05 | 67.15 | 15.72 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.82 | 67.88 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.87 | 68.46 | 16.46 |      | 150.0 |         |
|           |                                                | Z | 2.76 | 67.81 | 15.94 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.24 | 67.28 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.25 | 67.46 | 16.63 |      | 150.0 |         |
|           |                                                | Z | 5.20 | 67.29 | 16.46 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.61 | 67.64 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.61 | 67.79 | 16.81 |      | 150.0 |         |
|           |                                                | Z | 5.52 | 67.52 | 16.58 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.36 | 67.55 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.37 | 67.74 | 16.69 |      | 150.0 |         |
|           |                                                | Z | 5.32 | 67.53 | 16.51 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.22 | 67.23 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.23 | 67.39 | 16.61 |      | 150.0 |         |
|           |                                                | Z | 5.17 | 67.16 | 16.41 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.69 | 67.85 | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.70 | 68.02 | 16.93 |      | 150.0 |         |
|           |                                                | Z | 5.63 | 67.79 | 16.73 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.34 | 67.49 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.35 | 67.67 | 16.67 |      | 150.0 |         |
|           |                                                | Z | 5.29 | 67.47 | 16.49 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.47 | 67.47 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.51 | 67.91 | 16.21 |      | 150.0 |         |
|           |                                                | Z | 3.41 | 67.34 | 15.80 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.59 | 67.54 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.63 | 67.94 | 16.35 |      | 150.0 |         |
|           |                                                | Z | 3.53 | 67.43 | 15.97 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.05 | 68.16 | 15.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.17 | 69.48 | 16.39 |      | 150.0 |         |
|           |                                                | Z | 1.97 | 67.92 | 15.36 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.51 | 68.28 | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.59 | 69.11 | 16.17 |      | 150.0 |         |
|           |                                                | Z | 2.43 | 68.15 | 15.43 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.35 | 66.54 | 14.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.42 | 67.28 | 14.84 |      | 150.0 |         |
|           |                                                | Z | 2.27 | 66.32 | 14.07 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.37 | 65.72 | 12.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.46 | 66.99 | 13.37 |      | 150.0 |         |
|           |                                                | Z | 1.25 | 64.89 | 11.82 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 3.11 | 71.69 | 15.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.87 | 74.93 | 16.48 |      | 150.0 |         |
|           |                                                | Z | 2.20 | 67.57 | 12.72 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 3.99 | 75.14 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.26 | 79.21 | 18.27 |      | 150.0 |         |
|           |                                                | Z | 2.59 | 69.69 | 13.85 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.99 | 67.34 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.04 | 67.88 | 16.19 |      | 150.0 |         |
|           |                                            | Z | 2.93 | 67.20 | 15.70 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.11 | 67.30 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.16 | 67.79 | 16.21 |      | 150.0 |         |
|           |                                            | Z | 3.05 | 67.19 | 15.76 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 9.14 | 80.78 | 22.44 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 9.49 | 81.66 | 22.85 |      | 65.0  |         |
|           |                                            | Z | 9.14 | 81.08 | 22.55 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.08 | 77.12 | 21.52 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.33 | 77.95 | 21.96 |      | 65.0  |         |
|           |                                            | Z | 7.95 | 77.09 | 21.46 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.46 | 77.89 | 22.17 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.68 | 78.63 | 22.56 |      | 65.0  |         |
|           |                                            | Z | 8.36 | 77.94 | 22.15 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.33 | 68.67 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.44 | 69.83 | 16.86 |      | 150.0 |         |
|           |                                            | Z | 2.25 | 68.43 | 15.98 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.66 | 67.76 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.72 | 68.41 | 16.38 |      | 150.0 |         |
|           |                                            | Z | 2.60 | 67.68 | 15.82 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.90 | 68.21 | 15.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.03 | 69.70 | 16.30 |      | 150.0 |         |
|           |                                            | Z | 1.81 | 67.89 | 15.12 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.18 | 67.00 | 14.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.26 | 67.93 | 14.96 |      | 150.0 |         |
|           |                                            | Z | 2.09 | 66.73 | 14.04 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.82 | 67.92 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.87 | 68.51 | 16.50 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 67.86 | 15.98 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.28 | 67.39 | 14.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.36 | 68.28 | 15.19 |      | 150.0 |         |
|           |                                            | Z | 2.18 | 67.11 | 14.29 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.82 | 68.45 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.91 | 69.30 | 16.70 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 68.35 | 16.07 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.01 | 67.20 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.05 | 67.71 | 16.14 |      | 150.0 |         |
|           |                                            | Z | 2.95 | 67.10 | 15.68 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.11 | 67.31 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.16 | 67.80 | 16.23 |      | 150.0 |         |
|           |                                            | Z | 3.06 | 67.24 | 15.78 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.96 | 70.63 | 19.76 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.08 | 71.58 | 20.41 |      | 150.0 |         |
|           |                                            | Z | 3.69 | 69.63 | 19.19 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.16 | 74.36 | 20.54 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.47 | 75.92 | 21.41 |      | 150.0 |         |
|           |                                            | Z | 4.54 | 72.52 | 19.67 |      | 150.0 |         |

|           |                                            |   |        |        |       |      |       |         |
|-----------|--------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.71   | 76.55  | 21.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.04   | 78.08  | 22.60 |      | 150.0 |         |
|           |                                            | Z | 4.98   | 74.53  | 20.87 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.56   | 71.66  | 20.23 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.72   | 73.10  | 21.16 |      | 150.0 |         |
|           |                                            | Z | 3.12   | 69.36  | 19.09 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 5.50   | 79.49  | 23.11 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.14   | 82.25  | 24.43 |      | 150.0 |         |
|           |                                            | Z | 4.23   | 74.96  | 21.26 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 4.39   | 74.63  | 20.21 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.87   | 77.16  | 21.52 |      | 150.0 |         |
|           |                                            | Z | 3.55   | 71.26  | 18.74 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 36.90  | 115.61 | 35.71 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 89.16  | 134.58 | 40.97 |      | 65.0  |         |
|           |                                            | Z | 21.04  | 105.02 | 32.65 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 54.93  | 117.26 | 34.23 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 100.00 | 128.92 | 37.35 |      | 65.0  |         |
|           |                                            | Z | 30.85  | 107.44 | 31.57 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 39.60  | 109.76 | 31.68 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 70.95  | 120.74 | 34.73 |      | 65.0  |         |
|           |                                            | Z | 23.48  | 101.22 | 29.25 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.51   | 71.32  | 19.98 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.68   | 72.77  | 20.92 |      | 150.0 |         |
|           |                                            | Z | 3.08   | 69.09  | 18.87 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 5.51   | 79.52  | 23.12 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.15   | 82.28  | 24.44 |      | 150.0 |         |
|           |                                            | Z | 4.23   | 74.98  | 21.27 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.54   | 71.49  | 20.08 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.71   | 72.93  | 21.01 |      | 150.0 |         |
|           |                                            | Z | 3.11   | 69.22  | 18.95 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 5.43   | 79.21  | 22.98 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.06   | 81.97  | 24.30 |      | 150.0 |         |
|           |                                            | Z | 4.19   | 74.78  | 21.16 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 4.90   | 76.90  | 21.51 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.47   | 79.59  | 22.84 |      | 150.0 |         |
|           |                                            | Z | 3.86   | 73.02  | 19.88 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 4.38   | 74.54  | 20.15 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.86   | 77.07  | 21.46 |      | 150.0 |         |
|           |                                            | Z | 3.54   | 71.20  | 18.69 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.54   | 71.47  | 20.07 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.70   | 72.91  | 21.00 |      | 150.0 |         |
|           |                                            | Z | 3.10   | 69.21  | 18.95 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 5.42   | 79.19  | 22.97 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.05   | 81.94  | 24.29 |      | 150.0 |         |
|           |                                            | Z | 4.19   | 74.76  | 21.15 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 4.37   | 74.51  | 20.14 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.85   | 77.04  | 21.45 |      | 150.0 |         |
|           |                                            | Z | 3.53   | 71.17  | 18.68 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.55 | 71.52 | 20.09 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.72 | 72.96 | 21.02 |      | 150.0 |         |
|           |                                               | Z | 3.11 | 69.25 | 18.97 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 5.45 | 79.27 | 23.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.09 | 82.03 | 24.33 |      | 150.0 |         |
|           |                                               | Z | 4.20 | 74.82 | 21.19 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 4.39 | 74.59 | 20.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.88 | 77.13 | 21.49 |      | 150.0 |         |
|           |                                               | Z | 3.55 | 71.24 | 18.71 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.56 | 71.57 | 20.15 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.73 | 73.01 | 21.08 |      | 150.0 |         |
|           |                                               | Z | 3.12 | 69.30 | 19.03 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 5.67 | 80.08 | 23.42 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.33 | 82.86 | 24.73 |      | 150.0 |         |
|           |                                               | Z | 4.33 | 75.42 | 21.53 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 4.51 | 75.09 | 20.47 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.01 | 77.67 | 21.79 |      | 150.0 |         |
|           |                                               | Z | 3.62 | 71.63 | 18.97 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.64 | 66.65 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.65 | 66.84 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.59 | 66.64 | 16.13 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.82 | 67.00 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.83 | 67.19 | 16.48 |      | 150.0 |         |
|           |                                               | Z | 4.76 | 66.96 | 16.26 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.87 | 67.02 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.87 | 67.22 | 16.49 |      | 150.0 |         |
|           |                                               | Z | 4.81 | 67.00 | 16.28 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.65 | 66.74 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.66 | 66.93 | 16.38 |      | 150.0 |         |
|           |                                               | Z | 4.59 | 66.71 | 16.15 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.84 | 67.02 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.85 | 67.22 | 16.49 |      | 150.0 |         |
|           |                                               | Z | 4.78 | 66.99 | 16.27 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.87 | 67.04 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.88 | 67.24 | 16.50 |      | 150.0 |         |
|           |                                               | Z | 4.81 | 67.01 | 16.29 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.60 | 66.74 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.61 | 66.94 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 66.71 | 16.11 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.84 | 67.00 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.84 | 67.20 | 16.48 |      | 150.0 |         |
|           |                                               | Z | 4.77 | 66.96 | 16.26 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.88 | 66.97 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.89 | 67.16 | 16.49 |      | 150.0 |         |
|           |                                               | Z | 4.82 | 66.95 | 16.28 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.20 | 67.24 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.21 | 67.41 | 16.61 |      | 150.0 |         |
|           |                                               | Z | 5.15 | 67.17 | 16.40 |      | 150.0 |         |

|           |                                           |   |        |        |       |      |       |         |
|-----------|-------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.54   | 67.51  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.54   | 67.65  | 16.76 |      | 150.0 |         |
|           |                                           | Z | 5.46   | 67.41  | 16.55 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.24   | 67.33  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.25   | 67.50  | 16.58 |      | 150.0 |         |
|           |                                           | Z | 5.19   | 67.27  | 16.38 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.89   | 66.01  | 15.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.91   | 66.41  | 15.64 |      | 150.0 |         |
|           |                                           | Z | 2.83   | 65.96  | 15.20 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 60.00  | 119.05 | 34.79 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 129.10 | 37.47 |      | 65.0  |         |
|           |                                           | Z | 33.08  | 108.86 | 32.05 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 44.36  | 111.89 | 32.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 77.77  | 122.52 | 35.25 |      | 65.0  |         |
|           |                                           | Z | 27.85  | 104.26 | 30.19 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 40.71  | 118.07 | 36.50 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 92.59  | 135.95 | 41.44 |      | 65.0  |         |
|           |                                           | Z | 26.22  | 109.78 | 34.13 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 54.96  | 117.26 | 34.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 128.91 | 37.35 |      | 65.0  |         |
|           |                                           | Z | 30.93  | 107.47 | 31.58 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 41.37  | 110.53 | 31.89 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 71.92  | 120.98 | 34.79 |      | 65.0  |         |
|           |                                           | Z | 26.25  | 103.12 | 29.80 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 37.97  | 116.54 | 36.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 84.76  | 133.97 | 40.88 |      | 65.0  |         |
|           |                                           | Z | 24.71  | 108.49 | 33.69 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 54.99  | 117.28 | 34.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 128.92 | 37.35 |      | 65.0  |         |
|           |                                           | Z | 30.92  | 107.48 | 31.58 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 41.40  | 110.55 | 31.90 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 72.14  | 121.04 | 34.81 |      | 65.0  |         |
|           |                                           | Z | 26.24  | 103.13 | 29.80 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 35.49  | 114.97 | 35.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 77.34  | 131.82 | 40.23 |      | 65.0  |         |
|           |                                           | Z | 23.39  | 107.20 | 33.21 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 55.28  | 117.39 | 34.27 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 128.93 | 37.36 |      | 65.0  |         |
|           |                                           | Z | 31.03  | 107.56 | 31.61 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 41.91  | 110.74 | 31.95 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 73.33  | 121.30 | 34.87 |      | 65.0  |         |
|           |                                           | Z | 26.52  | 103.28 | 29.84 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 38.41  | 116.80 | 36.08 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 86.80  | 134.49 | 41.01 |      | 65.0  |         |
|           |                                           | Z | 24.91  | 108.68 | 33.74 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 55.05  | 117.31 | 34.25 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 100.00 | 128.93 | 37.35 |      | 65.0  |         |
|           |                                           | Z | 30.91  | 107.49 | 31.58 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 41.42 | 110.58 | 31.91 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 72.33 | 121.11 | 34.83 |      | 65.0 |         |
|           |                                            | Z | 26.22 | 103.13 | 29.80 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 38.25 | 116.72 | 36.05 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 86.28 | 134.37 | 40.98 |      | 65.0 |         |
|           |                                            | Z | 24.82 | 108.62 | 33.73 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 12.92 | 88.42  | 28.30 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 14.47 | 91.50  | 29.64 |      | 65.0 |         |
|           |                                            | Z | 11.71 | 86.68  | 27.54 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 12.30 | 87.28  | 27.78 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 13.91 | 90.55  | 29.21 |      | 65.0 |         |
|           |                                            | Z | 10.78 | 84.84  | 26.74 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 9.57  | 83.58  | 27.27 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.70 | 86.76  | 28.80 |      | 65.0 |         |
|           |                                            | Z | 8.63  | 81.57  | 26.33 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 9.97  | 81.73  | 21.53 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.43 | 82.64  | 21.91 |      | 65.0 |         |
|           |                                            | Z | 8.76  | 79.58  | 20.36 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 9.75  | 81.12  | 21.26 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.17 | 81.97  | 21.61 |      | 65.0 |         |
|           |                                            | Z | 8.56  | 78.97  | 20.07 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 9.14  | 83.08  | 21.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.72  | 84.22  | 22.38 |      | 65.0 |         |
|           |                                            | Z | 8.89  | 82.67  | 21.56 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 7.53  | 77.68  | 20.47 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.73  | 78.28  | 20.74 |      | 65.0 |         |
|           |                                            | Z | 7.33  | 77.37  | 20.13 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 7.50  | 77.17  | 20.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.71  | 77.80  | 20.54 |      | 65.0 |         |
|           |                                            | Z | 7.27  | 76.81  | 19.89 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 10.17 | 85.08  | 23.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.94 | 86.52  | 23.90 |      | 65.0 |         |
|           |                                            | Z | 10.18 | 85.27  | 23.26 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 8.40  | 79.60  | 22.53 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.67  | 80.38  | 22.90 |      | 65.0 |         |
|           |                                            | Z | 8.32  | 79.67  | 22.46 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 7.96  | 77.51  | 21.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.23  | 78.35  | 21.83 |      | 65.0 |         |
|           |                                            | Z | 7.84  | 77.49  | 21.29 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 9.91  | 84.03  | 23.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.54 | 85.36  | 24.22 |      | 65.0 |         |
|           |                                            | Z | 9.99  | 84.47  | 23.78 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 7.87  | 76.54  | 21.30 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.11  | 77.33  | 21.72 |      | 65.0 |         |
|           |                                            | Z | 7.77  | 76.53  | 21.24 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.25  | 77.30  | 21.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.47  | 78.02  | 22.29 |      | 65.0 |         |
|           |                                            | Z | 8.16  | 77.35  | 21.86 |      | 65.0 |         |

|           |                                             |   |       |       |       |      |      |         |
|-----------|---------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 8.82  | 80.37 | 22.51 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.18  | 81.32 | 22.95 |      | 65.0 |         |
|           |                                             | Z | 8.82  | 80.67 | 22.60 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 8.67  | 79.06 | 19.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.00  | 79.76 | 19.98 |      | 65.0 |         |
|           |                                             | Z | 7.35  | 76.40 | 18.22 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 8.39  | 78.18 | 19.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.67  | 78.82 | 19.53 |      | 65.0 |         |
|           |                                             | Z | 7.11  | 75.57 | 17.80 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 7.67  | 79.80 | 20.11 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.97  | 80.50 | 20.36 |      | 65.0 |         |
|           |                                             | Z | 7.13  | 78.64 | 19.35 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 7.87  | 78.36 | 21.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.11  | 79.04 | 21.50 |      | 65.0 |         |
|           |                                             | Z | 7.72  | 78.21 | 20.96 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 7.88  | 78.07 | 21.09 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.10  | 78.72 | 21.39 |      | 65.0 |         |
|           |                                             | Z | 7.71  | 77.89 | 20.85 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 9.63  | 83.94 | 23.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 10.30 | 85.33 | 23.81 |      | 65.0 |         |
|           |                                             | Z | 9.64  | 84.17 | 23.22 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 8.39  | 79.56 | 22.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.66  | 80.34 | 22.86 |      | 65.0 |         |
|           |                                             | Z | 8.31  | 79.62 | 22.42 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 7.95  | 77.50 | 21.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.22  | 78.34 | 21.82 |      | 65.0 |         |
|           |                                             | Z | 7.83  | 77.47 | 21.29 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 9.83  | 83.88 | 23.59 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 10.46 | 85.22 | 24.15 |      | 65.0 |         |
|           |                                             | Z | 9.91  | 84.30 | 23.70 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.08  | 77.12 | 21.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.33  | 77.96 | 21.96 |      | 65.0 |         |
|           |                                             | Z | 7.95  | 77.09 | 21.47 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.45  | 77.88 | 22.16 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.68  | 78.62 | 22.55 |      | 65.0 |         |
|           |                                             | Z | 8.36  | 77.93 | 22.14 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 9.12  | 80.75 | 22.43 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.47  | 81.62 | 22.84 |      | 65.0 |         |
|           |                                             | Z | 9.12  | 81.04 | 22.54 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.54  | 76.63 | 21.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.73  | 77.26 | 22.04 |      | 65.0 |         |
|           |                                             | Z | 8.44  | 76.63 | 21.67 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.47  | 76.21 | 21.58 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.64  | 76.83 | 21.94 |      | 65.0 |         |
|           |                                             | Z | 8.37  | 76.22 | 21.56 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 8.62  | 78.00 | 21.50 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.81  | 78.56 | 21.80 |      | 65.0 |         |
|           |                                             | Z | 8.57  | 78.16 | 21.57 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.63  | 66.22 | 15.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.68  | 66.76 | 15.56 |      | 150.0 |         |
|           |                                                                    | Z | 2.60  | 66.20 | 15.05 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.63  | 67.34 | 15.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.75  | 68.91 | 16.21 |      | 150.0 |         |
|           |                                                                    | Z | 1.59  | 67.10 | 15.04 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 5.23  | 69.17 | 13.58 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.23  | 69.14 | 13.54 |      | 50.0  |         |
|           |                                                                    | Z | 4.94  | 68.42 | 12.95 |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 9.44  | 80.92 | 21.03 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.27  | 80.52 | 20.82 |      | 50.0  |         |
|           |                                                                    | Z | 8.80  | 79.60 | 20.21 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 9.60  | 81.11 | 21.12 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.45  | 80.75 | 20.93 |      | 50.0  |         |
|           |                                                                    | Z | 8.93  | 79.76 | 20.30 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.49  | 68.14 | 14.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.71  | 70.53 | 15.29 |      | 150.0 |         |
|           |                                                                    | Z | 1.38  | 67.47 | 13.43 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.87  | 65.35 | 12.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.98  | 67.67 | 13.90 |      | 150.0 |         |
|           |                                                                    | Z | 0.81  | 64.81 | 11.96 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.01  | 68.28 | 14.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.28  | 72.37 | 16.47 |      | 150.0 |         |
|           |                                                                    | Z | 0.94  | 67.61 | 13.77 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 1.31  | 72.09 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.86  | 78.07 | 19.28 |      | 150.0 |         |
|           |                                                                    | Z | 1.24  | 71.48 | 16.00 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 11.68 | 86.43 | 25.21 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 12.34 | 87.51 | 25.61 |      | 50.0  |         |
|           |                                                                    | Z | 12.30 | 87.31 | 25.27 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.80  | 69.32 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.92  | 70.37 | 16.97 |      | 150.0 |         |
|           |                                                                    | Z | 2.72  | 69.08 | 16.22 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.65  | 67.43 | 14.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.78  | 69.00 | 15.16 |      | 150.0 |         |
|           |                                                                    | Z | 1.54  | 66.87 | 13.72 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 3.71  | 73.80 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.50  | 76.98 | 18.19 |      | 150.0 |         |
|           |                                                                    | Z | 2.80  | 70.24 | 14.88 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 2.66  | 68.22 | 13.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.97  | 70.07 | 14.57 |      | 150.0 |         |
|           |                                                                    | Z | 2.16  | 65.95 | 12.13 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 5.56  | 67.67 | 18.53 | 4.17 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.78  | 68.72 | 19.18 |      | 80.0  |         |
|           |                                                                    | Z | 5.51  | 67.68 | 18.44 |      | 80.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 6.08  | 68.43 | 19.36 | 4.96 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 6.31  | 69.64 | 20.14 |      | 80.0  |         |
|           |                                                                    | Z | 6.00  | 68.40 | 19.26 |      | 80.0  |         |

|           |                                                                     |   |       |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.91  | 68.44 | 19.38 | 4.96  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.17  | 69.77 | 20.23 |       | 80.0  |         |
|           |                                                                     | Z | 5.83  | 68.37 | 19.25 |       | 80.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.57  | 67.76 | 18.57 | 4.17  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.77  | 68.85 | 19.27 |       | 80.0  |         |
|           |                                                                     | Z | 5.49  | 67.73 | 18.47 |       | 80.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 7.72  | 78.82 | 24.99 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 9.80  | 85.05 | 27.90 |       | 50.0  |         |
|           |                                                                     | Z | 7.68  | 78.78 | 24.73 |       | 50.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 6.19  | 70.81 | 21.17 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.78  | 73.45 | 22.69 |       | 50.0  |         |
|           |                                                                     | Z | 6.09  | 70.68 | 20.96 |       | 50.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 6.23  | 71.39 | 21.28 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.93  | 74.34 | 22.91 |       | 50.0  |         |
|           |                                                                     | Z | 6.66  | 74.17 | 22.78 |       | 50.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 6.84  | 74.87 | 23.29 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 7.04  | 74.94 | 23.20 |       | 50.0  |         |
|           |                                                                     | Z | 6.77  | 74.83 | 23.10 |       | 50.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 6.29  | 71.13 | 21.36 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.92  | 73.87 | 22.92 |       | 50.0  |         |
|           |                                                                     | Z | 6.18  | 70.98 | 21.13 |       | 50.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 6.19  | 71.01 | 21.18 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.82  | 73.78 | 22.75 |       | 50.0  |         |
|           |                                                                     | Z | 6.55  | 73.55 | 22.58 |       | 50.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.15  | 68.64 | 16.01 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.28  | 69.57 | 16.56 |       | 150.0 |         |
|           |                                                                     | Z | 3.07  | 68.40 | 15.89 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 7.93  | 80.00 | 19.43 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 8.50  | 81.06 | 19.83 |       | 70.0  |         |
|           |                                                                     | Z | 7.91  | 80.08 | 19.40 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 10.36 | 86.77 | 24.35 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 11.09 | 87.90 | 24.72 |       | 30.0  |         |
|           |                                                                     | Z | 10.57 | 87.37 | 24.52 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.16  | 64.08 | 15.18 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.19  | 64.95 | 15.92 |       | 150.0 |         |
|           |                                                                     | Z | 1.15  | 63.96 | 15.05 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.74  | 66.85 | 16.40 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75  | 67.05 | 16.58 |       | 150.0 |         |
|           |                                                                     | Z | 4.69  | 66.84 | 16.36 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.74  | 66.85 | 16.40 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75  | 67.05 | 16.58 |       | 150.0 |         |
|           |                                                                     | Z | 4.69  | 66.84 | 16.36 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.83  | 67.07 | 16.30 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.84  | 67.29 | 16.50 |       | 150.0 |         |
|           |                                                                     | Z | 4.76  | 67.04 | 16.26 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.51  | 67.29 | 16.49 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.53  | 67.49 | 16.67 |       | 150.0 |         |
|           |                                                                     | Z | 5.49  | 67.36 | 16.51 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.79   | 67.69  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.79   | 67.83  | 16.67 |      | 150.0 |         |
|           |                                                                                | Z | 5.72   | 67.60  | 16.48 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 1.49   | 68.14  | 14.07 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.71   | 70.53  | 15.29 |      | 115.0 |         |
|           |                                                                                | Z | 1.38   | 67.47  | 13.43 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 1.49   | 68.14  | 14.07 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.71   | 70.53  | 15.29 |      | 115.0 |         |
|           |                                                                                | Z | 1.38   | 67.47  | 13.43 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 122.23 | 31.08 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 122.94 | 31.38 |      | 100.0 |         |
|           |                                                                                | Z | 21.98  | 102.39 | 26.35 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 100.00 | 121.68 | 31.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 122.54 | 31.65 |      | 80.0  |         |
|           |                                                                                | Z | 100.00 | 121.97 | 31.19 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.03   | 62.73  | 14.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.04   | 63.46  | 15.05 |      | 150.0 |         |
|           |                                                                                | Z | 1.02   | 62.64  | 14.23 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.64   | 66.69  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.65   | 66.89  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.59   | 66.68  | 16.20 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.64   | 66.69  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.65   | 66.89  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.59   | 66.68  | 16.20 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.63   | 66.83  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.64   | 67.04  | 16.42 |      | 150.0 |         |
|           |                                                                                | Z | 4.58   | 66.82  | 16.21 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.65   | 66.79  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.66   | 66.99  | 16.43 |      | 150.0 |         |
|           |                                                                                | Z | 4.60   | 66.78  | 16.21 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.78   | 66.81  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.78   | 67.00  | 16.45 |      | 150.0 |         |
|           |                                                                                | Z | 4.72   | 66.79  | 16.24 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.96   | 67.16  | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.97   | 67.35  | 16.58 |      | 150.0 |         |
|           |                                                                                | Z | 4.89   | 67.12  | 16.36 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.88   | 67.10  | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.88   | 67.30  | 16.54 |      | 150.0 |         |
|           |                                                                                | Z | 4.81   | 67.07  | 16.33 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.49   | 67.52  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.50   | 67.70  | 16.76 |      | 150.0 |         |
|           |                                                                                | Z | 5.44   | 67.51  | 16.58 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.49   | 67.54  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.50   | 67.71  | 16.76 |      | 150.0 |         |
|           |                                                                                | Z | 5.45   | 67.53  | 16.59 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.50   | 67.50  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.51   | 67.67  | 16.73 |      | 150.0 |         |
|           |                                                                | Z | 5.45   | 67.48  | 16.56 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.25   | 70.00  | 17.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.23   | 70.09  | 17.93 |      | 150.0 |         |
|           |                                                                | Z | 4.19   | 70.14  | 17.80 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.34   | 67.20  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.36   | 67.46  | 16.45 |      | 150.0 |         |
|           |                                                                | Z | 4.27   | 67.18  | 16.16 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.64   | 67.12  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.65   | 67.34  | 16.50 |      | 150.0 |         |
|           |                                                                | Z | 4.57   | 67.09  | 16.26 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.89   | 67.13  | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.90   | 67.33  | 16.56 |      | 150.0 |         |
|           |                                                                | Z | 4.82   | 67.10  | 16.34 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.31   | 70.67  | 17.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.30   | 70.79  | 17.87 |      | 150.0 |         |
|           |                                                                | Z | 4.25   | 70.82  | 17.71 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 121.51 | 31.18 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 122.37 | 31.57 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 121.79 | 31.11 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.63   | 67.13  | 15.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.66   | 67.50  | 15.86 |      | 150.0 |         |
|           |                                                                | Z | 3.54   | 67.07  | 15.44 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.17   | 66.96  | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.19   | 67.23  | 16.30 |      | 150.0 |         |
|           |                                                                | Z | 4.10   | 66.94  | 16.02 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.44   | 66.92  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.45   | 67.15  | 16.39 |      | 150.0 |         |
|           |                                                                | Z | 4.38   | 66.90  | 16.14 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.63   | 66.87  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.64   | 67.08  | 16.41 |      | 150.0 |         |
|           |                                                                | Z | 4.58   | 66.85  | 16.19 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.53   | 67.33  | 15.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.57   | 67.74  | 15.55 |      | 150.0 |         |
|           |                                                                | Z | 3.43   | 67.21  | 15.05 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.35   | 68.11  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.36   | 68.24  | 16.90 |      | 150.0 |         |
|           |                                                                | Z | 6.31   | 68.06  | 16.74 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.86   | 65.32  | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.86   | 65.52  | 16.13 |      | 150.0 |         |
|           |                                                                | Z | 3.83   | 65.31  | 15.89 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.37   | 66.71  | 14.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.41   | 67.16  | 15.08 |      | 150.0 |         |
|           |                                                                | Z | 3.26   | 66.61  | 14.51 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.52   | 65.23  | 15.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.60   | 65.75  | 16.11 |      | 150.0 |         |
|           |                                                                | Z | 4.38   | 65.07  | 15.54 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.89   | 66.92  | 15.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.01   | 69.93  | 17.18 |      | 150.0 |         |
|           |                                                                   | Z | 0.86   | 66.57  | 15.06 |      | 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 | 125.62 | 33.15 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 127.39 | 33.94 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.16 | 32.74 |      | 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 | 110.62 | 25.96 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.65 | 26.39 |      | 80.0  |         |
|           |                                                                   | Z | 84.76  | 108.06 | 25.05 |      | 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 | 107.62 | 24.51 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 108.53 | 24.89 |      | 80.0  |         |
|           |                                                                   | Z | 14.33  | 86.37  | 18.99 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.78 | 32.14 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.58 | 32.94 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.19 | 31.67 |      | 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 | 110.13 | 25.71 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.18 | 26.15 |      | 80.0  |         |
|           |                                                                   | Z | 35.58  | 97.99  | 22.58 |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 95.39  | 106.65 | 24.18 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 108.07 | 24.67 |      | 80.0  |         |
|           |                                                                   | Z | 9.21   | 81.47  | 17.50 |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.99 | 32.23 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.80 | 33.04 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.41 | 31.77 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.29 | 25.79 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.34 | 26.23 |      | 80.0  |         |
|           |                                                                   | Z | 43.78  | 100.42 | 23.20 |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 99.99  | 107.17 | 24.29 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 108.09 | 24.67 |      | 80.0  |         |
|           |                                                                   | Z | 9.38   | 81.68  | 17.56 |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 124.02 | 32.24 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.83 | 33.05 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.44 | 31.77 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.24 | 25.76 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.29 | 26.20 |      | 80.0  |         |
|           |                                                                   | Z | 43.76  | 100.38 | 23.18 |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.12 | 24.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 108.04 | 24.64 |      | 80.0  |         |
|           |                                                                   | Z | 9.36   | 81.64  | 17.53 |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.99 | 32.23 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.81 | 33.03 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 123.41 | 31.76 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.25 | 25.76 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.30 | 26.20 |      | 80.0  |         |
|           |                                                                   | Z | 42.90  | 100.17 | 23.13 |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 99.25  | 107.05 | 24.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 108.06 | 24.65 |      | 80.0  |         |
|           |                                                                   | Z | 9.24   | 81.52  | 17.50 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 110.09 | 25.68 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 111.14 | 26.12 |      | 80.0 |         |
|           |                                                                     | Z | 37.23  | 98.47  | 22.68 |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 95.92  | 106.64 | 24.15 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 108.00 | 24.62 |      | 80.0 |         |
|           |                                                                     | Z | 9.13   | 81.36  | 17.44 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 15.99  | 96.17  | 26.79 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 25.94  | 104.65 | 29.40 |      | 80.0 |         |
|           |                                                                     | Z | 12.83  | 92.51  | 25.34 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 19.48  | 93.48  | 24.25 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 30.64  | 100.38 | 26.28 |      | 80.0 |         |
|           |                                                                     | Z | 12.85  | 87.46  | 22.08 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 16.00  | 89.85  | 22.83 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 23.58  | 95.63  | 24.59 |      | 80.0 |         |
|           |                                                                     | Z | 10.55  | 84.00  | 20.64 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.04   | 76.94  | 19.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.02   | 79.79  | 20.13 |      | 80.0 |         |
|           |                                                                     | Z | 4.78   | 76.30  | 18.55 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.12   | 82.48  | 20.94 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 10.77  | 85.20  | 21.94 |      | 80.0 |         |
|           |                                                                     | Z | 6.99   | 78.47  | 19.09 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 8.29   | 80.89  | 20.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.58   | 83.28  | 21.31 |      | 80.0 |         |
|           |                                                                     | Z | 6.43   | 77.10  | 18.60 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.28   | 77.72  | 20.08 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.19   | 80.50  | 21.18 |      | 80.0 |         |
|           |                                                                     | Z | 5.13   | 77.51  | 19.85 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.51   | 72.42  | 17.68 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.81   | 73.61  | 18.21 |      | 80.0 |         |
|           |                                                                     | Z | 4.36   | 72.13  | 17.34 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.47   | 71.97  | 17.49 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.74   | 73.05  | 17.98 |      | 80.0 |         |
|           |                                                                     | Z | 4.32   | 71.65  | 17.14 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.28   | 76.23  | 20.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.88   | 78.28  | 20.95 |      | 80.0 |         |
|           |                                                                     | Z | 5.13   | 76.06  | 19.94 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.61   | 71.60  | 18.35 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.82   | 72.56  | 18.83 |      | 80.0 |         |
|           |                                                                     | Z | 4.51   | 71.52  | 18.23 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.69   | 71.33  | 18.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.87   | 72.22  | 18.72 |      | 80.0 |         |
|           |                                                                     | Z | 4.59   | 71.26  | 18.14 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.21   | 74.00  | 19.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.57   | 75.36  | 19.96 |      | 80.0 |         |
|           |                                                                     | Z | 5.08   | 73.85  | 19.24 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.87   | 70.59  | 18.20 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.02   | 71.33  | 18.60 |      | 80.0 |         |
|           |                                                                     | Z | 4.77   | 70.51  | 18.12 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.93 | 70.41 | 18.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.07 | 71.11 | 18.53 |      | 80.0 |         |
|           |                                                                      | Z | 4.83 | 70.34 | 18.06 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.74 | 75.68 | 19.79 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.23 | 77.26 | 20.51 |      | 80.0 |         |
|           |                                                                      | Z | 5.57 | 75.46 | 19.70 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.94 | 71.08 | 18.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.11 | 71.86 | 18.83 |      | 80.0 |         |
|           |                                                                      | Z | 4.84 | 70.96 | 18.32 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.99 | 70.71 | 18.29 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.14 | 71.42 | 18.69 |      | 80.0 |         |
|           |                                                                      | Z | 4.89 | 70.61 | 18.21 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.95 | 73.39 | 16.94 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.59 | 75.63 | 17.82 |      | 80.0 |         |
|           |                                                                      | Z | 3.56 | 72.03 | 16.04 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.99 | 67.14 | 13.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.17 | 68.04 | 13.81 |      | 80.0 |         |
|           |                                                                      | Z | 2.58 | 65.48 | 12.27 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.90 | 66.50 | 13.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.06 | 67.30 | 13.36 |      | 80.0 |         |
|           |                                                                      | Z | 2.49 | 64.82 | 11.82 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.14 | 76.64 | 19.91 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.86 | 79.02 | 20.91 |      | 80.0 |         |
|           |                                                                      | Z | 5.00 | 76.51 | 19.75 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.55 | 72.03 | 17.90 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.80 | 73.10 | 18.41 |      | 80.0 |         |
|           |                                                                      | Z | 4.43 | 71.87 | 17.67 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.59 | 71.80 | 17.77 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.83 | 72.81 | 18.25 |      | 80.0 |         |
|           |                                                                      | Z | 4.47 | 71.64 | 17.53 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 5.22 | 76.03 | 19.96 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.81 | 78.08 | 20.86 |      | 80.0 |         |
|           |                                                                      | Z | 5.07 | 75.86 | 19.85 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.59 | 71.52 | 18.30 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.80 | 72.48 | 18.79 |      | 80.0 |         |
|           |                                                                      | Z | 4.49 | 71.43 | 18.18 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.66 | 71.24 | 18.21 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.85 | 72.13 | 18.67 |      | 80.0 |         |
|           |                                                                      | Z | 4.56 | 71.17 | 18.09 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 5.69 | 75.54 | 19.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.18 | 77.12 | 20.44 |      | 80.0 |         |
|           |                                                                      | Z | 5.52 | 75.31 | 19.63 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.93 | 71.03 | 18.37 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.09 | 71.81 | 18.80 |      | 80.0 |         |
|           |                                                                      | Z | 4.82 | 70.90 | 18.29 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.98 | 70.65 | 18.25 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.12 | 71.36 | 18.65 |      | 80.0  |         |
|           |                                                                     | Z | 4.87 | 70.54 | 18.17 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 5.75 | 73.61 | 18.99 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.04 | 74.62 | 19.49 |      | 80.0  |         |
|           |                                                                     | Z | 5.61 | 73.42 | 18.92 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.37 | 70.52 | 18.25 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.50 | 71.12 | 18.60 |      | 80.0  |         |
|           |                                                                     | Z | 5.26 | 70.38 | 18.18 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.39 | 70.20 | 18.16 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.51 | 70.76 | 18.50 |      | 80.0  |         |
|           |                                                                     | Z | 5.29 | 70.08 | 18.10 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.17 | 75.45 | 19.55 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.61 | 76.77 | 20.16 |      | 80.0  |         |
|           |                                                                     | Z | 5.99 | 75.18 | 19.45 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.29 | 70.93 | 18.40 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.44 | 71.61 | 18.78 |      | 80.0  |         |
|           |                                                                     | Z | 5.18 | 70.76 | 18.31 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.26 | 70.42 | 18.25 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.39 | 71.03 | 18.61 |      | 80.0  |         |
|           |                                                                     | Z | 5.16 | 70.27 | 18.17 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.99 | 62.88 | 14.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.01 | 63.69 | 15.14 |      | 150.0 |         |
|           |                                                                     | Z | 0.98 | 62.78 | 14.25 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.57 | 67.90 | 15.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.79 | 74.76 | 19.51 |      | 150.0 |         |
|           |                                                                     | Z | 0.54 | 67.33 | 15.34 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.83 | 64.48 | 14.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.88 | 66.11 | 16.05 |      | 150.0 |         |
|           |                                                                     | Z | 0.82 | 64.26 | 14.59 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.64 | 66.76 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.64 | 66.97 | 16.39 |      | 150.0 |         |
|           |                                                                     | Z | 4.58 | 66.75 | 16.17 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.84 | 67.04 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.85 | 67.24 | 16.53 |      | 150.0 |         |
|           |                                                                     | Z | 4.77 | 67.00 | 16.30 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.69 | 67.00 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.70 | 67.20 | 16.45 |      | 150.0 |         |
|           |                                                                     | Z | 4.62 | 66.95 | 16.22 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.62 | 66.99 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.63 | 67.20 | 16.43 |      | 150.0 |         |
|           |                                                                     | Z | 4.55 | 66.94 | 16.20 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.67 | 67.03 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.69 | 67.25 | 16.50 |      | 150.0 |         |
|           |                                                                     | Z | 4.61 | 67.03 | 16.28 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.55 | 66.89 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.56 | 67.11 | 16.34 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.88 | 16.12 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.62 | 66.97 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.63 | 67.19 | 16.48 |      | 150.0 |         |
|           |                                                            | Z | 4.56 | 66.95 | 16.25 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.59 | 65.99 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.60 | 66.20 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 4.54 | 65.98 | 15.83 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.77 | 66.38 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.79 | 66.60 | 16.20 |      | 150.0 |         |
|           |                                                            | Z | 4.71 | 66.35 | 15.98 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.69 | 66.34 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.71 | 66.56 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.30 | 15.91 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.71 | 66.36 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.72 | 66.58 | 16.18 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.32 | 15.95 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.71 | 66.36 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.72 | 66.58 | 16.18 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.32 | 15.95 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.71 | 66.48 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.73 | 66.71 | 16.20 |      | 150.0 |         |
|           |                                                            | Z | 4.64 | 66.43 | 15.96 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.56 | 66.33 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.58 | 66.56 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.50 | 66.27 | 15.89 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.72 | 66.39 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.73 | 66.61 | 16.16 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.36 | 15.93 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.24 | 66.54 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.25 | 66.71 | 16.24 |      | 150.0 |         |
|           |                                                            | Z | 5.19 | 66.49 | 16.04 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.31 | 66.70 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.33 | 66.88 | 16.31 |      | 150.0 |         |
|           |                                                            | Z | 5.26 | 66.68 | 16.13 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.18 | 66.65 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.19 | 66.84 | 16.27 |      | 150.0 |         |
|           |                                                            | Z | 5.12 | 66.60 | 16.07 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.24 | 66.63 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.25 | 66.81 | 16.26 |      | 150.0 |         |
|           |                                                            | Z | 5.19 | 66.58 | 16.06 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.35 | 66.69 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.36 | 66.87 | 16.33 |      | 150.0 |         |
|           |                                                            | Z | 5.28 | 66.62 | 16.12 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.26 | 66.66 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.27 | 66.85 | 16.34 |      | 150.0 |         |
|           |                                                            | Z | 5.21 | 66.63 | 16.14 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.23 | 66.53 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.24 | 66.71 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.18 | 66.49 | 16.06 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.39 | 66.62 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.40 | 66.79 | 16.32 |      | 150.0 |         |
|           |                                                     | Z | 5.34 | 66.57 | 16.12 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.48 | 66.66 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.49 | 66.83 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 5.42 | 66.63 | 16.18 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.54 | 66.65 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.80 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.50 | 66.61 | 16.04 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.76 | 67.11 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.77 | 67.28 | 16.40 |      | 150.0 |         |
|           |                                                     | Z | 5.71 | 67.07 | 16.23 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.63 | 66.91 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.64 | 67.07 | 16.32 |      | 150.0 |         |
|           |                                                     | Z | 5.57 | 66.84 | 16.12 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.72 | 67.00 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.72 | 67.16 | 16.35 |      | 150.0 |         |
|           |                                                     | Z | 5.65 | 66.88 | 16.14 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 6.07 | 68.22 | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.08 | 68.42 | 16.96 |      | 150.0 |         |
|           |                                                     | Z | 5.98 | 68.06 | 16.70 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.65 | 66.89 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.66 | 67.05 | 16.31 |      | 150.0 |         |
|           |                                                     | Z | 5.60 | 66.86 | 16.14 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.65 | 66.93 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.66 | 67.09 | 16.29 |      | 150.0 |         |
|           |                                                     | Z | 5.60 | 66.87 | 16.11 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.56 | 66.71 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.57 | 66.86 | 16.19 |      | 150.0 |         |
|           |                                                     | Z | 5.51 | 66.66 | 16.01 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.65 | 66.77 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.66 | 66.92 | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 5.60 | 66.70 | 16.07 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.95 | 67.04 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.96 | 67.19 | 16.31 |      | 150.0 |         |
|           |                                                     | Z | 5.91 | 66.99 | 16.15 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.09 | 67.37 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.11 | 67.53 | 16.46 |      | 150.0 |         |
|           |                                                     | Z | 6.05 | 67.32 | 16.29 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.11 | 67.40 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.12 | 67.56 | 16.47 |      | 150.0 |         |
|           |                                                     | Z | 6.07 | 67.36 | 16.30 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.08 | 67.33 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.09 | 67.48 | 16.45 |      | 150.0 |         |
|           |                                                     | Z | 6.03 | 67.26 | 16.27 |      | 150.0 |         |

|           |                                                                 |   |       |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.14  | 67.52  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.15  | 67.67  | 16.56 |      | 150.0 |         |
|           |                                                                 | Z | 6.09  | 67.43  | 16.37 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.13  | 67.34  | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.14  | 67.49  | 16.51 |      | 150.0 |         |
|           |                                                                 | Z | 6.07  | 67.26  | 16.33 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 6.05  | 67.31  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.06  | 67.47  | 16.54 |      | 150.0 |         |
|           |                                                                 | Z | 6.00  | 67.24  | 16.36 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.21  | 67.80  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.22  | 67.97  | 16.79 |      | 150.0 |         |
|           |                                                                 | Z | 6.14  | 67.67  | 16.57 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.60  | 68.52  | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.61  | 68.70  | 17.11 |      | 150.0 |         |
|           |                                                                 | Z | 6.44  | 68.18  | 16.78 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.98  | 66.92  | 16.42 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.99  | 67.12  | 16.60 |      | 150.0 |         |
|           |                                                                 | Z | 4.93  | 66.90  | 16.38 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.22  | 67.37  | 16.73 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.23  | 67.55  | 16.90 |      | 150.0 |         |
|           |                                                                 | Z | 5.16  | 67.34  | 16.69 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 5.06  | 67.23  | 16.56 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.06  | 67.43  | 16.74 |      | 150.0 |         |
|           |                                                                 | Z | 4.99  | 67.19  | 16.51 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.08  | 67.57  | 16.87 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.08  | 67.74  | 17.03 |      | 150.0 |         |
|           |                                                                 | Z | 5.01  | 67.53  | 16.84 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.98  | 67.03  | 16.35 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.99  | 67.26  | 16.56 |      | 150.0 |         |
|           |                                                                 | Z | 4.91  | 67.01  | 16.31 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 5.02  | 67.62  | 16.91 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.03  | 67.78  | 17.06 |      | 150.0 |         |
|           |                                                                 | Z | 4.97  | 67.61  | 16.89 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.07  | 67.49  | 16.86 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.07  | 67.68  | 17.03 |      | 150.0 |         |
|           |                                                                 | Z | 5.00  | 67.48  | 16.83 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.33  | 65.38  | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.37  | 66.42  | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 1.31  | 65.23  | 15.71 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.35  | 65.94  | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.40  | 67.08  | 17.03 |      | 130.0 |         |
|           |                                                                 | Z | 1.33  | 65.79  | 16.04 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 2.45  | 84.59  | 22.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 10.53 | 109.30 | 30.18 |      | 130.0 |         |
|           |                                                                 | Z | 2.23  | 83.07  | 21.66 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.51  | 71.42  | 18.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.69  | 74.14  | 20.31 |      | 130.0 |         |
|           |                                                                 | Z | 1.47  | 71.09  | 18.56 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.80 | 66.79 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.80 | 66.99 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.74 | 66.78 | 16.48 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.82 | 66.93 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 67.13 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.77 | 66.93 | 16.54 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 5.04 | 67.25 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.04 | 67.43 | 16.92 |      | 130.0 |         |
|           |                                                                 | Z | 4.97 | 67.22 | 16.71 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.93 | 67.39 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.57 | 17.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.87 | 67.36 | 16.79 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.71 | 66.78 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 67.02 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.65 | 66.73 | 16.16 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.76 | 66.79 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.05 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.69 | 66.76 | 16.18 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.83 | 67.44 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 67.63 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 4.77 | 67.41 | 16.74 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.66 | 66.56 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 66.83 | 16.26 |      | 130.0 |         |
|           |                                                                 | Z | 4.59 | 66.51 | 15.97 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.80 | 66.79 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.80 | 66.99 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.74 | 66.78 | 16.48 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.82 | 66.93 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 67.13 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.77 | 66.93 | 16.54 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 5.04 | 67.25 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.04 | 67.43 | 16.92 |      | 130.0 |         |
|           |                                                                 | Z | 4.97 | 67.22 | 16.71 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.93 | 67.39 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.57 | 17.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.87 | 67.36 | 16.79 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.71 | 66.78 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 67.02 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.65 | 66.73 | 16.16 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.76 | 66.79 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.05 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.69 | 66.76 | 16.18 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.83 | 67.44 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 67.63 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 4.77 | 67.41 | 16.74 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.66 | 66.56 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 66.83 | 16.26 |      | 130.0 |         |
|           |                                                                 | Z | 4.59 | 66.51 | 15.97 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.94 | 66.84 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.95 | 67.02 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 4.89 | 66.83 | 16.58 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.11 | 67.18 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.11 | 67.36 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.05 | 67.16 | 16.71 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 5.04 | 67.12 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.04 | 67.31 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 4.97 | 67.08 | 16.60 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 5.09 | 67.26 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.09 | 67.44 | 16.95 |      | 130.0 |         |
|           |                                                       | Z | 5.02 | 67.24 | 16.74 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 5.06 | 67.23 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.07 | 67.42 | 16.86 |      | 130.0 |         |
|           |                                                       | Z | 4.99 | 67.20 | 16.64 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 5.00 | 67.23 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.01 | 67.44 | 16.87 |      | 130.0 |         |
|           |                                                       | Z | 4.93 | 67.20 | 16.65 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.95 | 67.15 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.96 | 67.36 | 16.77 |      | 130.0 |         |
|           |                                                       | Z | 4.88 | 67.11 | 16.54 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.92 | 67.37 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 67.55 | 16.99 |      | 130.0 |         |
|           |                                                       | Z | 4.86 | 67.32 | 16.78 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.62 | 67.44 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.62 | 67.59 | 16.99 |      | 130.0 |         |
|           |                                                       | Z | 5.57 | 67.41 | 16.81 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.83 | 68.08 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.83 | 68.26 | 17.31 |      | 130.0 |         |
|           |                                                       | Z | 5.75 | 67.98 | 17.08 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.67 | 67.70 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.68 | 67.87 | 17.12 |      | 130.0 |         |
|           |                                                       | Z | 5.61 | 67.65 | 16.92 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.76 | 67.70 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.77 | 67.88 | 17.05 |      | 130.0 |         |
|           |                                                       | Z | 5.71 | 67.69 | 16.87 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.83 | 67.96 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.84 | 68.14 | 17.30 |      | 130.0 |         |
|           |                                                       | Z | 5.78 | 67.93 | 17.11 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.62 | 67.40 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.63 | 67.56 | 17.00 |      | 130.0 |         |
|           |                                                       | Z | 5.57 | 67.37 | 16.81 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.75 | 67.79 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.76 | 67.98 | 17.22 |      | 130.0 |         |
|           |                                                       | Z | 5.71 | 67.80 | 17.04 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.50 | 67.17 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.51 | 67.36 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 5.45 | 67.15 | 16.57 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.77 | 66.11 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.31 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 4.72 | 66.10 | 16.17 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.97 | 66.53 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.98 | 66.73 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 4.91 | 66.51 | 16.34 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.86 | 66.39 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.87 | 66.61 | 16.41 |      | 130.0 |         |
|           |                                                   | Z | 4.80 | 66.37 | 16.19 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.91 | 66.54 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.92 | 66.75 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 4.85 | 66.52 | 16.34 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.83 | 66.37 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.84 | 66.58 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 4.77 | 66.34 | 16.20 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.85 | 66.53 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.86 | 66.77 | 16.48 |      | 130.0 |         |
|           |                                                   | Z | 4.78 | 66.50 | 16.25 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.86 | 66.45 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.87 | 66.68 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 4.79 | 66.40 | 16.14 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.79 | 66.59 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.80 | 66.80 | 16.57 |      | 130.0 |         |
|           |                                                   | Z | 4.72 | 66.55 | 16.34 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.84 | 66.22 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.85 | 66.46 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 4.77 | 66.19 | 15.99 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.43 | 66.66 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.44 | 66.83 | 16.58 |      | 130.0 |         |
|           |                                                   | Z | 5.38 | 66.62 | 16.39 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.49 | 66.80 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.50 | 66.99 | 16.63 |      | 130.0 |         |
|           |                                                   | Z | 5.45 | 66.83 | 16.47 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.38 | 66.84 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.39 | 67.01 | 16.65 |      | 130.0 |         |
|           |                                                   | Z | 5.33 | 66.80 | 16.47 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.41 | 66.69 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.88 | 16.53 |      | 130.0 |         |
|           |                                                   | Z | 5.36 | 66.66 | 16.34 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.51 | 66.76 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.52 | 66.94 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 5.45 | 66.69 | 16.40 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.49 | 66.80 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.49 | 66.95 | 16.72 |      | 130.0 |         |
|           |                                                   | Z | 5.43 | 66.76 | 16.55 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.50 | 66.97 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.51 | 67.14 | 16.81 |      | 130.0 |         |
|           |                                                   | Z | 5.46 | 66.96 | 16.64 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.38 | 66.52 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.39 | 66.70 | 16.48 |      | 130.0 |         |
|           |                                                     | Z | 5.33 | 66.49 | 16.29 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.58 | 66.73 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.59 | 66.90 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 5.52 | 66.69 | 16.46 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 6.03 | 67.94 | 17.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.04 | 68.15 | 17.32 |      | 130.0 |         |
|           |                                                     | Z | 5.94 | 67.84 | 17.08 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.70 | 66.70 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.71 | 66.85 | 16.51 |      | 130.0 |         |
|           |                                                     | Z | 5.66 | 66.67 | 16.35 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 5.98 | 67.34 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.99 | 67.51 | 16.80 |      | 130.0 |         |
|           |                                                     | Z | 5.93 | 67.32 | 16.64 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.76 | 66.88 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.78 | 67.04 | 16.51 |      | 130.0 |         |
|           |                                                     | Z | 5.72 | 66.82 | 16.32 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.85 | 66.94 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.86 | 67.11 | 16.54 |      | 130.0 |         |
|           |                                                     | Z | 5.81 | 66.93 | 16.37 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.47 | 68.96 | 17.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.50 | 69.20 | 17.59 |      | 130.0 |         |
|           |                                                     | Z | 6.37 | 68.78 | 17.30 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 6.25 | 68.39 | 17.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.25 | 68.53 | 17.42 |      | 130.0 |         |
|           |                                                     | Z | 6.15 | 68.22 | 17.20 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 5.93 | 67.33 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.93 | 67.47 | 16.90 |      | 130.0 |         |
|           |                                                     | Z | 5.89 | 67.32 | 16.77 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.83 | 67.02 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.83 | 67.17 | 16.59 |      | 130.0 |         |
|           |                                                     | Z | 5.76 | 66.93 | 16.40 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.80 | 67.01 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.81 | 67.15 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 5.75 | 66.94 | 16.47 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.71 | 66.44 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.72 | 66.63 | 16.15 |      | 130.0 |         |
|           |                                                     | Z | 5.64 | 66.35 | 15.92 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.12 | 67.11 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.13 | 67.25 | 16.62 |      | 130.0 |         |
|           |                                                     | Z | 6.09 | 67.07 | 16.46 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.30 | 67.52 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.31 | 67.68 | 16.81 |      | 130.0 |         |
|           |                                                     | Z | 6.26 | 67.49 | 16.65 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.30 | 67.50 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.31 | 67.65 | 16.78 |      | 130.0 |         |
|           |                                                     | Z | 6.26 | 67.46 | 16.61 |      | 130.0 |         |

|           |                                                        |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.28   | 67.46  | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.28   | 67.59  | 16.79 |      | 130.0 |         |
|           |                                                        | Z | 6.23   | 67.38  | 16.62 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.30   | 67.54  | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.31   | 67.70  | 16.79 |      | 130.0 |         |
|           |                                                        | Z | 6.24   | 67.43  | 16.59 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.31   | 67.32  | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.32   | 67.48  | 16.70 |      | 130.0 |         |
|           |                                                        | Z | 6.28   | 67.31  | 16.54 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.36   | 67.59  | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.36   | 67.71  | 16.97 |      | 130.0 |         |
|           |                                                        | Z | 6.31   | 67.52  | 16.81 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.20   | 67.31  | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.21   | 67.47  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.16   | 67.26  | 16.58 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.42   | 67.97  | 16.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.43   | 68.15  | 17.13 |      | 130.0 |         |
|           |                                                        | Z | 6.34   | 67.82  | 16.88 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.93   | 69.02  | 17.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.97   | 69.27  | 17.65 |      | 130.0 |         |
|           |                                                        | Z | 6.82   | 68.81  | 17.34 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 47.20  | 124.94 | 41.34 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 143.87 | 46.72 |      | 60.0  |         |
|           |                                                        | Z | 42.87  | 123.31 | 40.85 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 47.80  | 126.16 | 41.84 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 144.94 | 47.17 |      | 60.0  |         |
|           |                                                        | Z | 42.80  | 124.20 | 41.27 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.75   | 63.57  | 11.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.80   | 64.99  | 12.02 |      | 150.0 |         |
|           |                                                        | Z | 0.70   | 63.11  | 10.54 |      | 150.0 |         |

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA  
 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **EX3-3914\_Feb17**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3914**

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

*BN ✓  
 03-01-2017*

Calibration date: **February 13, 2017**

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       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| 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-16) | In house check: Oct-17 |

|                                                                                                                 |                               |                                          |                           |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------|---------------------------|
| Calibrated by:                                                                                                  | Name<br><b>Jeton Kastrati</b> | Function<br><b>Laboratory Technician</b> | Signature<br>             |
| Approved by:                                                                                                    | Name<br><b>Katja Pokovic</b>  | Function<br><b>Technical Manager</b>     | Signature<br>             |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                               |                                          | Issued: February 13, 2017 |



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

### Glossary:

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

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

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

### Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub> = NORM<sub>x,y,z</sub> \* frequency\_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>; A, B, C, D** are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

# Probe EX3DV4

## SN:3914

Manufactured: December 18, 2012  
Calibrated: February 13, 2017

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

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

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.46     | 0.41     | 0.44     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 98.6     | 102.5    | 103.7    |               |

### 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    | 156.6    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 139.0    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 149.0    |                           |

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 | 46.19    | 344.3    | 35.58                       | 12.88                               | 0.995                               | 4.971    | 0.985                 | 0.325                 | 1.004 |
| Y | 48.34    | 356      | 34.87                       | 12.19                               | 1.102                               | 4.961    | 0.683                 | 0.315                 | 1.003 |
| Z | 44.31    | 328.7    | 35.26                       | 10.14                               | 1.122                               | 4.975    | 1.527                 | 0.227                 | 1.005 |

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

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

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

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

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

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 6                    | 55.5                               | 0.75                            | 21.32   | 21.32   | 21.32   | 0.00               | 1.00                    | ± 13.3 %  |
| 13                   | 55.5                               | 0.75                            | 17.87   | 17.87   | 17.87   | 0.00               | 1.00                    | ± 13.3 %  |
| 5250                 | 35.9                               | 4.71                            | 5.49    | 5.49    | 5.49    | 0.30               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.94    | 4.94    | 4.94    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.91    | 4.91    | 4.91    | 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:3914

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 9.98    | 9.98    | 9.98    | 0.45               | 0.88                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.73    | 9.73    | 9.73    | 0.40               | 0.88                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.01    | 8.01    | 8.01    | 0.32               | 1.02                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.75    | 7.75    | 7.75    | 0.34               | 0.95                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.56    | 7.56    | 7.56    | 0.44               | 0.80                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.45    | 7.45    | 7.45    | 0.35               | 0.90                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.24    | 7.24    | 7.24    | 0.29               | 0.95                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.78    | 4.78    | 4.78    | 0.40               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.07    | 4.07    | 4.07    | 0.45               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.15    | 4.15    | 4.15    | 0.50               | 1.90                    | ± 13.1 %  |

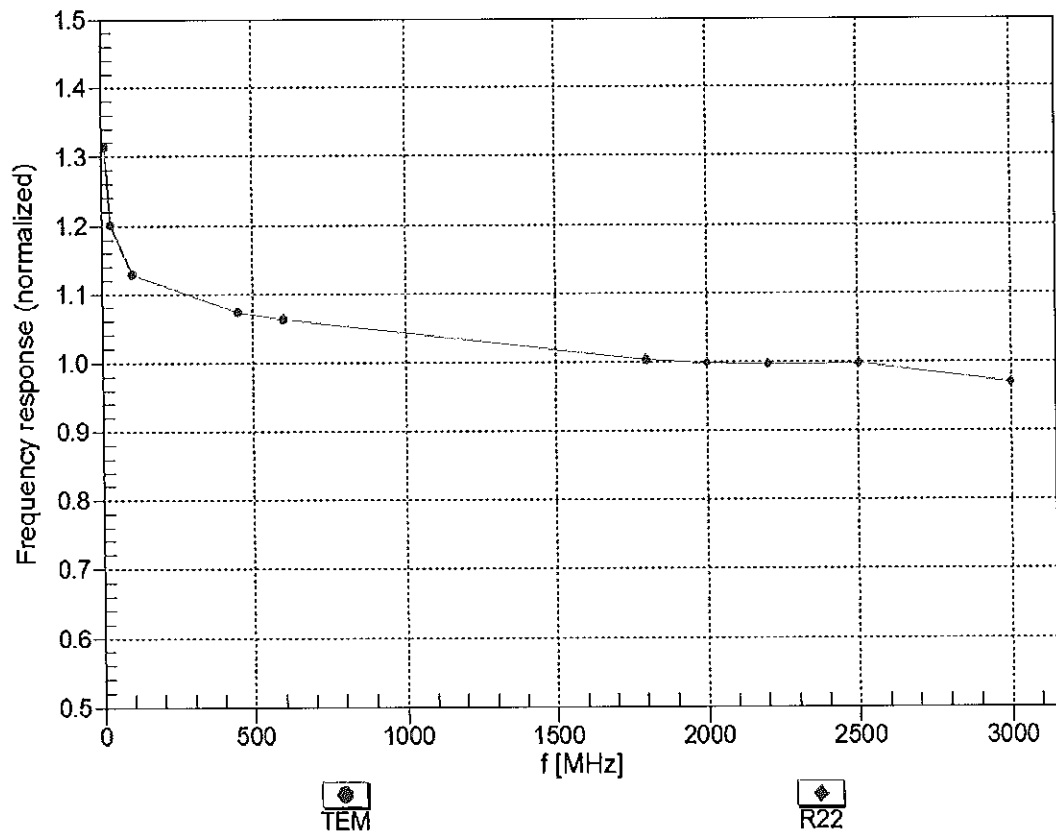
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

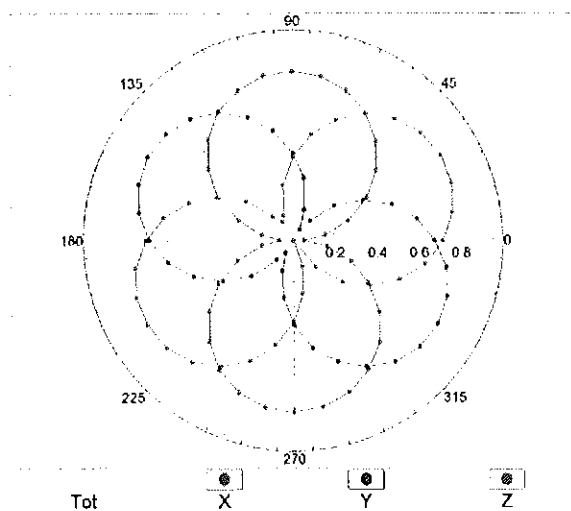
(TEM-Cell:ifi110 EXX, Waveguide: R22)



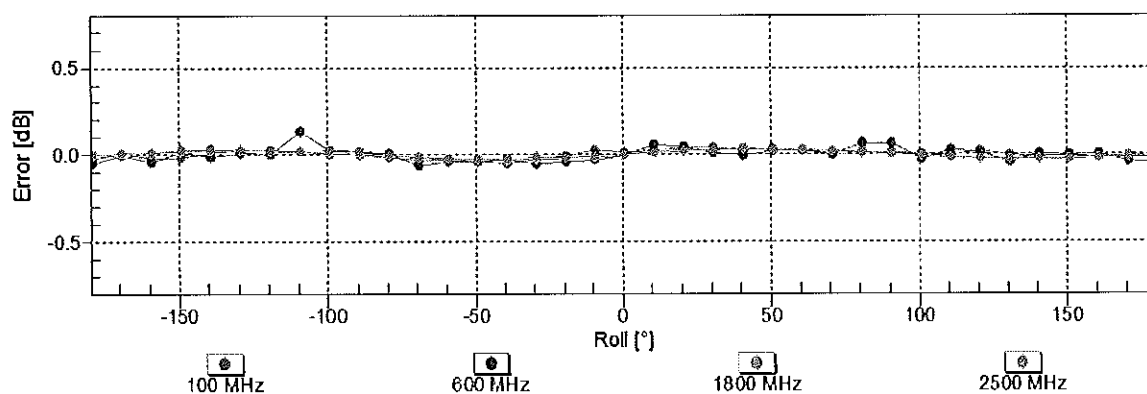
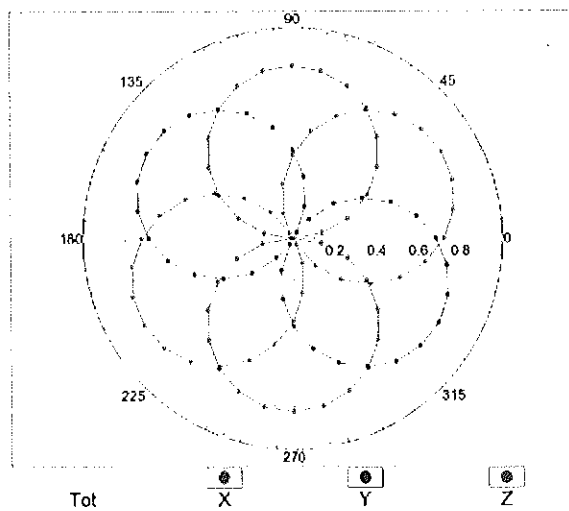
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz, TEM

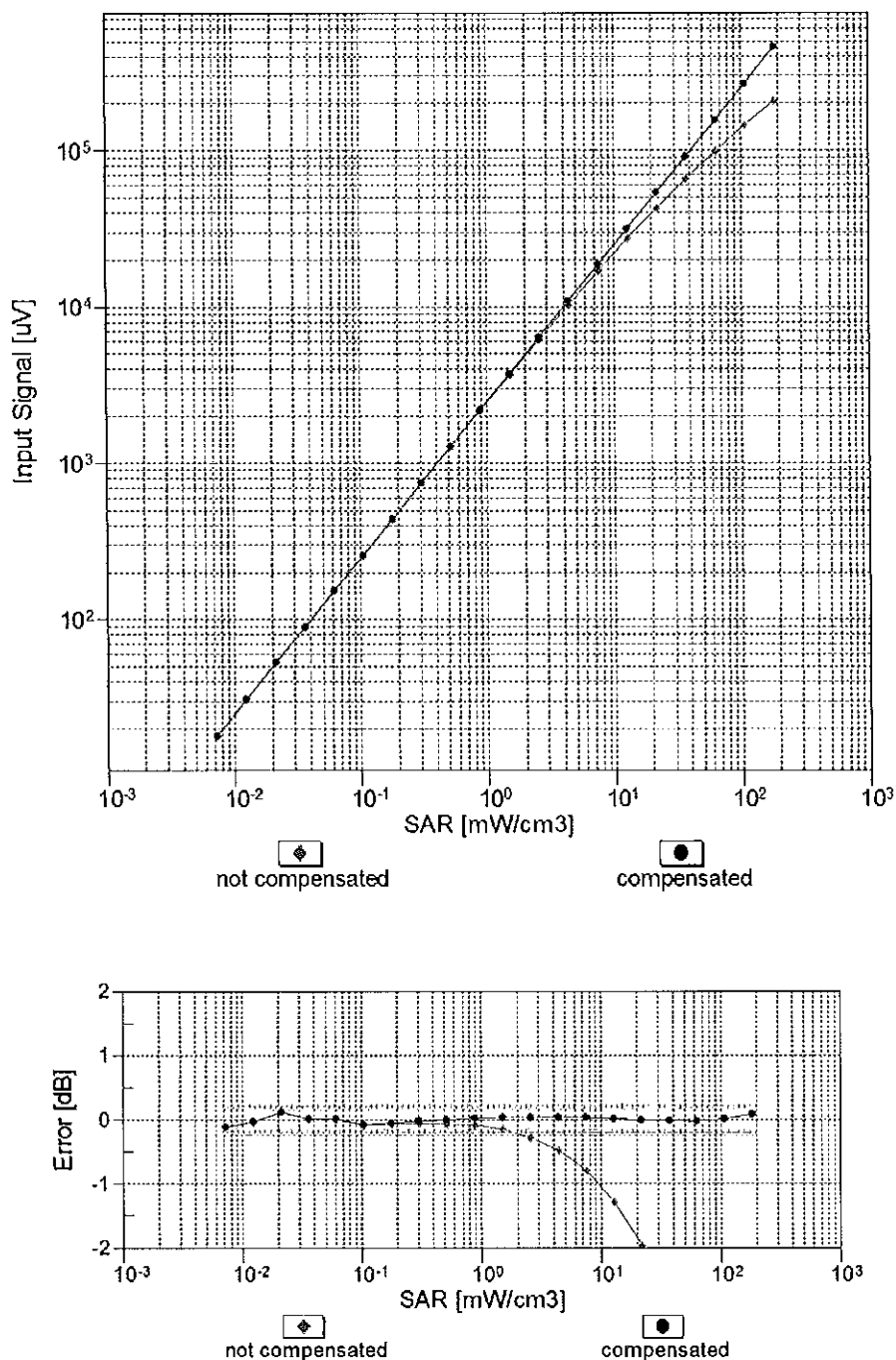


f=1800 MHz, R22



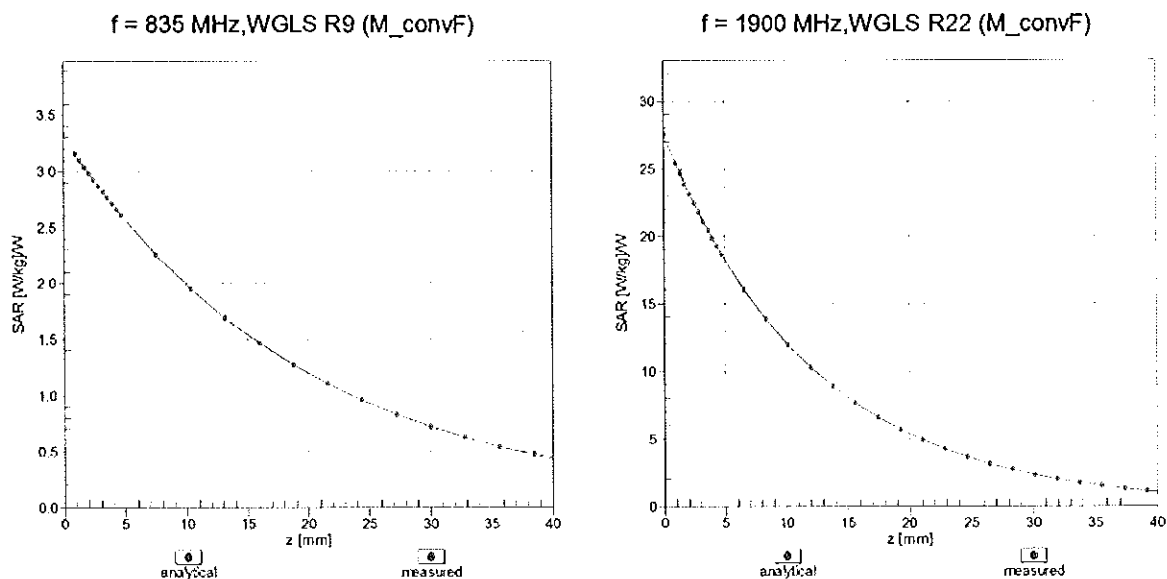
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



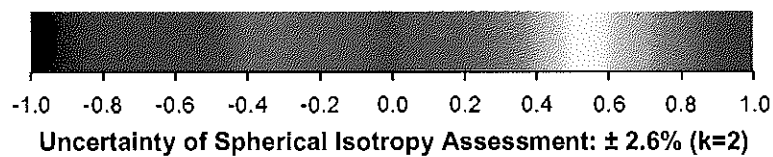
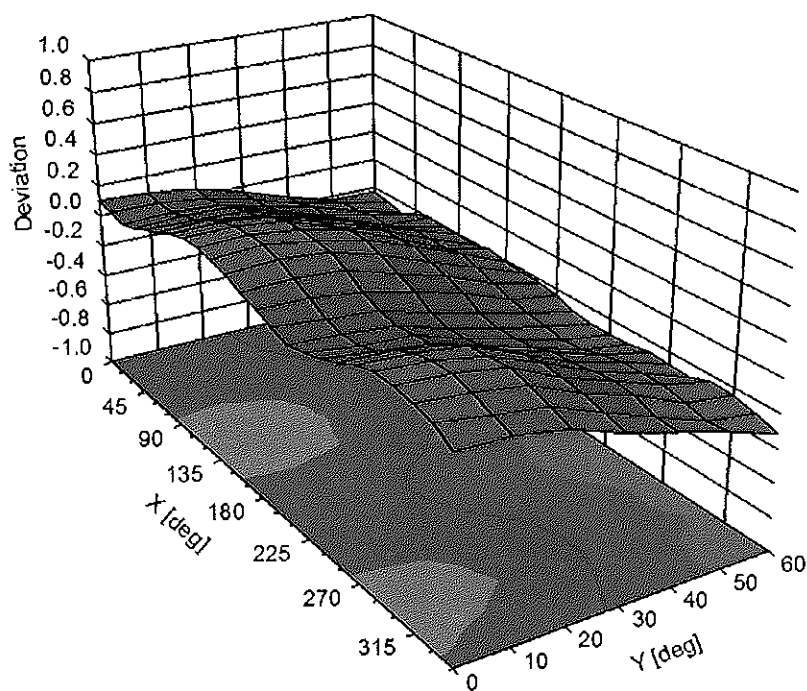
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



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

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 130.8      |
| 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    | 156.6    | $\pm 3.3 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 139.0    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 149.0    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.67    | 66.07                  | 10.73 | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 2.77    | 66.16                  | 10.84 |         | 20.0     |                                  |
|               |                                               | Z | 3.01    | 67.22                  | 11.52 |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.07    | 68.17                  | 15.86 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.14    | 69.43                  | 16.60 |         | 150.0    |                                  |
|               |                                               | Z | 1.05    | 67.81                  | 15.63 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.18    | 63.94                  | 15.29 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.19    | 64.27                  | 15.54 |         | 150.0    |                                  |
|               |                                               | Z | 1.17    | 63.79                  | 15.16 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.82    | 66.52                  | 16.88 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.84    | 66.55                  | 16.88 |         | 150.0    |                                  |
|               |                                               | Z | 4.80    | 66.54                  | 16.86 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 10.62   | 83.12                  | 18.62 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 8.33    | 79.79                  | 17.55 |         | 50.0     |                                  |
|               |                                               | Z | 13.42   | 86.52                  | 20.09 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 8.76    | 80.53                  | 17.78 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 7.40    | 78.13                  | 16.99 |         | 50.0     |                                  |
|               |                                               | Z | 10.55   | 83.20                  | 19.04 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 21.17   | 91.31                  | 19.68 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 12.07   | 85.13                  | 17.96 |         | 60.0     |                                  |
|               |                                               | Z | 52.32   | 102.57                 | 22.98 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 4.95    | 72.82                  | 26.24 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 7.53    | 84.57                  | 31.77 |         | 50.0     |                                  |
|               |                                               | Z | 4.80    | 71.26                  | 25.29 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 8.84    | 88.73                  | 30.42 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 10.05   | 91.59                  | 31.44 |         | 60.0     |                                  |
|               |                                               | Z | 8.11    | 86.61                  | 29.62 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 106.86                 | 22.53 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 106.55                 | 22.42 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 109.38                 | 23.65 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 107.35                 | 22.11 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 107.02                 | 21.99 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 110.40                 | 23.40 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 5.77    | 79.87                  | 25.94 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 6.21    | 81.41                  | 26.54 |         | 80.0     |                                  |
|               |                                               | Z | 5.35    | 78.22                  | 25.29 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 13.42   | 86.20                  | 17.57 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 9.31    | 82.44                  | 16.50 |         | 70.0     |                                  |
|               |                                               | Z | 29.70   | 95.60                  | 20.46 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 106.43                 | 20.54 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 106.56                 | 20.60 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 109.99                 | 21.95 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 112.98 | 22.39 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 114.09 | 22.82 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 117.75 | 24.22 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 5.28   | 79.65  | 19.49 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 5.39   | 79.85  | 19.61 |       | 70.0  |         |
|           |                                                     | Z | 4.87   | 78.68  | 19.23 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 2.39   | 73.05  | 16.10 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.51   | 73.86  | 16.59 |       | 100.0 |         |
|           |                                                     | Z | 2.22   | 72.28  | 15.77 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 1.86   | 71.23  | 15.30 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.97   | 72.22  | 15.90 |       | 100.0 |         |
|           |                                                     | Z | 1.74   | 70.56  | 14.96 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 6.16   | 82.06  | 20.41 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 6.25   | 82.19  | 20.50 |       | 70.0  |         |
|           |                                                     | Z | 5.60   | 80.92  | 20.11 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 2.26   | 72.39  | 15.80 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.37   | 73.21  | 16.30 |       | 100.0 |         |
|           |                                                     | Z | 2.09   | 71.60  | 15.47 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.87   | 71.57  | 15.55 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.00   | 72.59  | 16.17 |       | 100.0 |         |
|           |                                                     | Z | 1.75   | 70.84  | 15.19 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.22   | 74.99  | 16.99 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.65   | 77.61  | 18.26 |       | 150.0 |         |
|           |                                                     | Z | 2.08   | 74.23  | 16.52 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 7.56   | 79.14  | 16.13 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 6.34   | 77.01  | 15.44 |       | 50.0  |         |
|           |                                                     | Z | 11.33  | 84.23  | 18.10 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 97.59  | 0.84  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 98.99  | 0.04  |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 96.10  | 0.72  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 6.44   | 73.35  | 16.60 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 6.16   | 72.26  | 16.24 |       | 25.0  |         |
|           |                                                     | Z | 7.34   | 74.65  | 17.41 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 6.68   | 76.08  | 16.45 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 6.26   | 74.90  | 16.07 |       | 40.0  |         |
|           |                                                     | Z | 7.59   | 77.73  | 17.40 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 8.65   | 81.91  | 20.55 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 8.47   | 81.27  | 20.33 |       | 50.0  |         |
|           |                                                     | Z | 8.59   | 81.70  | 20.58 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.50   | 75.41  | 23.42 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.71   | 76.39  | 23.81 |       | 100.0 |         |
|           |                                                     | Z | 4.21   | 74.08  | 22.88 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.22   | 64.88  | 15.72 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.23   | 65.26  | 15.98 |       | 110.0 |         |
|           |                                                     | Z | 1.20   | 64.63  | 15.56 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 5.20   | 91.89  | 23.64 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 8.22   | 98.67  | 25.63 |       | 110.0 |         |
|           |                                                     | Z | 3.57   | 87.17  | 22.39 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 2.42 | 76.11 | 19.87 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 2.58 | 77.18 | 20.29 |      | 110.0 |         |
|           |                                                | Z | 2.18 | 74.61 | 19.37 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.65 | 66.63 | 16.45 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.67 | 66.69 | 16.47 |      | 100.0 |         |
|           |                                                | Z | 4.63 | 66.64 | 16.42 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.66 | 66.68 | 16.51 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.68 | 66.74 | 16.53 |      | 100.0 |         |
|           |                                                | Z | 4.63 | 66.69 | 16.48 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.94 | 66.91 | 16.71 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.96 | 66.98 | 16.73 |      | 100.0 |         |
|           |                                                | Z | 4.91 | 66.92 | 16.68 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.80 | 66.77 | 16.76 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.82 | 66.84 | 16.78 |      | 100.0 |         |
|           |                                                | Z | 4.77 | 66.77 | 16.73 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.81 | 66.75 | 16.88 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.83 | 66.82 | 16.89 |      | 100.0 |         |
|           |                                                | Z | 4.78 | 66.75 | 16.85 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.09 | 66.88 | 17.26 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.11 | 66.92 | 17.27 |      | 100.0 |         |
|           |                                                | Z | 5.07 | 66.91 | 17.25 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.13 | 66.89 | 17.43 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.16 | 66.96 | 17.45 |      | 100.0 |         |
|           |                                                | Z | 5.10 | 66.89 | 17.41 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.21 | 66.88 | 17.61 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.23 | 66.94 | 17.62 |      | 100.0 |         |
|           |                                                | Z | 5.18 | 66.90 | 17.59 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.91 | 66.56 | 17.12 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.92 | 66.60 | 17.13 |      | 100.0 |         |
|           |                                                | Z | 4.89 | 66.58 | 17.10 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.88 | 66.83 | 17.29 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.90 | 66.89 | 17.30 |      | 100.0 |         |
|           |                                                | Z | 4.86 | 66.85 | 17.27 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.94 | 66.95 | 17.56 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.95 | 67.01 | 17.56 |      | 100.0 |         |
|           |                                                | Z | 4.92 | 66.98 | 17.54 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.92 | 66.84 | 17.68 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 66.89 | 17.68 |      | 100.0 |         |
|           |                                                | Z | 4.91 | 66.87 | 17.66 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.96 | 66.95 | 17.95 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.99 | 67.03 | 17.97 |      | 90.0  |         |
|           |                                                | Z | 4.95 | 66.97 | 17.93 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.98 | 66.76 | 18.06 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.00 | 66.82 | 18.07 |      | 90.0  |         |
|           |                                                | Z | 4.98 | 66.79 | 18.06 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.01 | 66.82 | 18.15 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.02 | 66.89 | 18.16 |      | 90.0  |         |
|           |                                                | Z | 5.01 | 66.87 | 18.15 |      | 90.0  |         |

|           |                                                     |   |       |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.92  | 67.41  | 13.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.03  | 69.09  | 14.44 |      | 150.0 |         |
|           |                                                     | Z | 0.88  | 66.94  | 12.99 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.63  | 57.80  | 3.24  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.66  | 58.21  | 3.60  |      | 80.0  |         |
|           |                                                     | Z | 0.62  | 57.96  | 3.46  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 20.08 | 90.74  | 19.54 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 11.65 | 84.73  | 17.86 |      | 60.0  |         |
|           |                                                     | Z | 47.95 | 101.61 | 22.77 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.89  | 68.37  | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.94  | 68.91  | 16.47 |      | 150.0 |         |
|           |                                                     | Z | 1.87  | 68.28  | 16.00 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.85  | 68.32  | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.90  | 68.87  | 16.45 |      | 150.0 |         |
|           |                                                     | Z | 1.83  | 68.22  | 15.96 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 8.88  | 88.80  | 30.43 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 10.09 | 91.64  | 31.45 |      | 60.0  |         |
|           |                                                     | Z | 8.15  | 86.66  | 29.63 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.20  | 70.80  | 17.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.31  | 71.44  | 17.31 |      | 150.0 |         |
|           |                                                     | Z | 3.15  | 70.62  | 16.92 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.26  | 67.72  | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.31  | 68.03  | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 3.23  | 67.65  | 16.04 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.37  | 67.70  | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.41  | 67.97  | 16.34 |      | 150.0 |         |
|           |                                                     | Z | 3.34  | 67.64  | 16.14 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 6.10  | 74.42  | 19.52 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.87  | 73.66  | 19.14 |      | 65.0  |         |
|           |                                                     | Z | 5.74  | 73.57  | 19.22 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 6.15  | 72.80  | 19.65 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.23  | 72.96  | 19.68 |      | 65.0  |         |
|           |                                                     | Z | 5.94  | 72.31  | 19.46 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.87  | 71.80  | 19.52 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.67  | 71.06  | 19.13 |      | 65.0  |         |
|           |                                                     | Z | 5.56  | 70.91  | 19.13 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.79  | 70.03  | 16.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.88  | 70.63  | 17.15 |      | 150.0 |         |
|           |                                                     | Z | 2.74  | 69.86  | 16.75 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.92  | 67.64  | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.97  | 67.95  | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 2.89  | 67.57  | 15.96 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.26  | 69.17  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.35  | 69.78  | 16.82 |      | 150.0 |         |
|           |                                                     | Z | 2.22  | 68.99  | 16.35 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.67  | 68.78  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.73  | 69.09  | 16.70 |      | 150.0 |         |
|           |                                                     | Z | 2.65  | 68.73  | 16.39 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.05 | 67.64 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.10 | 67.91 | 16.26 |      | 150.0 |         |
|           |                                                | Z | 3.02 | 67.58 | 16.03 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.83 | 68.92 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.88 | 69.19 | 16.80 |      | 150.0 |         |
|           |                                                | Z | 2.80 | 68.89 | 16.53 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.14 | 67.30 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.37 | 16.54 |      | 150.0 |         |
|           |                                                | Z | 5.11 | 67.28 | 16.49 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.41 | 67.39 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.44 | 67.49 | 16.61 |      | 150.0 |         |
|           |                                                | Z | 5.37 | 67.35 | 16.53 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.23 | 67.48 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.25 | 67.56 | 16.57 |      | 150.0 |         |
|           |                                                | Z | 5.20 | 67.46 | 16.50 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.10 | 67.15 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.12 | 67.24 | 16.50 |      | 150.0 |         |
|           |                                                | Z | 5.07 | 67.14 | 16.44 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.49 | 67.59 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.52 | 67.68 | 16.71 |      | 150.0 |         |
|           |                                                | Z | 5.45 | 67.53 | 16.63 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.21 | 67.43 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.22 | 67.50 | 16.55 |      | 150.0 |         |
|           |                                                | Z | 5.18 | 67.41 | 16.49 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.40 | 67.70 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.45 | 67.97 | 16.25 |      | 150.0 |         |
|           |                                                | Z | 3.37 | 67.64 | 16.05 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.53 | 67.82 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.57 | 68.05 | 16.41 |      | 150.0 |         |
|           |                                                | Z | 3.50 | 67.77 | 16.23 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.05 | 69.36 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.15 | 70.07 | 16.65 |      | 150.0 |         |
|           |                                                | Z | 2.01 | 69.16 | 16.05 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.58 | 69.85 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.67 | 70.31 | 16.66 |      | 150.0 |         |
|           |                                                | Z | 2.55 | 69.76 | 16.17 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.27 | 67.04 | 14.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.35 | 67.51 | 14.81 |      | 150.0 |         |
|           |                                                | Z | 2.23 | 66.89 | 14.26 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.27 | 65.89 | 12.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.42 | 67.33 | 13.21 |      | 150.0 |         |
|           |                                                | Z | 1.20 | 65.32 | 11.71 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.76 | 65.12 | 10.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.85 | 65.98 | 11.50 |      | 150.0 |         |
|           |                                                | Z | 1.79 | 65.33 | 10.70 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 2.02 | 66.77 | 11.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.20 | 68.07 | 12.63 |      | 150.0 |         |
|           |                                                | Z | 2.10 | 67.13 | 11.69 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.93 | 67.71 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.98 | 68.02 | 16.27 |      | 150.0 |         |
|           |                                            | Z | 2.90 | 67.64 | 16.02 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.06 | 67.71 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.10 | 67.97 | 16.30 |      | 150.0 |         |
|           |                                            | Z | 3.03 | 67.65 | 16.07 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 6.20 | 76.14 | 20.26 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.27 | 76.18 | 20.22 |      | 65.0  |         |
|           |                                            | Z | 5.93 | 75.60 | 20.10 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.64 | 72.55 | 19.21 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.73 | 72.74 | 19.28 |      | 65.0  |         |
|           |                                            | Z | 5.43 | 72.04 | 19.00 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 6.03 | 73.59 | 20.04 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.10 | 73.69 | 20.06 |      | 65.0  |         |
|           |                                            | Z | 5.81 | 73.08 | 19.84 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.32 | 69.68 | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.41 | 70.30 | 17.13 |      | 150.0 |         |
|           |                                            | Z | 2.28 | 69.49 | 16.65 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.68 | 68.79 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.73 | 69.11 | 16.71 |      | 150.0 |         |
|           |                                            | Z | 2.65 | 68.75 | 16.41 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.92 | 69.63 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.03 | 70.50 | 16.63 |      | 150.0 |         |
|           |                                            | Z | 1.87 | 69.37 | 15.88 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.14 | 67.82 | 14.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.24 | 68.46 | 15.06 |      | 150.0 |         |
|           |                                            | Z | 2.09 | 67.62 | 14.35 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.84 | 69.00 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.89 | 69.26 | 16.85 |      | 150.0 |         |
|           |                                            | Z | 2.81 | 68.97 | 16.58 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.26 | 68.38 | 14.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.37 | 69.05 | 15.40 |      | 150.0 |         |
|           |                                            | Z | 2.21 | 68.17 | 14.68 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.78 | 69.02 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84 | 69.39 | 16.78 |      | 150.0 |         |
|           |                                            | Z | 2.74 | 68.91 | 16.49 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.96 | 67.68 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.00 | 67.95 | 16.25 |      | 150.0 |         |
|           |                                            | Z | 2.93 | 67.62 | 16.01 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.07 | 67.83 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.11 | 68.07 | 16.35 |      | 150.0 |         |
|           |                                            | Z | 3.04 | 67.79 | 16.13 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.52 | 69.42 | 18.97 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.48 | 69.21 | 18.88 |      | 150.0 |         |
|           |                                            | Z | 3.58 | 69.99 | 19.29 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.35 | 72.55 | 19.50 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.23 | 72.10 | 19.35 |      | 150.0 |         |
|           |                                            | Z | 4.57 | 73.71 | 20.03 |      | 150.0 |         |

|           |                                            |   |       |       |       |      |       |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.95  | 75.33 | 21.09 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.74  | 74.55 | 20.78 |      | 150.0 |         |
|           |                                            | Z | 5.31  | 76.94 | 21.79 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.92  | 68.92 | 18.76 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.83  | 68.61 | 18.65 |      | 150.0 |         |
|           |                                            | Z | 3.02  | 69.75 | 19.20 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 4.20  | 75.93 | 21.56 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.90  | 74.95 | 21.22 |      | 150.0 |         |
|           |                                            | Z | 4.73  | 78.44 | 22.61 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.29  | 70.86 | 18.34 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.14  | 70.43 | 18.23 |      | 150.0 |         |
|           |                                            | Z | 3.53  | 72.31 | 18.98 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 6.18  | 83.60 | 24.73 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.31  | 80.83 | 23.64 |      | 65.0  |         |
|           |                                            | Z | 5.59  | 82.35 | 24.48 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 9.66  | 88.05 | 24.34 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 9.20  | 87.15 | 23.96 |      | 65.0  |         |
|           |                                            | Z | 11.03 | 90.93 | 25.45 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 7.49  | 83.02 | 22.12 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.16  | 79.95 | 20.98 |      | 65.0  |         |
|           |                                            | Z | 7.52  | 83.81 | 22.58 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.88  | 68.56 | 18.48 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.79  | 68.29 | 18.39 |      | 150.0 |         |
|           |                                            | Z | 2.97  | 69.36 | 18.91 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 4.20  | 75.96 | 21.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.90  | 74.98 | 21.23 |      | 150.0 |         |
|           |                                            | Z | 4.74  | 78.47 | 22.62 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.90  | 68.74 | 18.59 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.82  | 68.45 | 18.49 |      | 150.0 |         |
|           |                                            | Z | 3.00  | 69.54 | 19.02 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 4.15  | 75.68 | 21.43 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.86  | 74.72 | 21.10 |      | 150.0 |         |
|           |                                            | Z | 4.66  | 78.13 | 22.46 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.69  | 73.16 | 19.77 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.48  | 72.54 | 19.57 |      | 150.0 |         |
|           |                                            | Z | 4.04  | 75.08 | 20.59 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 3.28  | 70.77 | 18.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.13  | 70.35 | 18.17 |      | 150.0 |         |
|           |                                            | Z | 3.52  | 72.21 | 18.92 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.90  | 68.71 | 18.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.81  | 68.43 | 18.49 |      | 150.0 |         |
|           |                                            | Z | 2.99  | 69.52 | 19.01 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 4.14  | 75.65 | 21.42 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.85  | 74.70 | 21.08 |      | 150.0 |         |
|           |                                            | Z | 4.65  | 78.10 | 22.45 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 3.28  | 70.75 | 18.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.12  | 70.33 | 18.16 |      | 150.0 |         |
|           |                                            | Z | 3.51  | 72.19 | 18.91 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.91 | 68.76 | 18.61 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.82 | 68.48 | 18.51 |      | 150.0 |         |
|           |                                               | Z | 3.00 | 69.57 | 19.04 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 4.16 | 75.74 | 21.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.87 | 74.78 | 21.12 |      | 150.0 |         |
|           |                                               | Z | 4.68 | 78.20 | 22.50 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 3.29 | 70.82 | 18.30 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.14 | 70.40 | 18.20 |      | 150.0 |         |
|           |                                               | Z | 3.53 | 72.27 | 18.95 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.92 | 68.82 | 18.67 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.83 | 68.53 | 18.57 |      | 150.0 |         |
|           |                                               | Z | 3.01 | 69.64 | 19.11 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 4.34 | 76.58 | 21.92 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.01 | 75.52 | 21.54 |      | 150.0 |         |
|           |                                               | Z | 4.92 | 79.24 | 23.02 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 3.38 | 71.31 | 18.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.21 | 70.86 | 18.50 |      | 150.0 |         |
|           |                                               | Z | 3.64 | 72.84 | 19.29 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.53 | 66.74 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.55 | 66.82 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.75 | 16.20 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.70 | 67.04 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.73 | 67.14 | 16.40 |      | 150.0 |         |
|           |                                               | Z | 4.67 | 67.04 | 16.32 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.74 | 67.07 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.16 | 16.42 |      | 150.0 |         |
|           |                                               | Z | 4.71 | 67.07 | 16.34 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.53 | 66.80 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.56 | 66.89 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.80 | 16.21 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.71 | 67.06 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.74 | 67.16 | 16.41 |      | 150.0 |         |
|           |                                               | Z | 4.68 | 67.06 | 16.33 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.74 | 67.09 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.18 | 16.43 |      | 150.0 |         |
|           |                                               | Z | 4.71 | 67.09 | 16.35 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.48 | 66.81 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.51 | 66.91 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.45 | 66.82 | 16.18 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.70 | 67.03 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.73 | 67.13 | 16.40 |      | 150.0 |         |
|           |                                               | Z | 4.67 | 67.03 | 16.32 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.75 | 67.02 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78 | 67.11 | 16.41 |      | 150.0 |         |
|           |                                               | Z | 4.72 | 67.01 | 16.33 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.07 | 67.16 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.09 | 67.26 | 16.50 |      | 150.0 |         |
|           |                                               | Z | 5.05 | 67.15 | 16.43 |      | 150.0 |         |

|           |                                           |   |       |       |       |      |       |         |
|-----------|-------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.37  | 67.36 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.39  | 67.42 | 16.59 |      | 150.0 |         |
|           |                                           | Z | 5.35  | 67.37 | 16.56 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.12  | 67.28 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.14  | 67.37 | 16.48 |      | 150.0 |         |
|           |                                           | Z | 5.09  | 67.26 | 16.42 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.82  | 66.40 | 15.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.86  | 66.59 | 15.66 |      | 150.0 |         |
|           |                                           | Z | 2.79  | 66.37 | 15.39 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 10.34 | 89.28 | 24.84 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.78  | 88.26 | 24.43 |      | 65.0  |         |
|           |                                           | Z | 11.95 | 92.40 | 26.02 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 9.45  | 86.56 | 23.34 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.84  | 85.37 | 22.86 |      | 65.0  |         |
|           |                                           | Z | 10.93 | 89.56 | 24.47 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 7.32  | 86.94 | 25.98 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.51  | 87.27 | 26.00 |      | 65.0  |         |
|           |                                           | Z | 7.20  | 87.24 | 26.30 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 9.74  | 88.16 | 24.39 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.28  | 87.26 | 24.01 |      | 65.0  |         |
|           |                                           | Z | 11.13 | 91.06 | 25.50 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 8.91  | 85.54 | 22.92 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.39  | 84.47 | 22.48 |      | 65.0  |         |
|           |                                           | Z | 10.18 | 88.33 | 24.00 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 7.00  | 86.05 | 25.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.21  | 86.43 | 25.62 |      | 65.0  |         |
|           |                                           | Z | 6.88  | 86.32 | 25.89 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 9.72  | 88.14 | 24.38 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.26  | 87.24 | 24.00 |      | 65.0  |         |
|           |                                           | Z | 11.11 | 91.04 | 25.49 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 8.89  | 85.52 | 22.92 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.37  | 84.45 | 22.47 |      | 65.0  |         |
|           |                                           | Z | 10.16 | 88.31 | 23.99 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 6.73  | 85.20 | 25.16 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.94  | 85.61 | 25.22 |      | 65.0  |         |
|           |                                           | Z | 6.62  | 85.46 | 25.47 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 9.73  | 88.16 | 24.39 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.26  | 87.26 | 24.01 |      | 65.0  |         |
|           |                                           | Z | 11.12 | 91.07 | 25.50 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 8.97  | 85.63 | 22.95 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.44  | 84.56 | 22.50 |      | 65.0  |         |
|           |                                           | Z | 10.26 | 88.43 | 24.03 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 7.00  | 86.09 | 25.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.21  | 86.48 | 25.64 |      | 65.0  |         |
|           |                                           | Z | 6.88  | 86.35 | 25.91 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 9.70  | 88.11 | 24.37 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 9.24  | 87.21 | 23.99 |      | 65.0  |         |
|           |                                           | Z | 11.08 | 91.01 | 25.48 |      | 65.0  |         |

|           |                                            |   |       |       |       |      |      |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 8.86  | 85.49 | 22.91 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.34  | 84.42 | 22.46 |      | 65.0 |         |
|           |                                            | Z | 10.12 | 88.27 | 23.98 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 6.98  | 86.05 | 25.58 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.19  | 86.44 | 25.63 |      | 65.0 |         |
|           |                                            | Z | 6.87  | 86.32 | 25.89 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 7.66  | 79.41 | 24.04 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.53  | 78.99 | 23.87 |      | 65.0 |         |
|           |                                            | Z | 7.72  | 79.98 | 24.35 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.08  | 77.85 | 23.32 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.56  | 76.18 | 22.61 |      | 65.0 |         |
|           |                                            | Z | 6.82  | 77.47 | 23.23 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.72  | 74.40 | 22.72 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.45  | 73.28 | 22.19 |      | 65.0 |         |
|           |                                            | Z | 5.52  | 73.92 | 22.57 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 4.75  | 71.39 | 15.87 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.77  | 71.48 | 16.03 |      | 65.0 |         |
|           |                                            | Z | 4.72  | 71.54 | 15.92 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 4.68  | 70.96 | 15.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.72  | 71.09 | 15.82 |      | 65.0 |         |
|           |                                            | Z | 4.64  | 71.06 | 15.66 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 4.46  | 73.85 | 17.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.61  | 74.27 | 17.59 |      | 65.0 |         |
|           |                                            | Z | 4.17  | 73.10 | 17.00 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 4.62  | 71.66 | 17.10 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.72  | 71.92 | 17.30 |      | 65.0 |         |
|           |                                            | Z | 4.41  | 71.11 | 16.82 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 4.64  | 71.26 | 16.91 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.75  | 71.55 | 17.13 |      | 65.0 |         |
|           |                                            | Z | 4.42  | 70.71 | 16.63 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 5.55  | 77.29 | 19.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.67  | 77.48 | 19.75 |      | 65.0 |         |
|           |                                            | Z | 5.19  | 76.50 | 19.35 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 5.62  | 74.57 | 20.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.69  | 74.63 | 20.05 |      | 65.0 |         |
|           |                                            | Z | 5.39  | 73.98 | 19.78 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.39  | 72.65 | 18.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.48  | 72.84 | 18.95 |      | 65.0 |         |
|           |                                            | Z | 5.18  | 72.13 | 18.61 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 6.13  | 78.05 | 20.93 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.21  | 78.10 | 20.92 |      | 65.0 |         |
|           |                                            | Z | 5.78  | 77.32 | 20.70 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.54  | 72.10 | 19.00 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.62  | 72.26 | 19.07 |      | 65.0 |         |
|           |                                            | Z | 5.35  | 71.63 | 18.79 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.89  | 73.05 | 19.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.96  | 73.15 | 19.77 |      | 65.0 |         |
|           |                                            | Z | 5.69  | 72.56 | 19.53 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 5.96 | 75.63 | 20.26 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.03 | 75.68 | 20.24 |      | 65.0 |         |
|           |                                             | Z | 5.70 | 75.08 | 20.08 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 3.65 | 67.68 | 13.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.72 | 67.99 | 13.43 |      | 65.0 |         |
|           |                                             | Z | 3.58 | 67.63 | 13.06 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 3.61 | 67.24 | 12.83 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.69 | 67.57 | 13.15 |      | 65.0 |         |
|           |                                             | Z | 3.52 | 67.14 | 12.74 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 3.39 | 69.66 | 14.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.55 | 70.26 | 15.05 |      | 65.0 |         |
|           |                                             | Z | 3.18 | 68.99 | 14.30 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 5.01 | 72.76 | 18.17 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.10 | 72.95 | 18.31 |      | 65.0 |         |
|           |                                             | Z | 4.79 | 72.21 | 17.91 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 5.05 | 72.57 | 18.09 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.14 | 72.76 | 18.24 |      | 65.0 |         |
|           |                                             | Z | 4.83 | 72.02 | 17.83 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 5.55 | 76.95 | 19.93 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.66 | 77.10 | 20.01 |      | 65.0 |         |
|           |                                             | Z | 5.23 | 76.20 | 19.66 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 5.61 | 74.51 | 19.98 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.68 | 74.58 | 20.01 |      | 65.0 |         |
|           |                                             | Z | 5.37 | 73.92 | 19.73 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.38 | 72.63 | 18.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.47 | 72.82 | 18.95 |      | 65.0 |         |
|           |                                             | Z | 5.17 | 72.10 | 18.61 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 6.07 | 77.87 | 20.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.16 | 77.94 | 20.84 |      | 65.0 |         |
|           |                                             | Z | 5.73 | 77.15 | 20.61 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.64 | 72.55 | 19.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.73 | 72.74 | 19.29 |      | 65.0 |         |
|           |                                             | Z | 5.43 | 72.04 | 19.01 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 6.02 | 73.57 | 20.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.09 | 73.68 | 20.05 |      | 65.0 |         |
|           |                                             | Z | 5.81 | 73.06 | 19.83 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 6.19 | 76.11 | 20.24 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.26 | 76.15 | 20.20 |      | 65.0 |         |
|           |                                             | Z | 5.92 | 75.57 | 20.08 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.31 | 72.74 | 19.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.38 | 72.86 | 19.76 |      | 65.0 |         |
|           |                                             | Z | 6.11 | 72.28 | 19.56 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.31 | 72.40 | 19.66 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.37 | 72.52 | 19.68 |      | 65.0 |         |
|           |                                             | Z | 6.11 | 71.95 | 19.47 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.25 | 74.19 | 19.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.30 | 74.22 | 19.60 |      | 65.0 |         |
|           |                                             | Z | 6.03 | 73.76 | 19.52 |      | 65.0 |         |

|           |                                                                    |   |      |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.62 | 66.83 | 15.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.65 | 67.06 | 15.64 |      | 150.0 |         |
|           |                                                                    | Z | 2.60 | 66.81 | 15.36 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.66 | 68.56 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.74 | 69.37 | 16.47 |      | 150.0 |         |
|           |                                                                    | Z | 1.63 | 68.35 | 15.83 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 2.45 | 61.81 | 7.48  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.59 | 62.16 | 7.82  |      | 50.0  |         |
|           |                                                                    | Z | 2.54 | 62.07 | 7.75  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 4.03 | 68.72 | 13.51 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.22 | 69.17 | 13.84 |      | 50.0  |         |
|           |                                                                    | Z | 4.10 | 68.73 | 13.58 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 4.13 | 68.96 | 13.67 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.33 | 69.41 | 14.00 |      | 50.0  |         |
|           |                                                                    | Z | 4.19 | 68.95 | 13.73 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.59 | 70.25 | 14.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.82 | 72.15 | 15.78 |      | 150.0 |         |
|           |                                                                    | Z | 1.50 | 69.65 | 14.28 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.90 | 67.12 | 13.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.00 | 68.73 | 14.25 |      | 150.0 |         |
|           |                                                                    | Z | 0.86 | 66.67 | 12.84 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.36 | 73.82 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.71 | 77.26 | 18.32 |      | 150.0 |         |
|           |                                                                    | Z | 1.28 | 73.01 | 16.14 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 3.29 | 86.77 | 21.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.71 | 92.66 | 24.11 |      | 150.0 |         |
|           |                                                                    | Z | 3.08 | 85.69 | 21.33 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 7.29 | 78.77 | 20.59 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 7.06 | 78.09 | 20.40 |      | 50.0  |         |
|           |                                                                    | Z | 7.48 | 78.90 | 20.60 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.80 | 70.15 | 16.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.90 | 70.75 | 17.22 |      | 150.0 |         |
|           |                                                                    | Z | 2.76 | 69.98 | 16.83 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.64 | 68.64 | 14.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.79 | 69.89 | 15.40 |      | 150.0 |         |
|           |                                                                    | Z | 1.57 | 68.20 | 14.24 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 2.47 | 68.83 | 13.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.54 | 69.43 | 14.13 |      | 150.0 |         |
|           |                                                                    | Z | 2.67 | 69.79 | 13.88 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.84 | 64.47 | 10.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.87 | 64.82 | 11.18 |      | 150.0 |         |
|           |                                                                    | Z | 1.87 | 64.71 | 10.75 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.69 | 65.44 | 17.46 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.63 | 65.10 | 17.32 |      | 50.0  |         |
|           |                                                                    | Z | 4.65 | 65.38 | 17.36 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.12 | 65.81 | 18.03 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.16 | 65.97 | 18.16 |      | 50.0  |         |
|           |                                                                    | Z | 5.12 | 65.91 | 18.02 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.87 | 65.45 | 17.87 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.92 | 65.62 | 18.01 |       | 50.0  |         |
|           |                                                                     | Z | 4.87 | 65.57 | 17.85 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.68 | 65.35 | 17.39 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.72 | 65.48 | 17.50 |       | 50.0  |         |
|           |                                                                     | Z | 4.68 | 65.45 | 17.37 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.39 | 67.43 | 19.46 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.48 | 67.81 | 19.80 |       | 35.0  |         |
|           |                                                                     | Z | 4.49 | 68.01 | 19.61 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.67 | 66.30 | 18.98 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.73 | 66.54 | 19.21 |       | 35.0  |         |
|           |                                                                     | Z | 4.72 | 66.69 | 19.08 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.58 | 66.51 | 18.97 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.65 | 66.79 | 19.23 |       | 35.0  |         |
|           |                                                                     | Z | 4.64 | 66.91 | 19.08 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.56 | 66.71 | 19.12 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.63 | 67.02 | 19.38 |       | 35.0  |         |
|           |                                                                     | Z | 4.62 | 67.14 | 19.23 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.72 | 66.48 | 19.11 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.79 | 66.75 | 19.35 |       | 35.0  |         |
|           |                                                                     | Z | 4.77 | 66.86 | 19.21 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.62 | 66.39 | 18.97 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.69 | 66.63 | 19.20 |       | 35.0  |         |
|           |                                                                     | Z | 4.68 | 66.79 | 19.08 |       | 35.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.17 | 69.43 | 16.56 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.28 | 70.00 | 16.83 |       | 150.0 |         |
|           |                                                                     | Z | 3.13 | 69.27 | 16.47 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 3.04 | 69.90 | 14.46 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 3.00 | 69.58 | 14.26 |       | 70.0  |         |
|           |                                                                     | Z | 2.91 | 69.76 | 14.60 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 4.05 | 75.03 | 19.23 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 3.94 | 74.12 | 18.73 |       | 30.0  |         |
|           |                                                                     | Z | 4.12 | 75.22 | 19.44 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.10 | 63.97 | 15.35 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.11 | 64.32 | 15.62 |       | 150.0 |         |
|           |                                                                     | Z | 1.09 | 63.83 | 15.22 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.56 | 66.66 | 16.26 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 66.74 | 16.29 |       | 150.0 |         |
|           |                                                                     | Z | 4.53 | 66.67 | 16.22 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.56 | 66.66 | 16.26 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 66.74 | 16.29 |       | 150.0 |         |
|           |                                                                     | Z | 4.53 | 66.67 | 16.22 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.68 | 67.08 | 16.34 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.72 | 67.18 | 16.39 |       | 150.0 |         |
|           |                                                                     | Z | 4.65 | 67.07 | 16.30 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.39 | 67.23 | 16.48 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.40 | 67.28 | 16.50 |       | 150.0 |         |
|           |                                                                     | Z | 5.35 | 67.18 | 16.43 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.64   | 67.54  | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.66   | 67.64  | 16.53 |      | 150.0 |         |
|           |                                                                                | Z | 5.61   | 67.52  | 16.47 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 1.59   | 70.25  | 14.71 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.82   | 72.15  | 15.78 |      | 115.0 |         |
|           |                                                                                | Z | 1.50   | 69.65  | 14.28 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 1.59   | 70.25  | 14.71 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.82   | 72.15  | 15.78 |      | 115.0 |         |
|           |                                                                                | Z | 1.50   | 69.65  | 14.28 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 119.40 | 29.12 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 122.00 | 30.20 |      | 100.0 |         |
|           |                                                                                | Z | 100.00 | 117.27 | 28.11 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 7.12   | 84.42  | 19.31 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 6.26   | 82.81  | 18.74 |      | 80.0  |         |
|           |                                                                                | Z | 11.96  | 91.59  | 21.64 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.03   | 63.32  | 14.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.04   | 63.68  | 15.26 |      | 150.0 |         |
|           |                                                                                | Z | 1.03   | 63.25  | 14.86 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.53   | 66.77  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.56   | 66.86  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.51   | 66.78  | 16.27 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.53   | 66.77  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.56   | 66.86  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.51   | 66.78  | 16.27 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.52   | 66.95  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.55   | 67.03  | 16.37 |      | 150.0 |         |
|           |                                                                                | Z | 4.50   | 66.95  | 16.30 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.54   | 66.89  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.57   | 66.97  | 16.37 |      | 150.0 |         |
|           |                                                                                | Z | 4.52   | 66.90  | 16.30 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.66   | 66.88  | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.68   | 66.96  | 16.38 |      | 150.0 |         |
|           |                                                                                | Z | 4.63   | 66.88  | 16.30 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.82   | 67.18  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.85   | 67.27  | 16.49 |      | 150.0 |         |
|           |                                                                                | Z | 4.78   | 67.18  | 16.41 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.74   | 67.14  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.77   | 67.23  | 16.47 |      | 150.0 |         |
|           |                                                                                | Z | 4.71   | 67.13  | 16.39 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.34   | 67.39  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.35   | 67.47  | 16.59 |      | 150.0 |         |
|           |                                                                                | Z | 5.30   | 67.36  | 16.53 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.35   | 67.44  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.36   | 67.49  | 16.60 |      | 150.0 |         |
|           |                                                                                | Z | 5.32   | 67.42  | 16.56 |      | 150.0 |         |

|           |                                                                |   |       |       |       |      |       |         |
|-----------|----------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.36  | 67.40 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.37  | 67.48 | 16.59 |      | 150.0 |         |
|           |                                                                | Z | 5.32  | 67.37 | 16.53 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.43  | 71.93 | 18.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.42  | 71.71 | 18.69 |      | 150.0 |         |
|           |                                                                | Z | 4.43  | 72.11 | 18.76 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.21  | 67.37 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.25  | 67.48 | 16.39 |      | 150.0 |         |
|           |                                                                | Z | 4.17  | 67.37 | 16.26 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.51  | 67.21 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.54  | 67.31 | 16.43 |      | 150.0 |         |
|           |                                                                | Z | 4.47  | 67.21 | 16.34 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.75  | 67.17 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.79  | 67.27 | 16.49 |      | 150.0 |         |
|           |                                                                | Z | 4.72  | 67.17 | 16.41 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.61  | 73.06 | 18.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.59  | 72.83 | 18.78 |      | 150.0 |         |
|           |                                                                | Z | 4.61  | 73.27 | 18.81 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 6.74  | 83.64 | 19.02 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 5.96  | 82.09 | 18.46 |      | 80.0  |         |
|           |                                                                | Z | 10.99 | 90.40 | 21.25 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.51  | 67.45 | 15.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.57  | 67.65 | 15.82 |      | 150.0 |         |
|           |                                                                | Z | 3.46  | 67.42 | 15.53 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.05  | 67.16 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.09  | 67.27 | 16.26 |      | 150.0 |         |
|           |                                                                | Z | 4.02  | 67.16 | 16.13 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.33  | 67.05 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.36  | 67.15 | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.30  | 67.04 | 16.24 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.52  | 66.95 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.55  | 67.05 | 16.35 |      | 150.0 |         |
|           |                                                                | Z | 4.50  | 66.95 | 16.27 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.39  | 67.63 | 15.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.47  | 67.90 | 15.48 |      | 150.0 |         |
|           |                                                                | Z | 3.34  | 67.55 | 15.09 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.21  | 67.93 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.21  | 67.99 | 16.72 |      | 150.0 |         |
|           |                                                                | Z | 6.19  | 67.92 | 16.69 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.80  | 65.42 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.81  | 65.50 | 16.06 |      | 150.0 |         |
|           |                                                                | Z | 3.79  | 65.44 | 15.98 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.19  | 66.85 | 14.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.28  | 67.17 | 14.85 |      | 150.0 |         |
|           |                                                                | Z | 3.13  | 66.73 | 14.35 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.26  | 65.09 | 15.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.45  | 65.72 | 15.90 |      | 150.0 |         |
|           |                                                                | Z | 4.15  | 64.82 | 15.27 |      | 150.0 |         |

|           |                                                                   |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.95 | 69.24 | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.02 | 70.79 | 17.77 |      | 150.0 |         |
|           |                                                                   | Z | 0.93 | 68.79 | 16.59 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.16 | 76.40 | 17.59 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.00 | 75.64 | 17.23 |      | 80.0  |         |
|           |                                                                   | Z | 4.60 | 82.00 | 19.74 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.95 | 60.00 | 7.73  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.93 | 60.00 | 7.68  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.16 | 7.81  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.96 | 60.00 | 7.25  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.96 | 60.00 | 7.20  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.00 | 7.22  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.40 | 72.59 | 15.64 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.28 | 71.93 | 15.30 |      | 80.0  |         |
|           |                                                                   | Z | 3.30 | 77.16 | 17.51 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.94 | 60.00 | 7.67  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.93 | 60.00 | 7.61  |      | 80.0  |         |
|           |                                                                   | Z | 0.91 | 60.00 | 7.66  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.97 | 60.00 | 7.21  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.96 | 60.00 | 7.15  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.00 | 7.18  |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.51 | 73.23 | 15.91 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.39 | 72.52 | 15.56 |      | 80.0  |         |
|           |                                                                   | Z | 3.54 | 78.13 | 17.88 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.94 | 60.00 | 7.68  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.93 | 60.00 | 7.62  |      | 80.0  |         |
|           |                                                                   | Z | 0.91 | 60.00 | 7.68  |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.97 | 60.00 | 7.20  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.96 | 60.00 | 7.15  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.00 | 7.18  |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.50 | 73.21 | 15.89 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.37 | 72.50 | 15.54 |      | 80.0  |         |
|           |                                                                   | Z | 3.54 | 78.12 | 17.87 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.94 | 60.00 | 7.67  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.93 | 60.00 | 7.61  |      | 80.0  |         |
|           |                                                                   | Z | 0.91 | 60.00 | 7.66  |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.96 | 60.00 | 7.19  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.96 | 60.00 | 7.14  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.00 | 7.16  |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.50 | 73.17 | 15.87 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.37 | 72.47 | 15.52 |      | 80.0  |         |
|           |                                                                   | Z | 3.52 | 78.07 | 17.84 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.94 | 60.00 | 7.67  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.93 | 60.00 | 7.61  |      | 80.0  |         |
|           |                                                                   | Z | 0.91 | 60.00 | 7.66  |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.96 | 60.00 | 7.19  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.95 | 60.00 | 7.14  |      | 80.0  |         |
|           |                                                                   | Z | 0.93 | 60.00 | 7.16  |      | 80.0  |         |

|           |                                                                     |   |      |       |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.94 | 60.00 | 7.65  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.93 | 60.00 | 7.59  |      | 80.0 |         |
|           |                                                                     | Z | 0.91 | 60.00 | 7.64  |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.96 | 60.00 | 7.18  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.96 | 60.00 | 7.13  |      | 80.0 |         |
|           |                                                                     | Z | 0.93 | 60.00 | 7.15  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.82 | 75.02 | 18.32 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.62 | 74.21 | 18.05 |      | 80.0 |         |
|           |                                                                     | Z | 4.46 | 77.72 | 19.42 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.25 | 69.58 | 14.47 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.17 | 69.32 | 14.47 |      | 80.0 |         |
|           |                                                                     | Z | 3.70 | 71.50 | 15.22 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.76 | 67.27 | 13.16 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.74 | 67.18 | 13.23 |      | 80.0 |         |
|           |                                                                     | Z | 3.01 | 68.58 | 13.68 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.20 | 67.37 | 14.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.35 | 68.14 | 14.78 |      | 80.0 |         |
|           |                                                                     | Z | 2.08 | 66.84 | 14.02 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.64 | 66.33 | 13.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.72 | 66.71 | 13.49 |      | 80.0 |         |
|           |                                                                     | Z | 2.71 | 66.89 | 13.39 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.59 | 65.86 | 12.96 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.68 | 66.27 | 13.30 |      | 80.0 |         |
|           |                                                                     | Z | 2.63 | 66.32 | 13.14 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.65 | 69.52 | 16.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.77 | 70.09 | 16.54 |      | 80.0 |         |
|           |                                                                     | Z | 2.52 | 69.04 | 16.02 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.73 | 66.83 | 14.56 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.83 | 67.27 | 14.87 |      | 80.0 |         |
|           |                                                                     | Z | 2.62 | 66.49 | 14.35 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.75 | 66.57 | 14.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.85 | 67.00 | 14.75 |      | 80.0 |         |
|           |                                                                     | Z | 2.64 | 66.24 | 14.22 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.11 | 69.87 | 17.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.21 | 70.31 | 17.35 |      | 80.0 |         |
|           |                                                                     | Z | 2.98 | 69.45 | 17.00 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.21 | 67.51 | 16.20 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.27 | 67.74 | 16.32 |      | 80.0 |         |
|           |                                                                     | Z | 3.12 | 67.26 | 16.07 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.31 | 67.44 | 16.19 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.37 | 67.66 | 16.31 |      | 80.0 |         |
|           |                                                                     | Z | 3.22 | 67.20 | 16.06 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.45 | 69.12 | 17.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.54 | 69.47 | 17.16 |      | 80.0 |         |
|           |                                                                     | Z | 3.34 | 68.78 | 16.91 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.61 | 67.20 | 16.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.67 | 67.39 | 16.51 |      | 80.0 |         |
|           |                                                                     | Z | 3.53 | 66.97 | 16.31 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.68 | 67.13 | 16.41 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.74 | 67.31 | 16.49 |      | 80.0 |         |
|           |                                                                      | Z | 3.60 | 66.91 | 16.30 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.65 | 70.25 | 17.36 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.77 | 70.66 | 17.50 |      | 80.0 |         |
|           |                                                                      | Z | 3.52 | 69.86 | 17.23 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.63 | 67.51 | 16.59 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.69 | 67.72 | 16.68 |      | 80.0 |         |
|           |                                                                      | Z | 3.55 | 67.26 | 16.48 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.72 | 67.34 | 16.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.78 | 67.53 | 16.64 |      | 80.0 |         |
|           |                                                                      | Z | 3.64 | 67.11 | 16.46 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.59 | 63.52 | 11.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.71 | 64.33 | 12.09 |      | 80.0 |         |
|           |                                                                      | Z | 1.49 | 63.03 | 11.17 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.40 | 60.13 | 8.74  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.50 | 60.76 | 9.30  |      | 80.0 |         |
|           |                                                                      | Z | 1.35 | 60.00 | 8.54  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.40 | 60.00 | 8.54  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.47 | 60.38 | 8.96  |      | 80.0 |         |
|           |                                                                      | Z | 1.37 | 60.00 | 8.41  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.81 | 69.52 | 16.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.92 | 70.00 | 16.81 |      | 80.0 |         |
|           |                                                                      | Z | 2.69 | 69.09 | 16.38 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.95 | 67.23 | 15.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.03 | 67.55 | 15.48 |      | 80.0 |         |
|           |                                                                      | Z | 2.85 | 66.94 | 15.08 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.01 | 67.14 | 15.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.09 | 67.47 | 15.39 |      | 80.0 |         |
|           |                                                                      | Z | 2.91 | 66.86 | 14.98 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.07 | 69.70 | 17.08 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.18 | 70.14 | 17.26 |      | 80.0 |         |
|           |                                                                      | Z | 2.95 | 69.28 | 16.91 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.19 | 67.42 | 16.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.25 | 67.66 | 16.27 |      | 80.0 |         |
|           |                                                                      | Z | 3.11 | 67.17 | 16.01 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.29 | 67.35 | 16.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.35 | 67.57 | 16.26 |      | 80.0 |         |
|           |                                                                      | Z | 3.20 | 67.11 | 16.00 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.63 | 70.12 | 17.29 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.74 | 70.54 | 17.44 |      | 80.0 |         |
|           |                                                                      | Z | 3.50 | 69.73 | 17.16 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.62 | 67.45 | 16.55 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.67 | 67.66 | 16.64 |      | 80.0 |         |
|           |                                                                      | Z | 3.53 | 67.20 | 16.44 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.71 | 67.28 | 16.52 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.77 | 67.47 | 16.60 |      | 80.0  |         |
|           |                                                                     | Z | 3.63 | 67.04 | 16.41 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.06 | 69.48 | 17.08 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.15 | 69.80 | 17.17 |      | 80.0  |         |
|           |                                                                     | Z | 3.94 | 69.18 | 16.98 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.13 | 67.43 | 16.69 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.18 | 67.63 | 16.75 |      | 80.0  |         |
|           |                                                                     | Z | 4.04 | 67.20 | 16.59 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.20 | 67.25 | 16.66 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 67.43 | 16.72 |      | 80.0  |         |
|           |                                                                     | Z | 4.11 | 67.04 | 16.57 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.13 | 70.56 | 17.37 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 70.98 | 17.50 |      | 80.0  |         |
|           |                                                                     | Z | 4.00 | 70.21 | 17.25 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.00 | 67.59 | 16.74 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.06 | 67.82 | 16.82 |      | 80.0  |         |
|           |                                                                     | Z | 3.91 | 67.34 | 16.64 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.05 | 67.28 | 16.67 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.10 | 67.48 | 16.74 |      | 80.0  |         |
|           |                                                                     | Z | 3.96 | 67.05 | 16.57 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.99 | 63.52 | 15.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.00 | 63.92 | 15.36 |      | 150.0 |         |
|           |                                                                     | Z | 0.99 | 63.44 | 14.93 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.65 | 71.87 | 18.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.77 | 75.38 | 20.23 |      | 150.0 |         |
|           |                                                                     | Z | 0.62 | 70.84 | 17.85 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.85 | 65.63 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87 | 66.42 | 16.38 |      | 150.0 |         |
|           |                                                                     | Z | 0.84 | 65.40 | 15.63 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.52 | 66.86 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 66.94 | 16.33 |      | 150.0 |         |
|           |                                                                     | Z | 4.50 | 66.86 | 16.25 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.70 | 67.07 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.73 | 67.16 | 16.44 |      | 150.0 |         |
|           |                                                                     | Z | 4.67 | 67.07 | 16.35 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.55 | 67.03 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.59 | 67.14 | 16.37 |      | 150.0 |         |
|           |                                                                     | Z | 4.52 | 67.02 | 16.28 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.49 | 67.03 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.52 | 67.14 | 16.36 |      | 150.0 |         |
|           |                                                                     | Z | 4.46 | 67.02 | 16.27 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.55 | 67.14 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 67.23 | 16.45 |      | 150.0 |         |
|           |                                                                     | Z | 4.52 | 67.13 | 16.36 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.44 | 67.02 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.47 | 67.12 | 16.31 |      | 150.0 |         |
|           |                                                            | Z | 4.41 | 67.03 | 16.23 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.49 | 67.05 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.52 | 67.14 | 16.41 |      | 150.0 |         |
|           |                                                            | Z | 4.46 | 67.05 | 16.33 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.49 | 66.12 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.51 | 66.21 | 16.02 |      | 150.0 |         |
|           |                                                            | Z | 4.46 | 66.13 | 15.94 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.65 | 66.47 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.68 | 66.57 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.62 | 66.46 | 16.07 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.57 | 66.44 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.61 | 66.54 | 16.10 |      | 150.0 |         |
|           |                                                            | Z | 4.54 | 66.43 | 16.01 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.59 | 66.45 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 66.56 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.56 | 66.44 | 16.04 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.59 | 66.45 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 66.56 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.56 | 66.44 | 16.04 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.57 | 66.54 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.61 | 66.66 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.54 | 66.52 | 16.05 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.44 | 66.40 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.47 | 66.53 | 16.09 |      | 150.0 |         |
|           |                                                            | Z | 4.41 | 66.38 | 15.98 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.60 | 66.51 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.63 | 66.61 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.57 | 66.51 | 16.04 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.12 | 66.51 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.14 | 66.61 | 16.16 |      | 150.0 |         |
|           |                                                            | Z | 5.10 | 66.50 | 16.09 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.19 | 66.69 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.21 | 66.78 | 16.23 |      | 150.0 |         |
|           |                                                            | Z | 5.16 | 66.67 | 16.17 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.06 | 66.65 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.08 | 66.75 | 16.20 |      | 150.0 |         |
|           |                                                            | Z | 5.03 | 66.64 | 16.13 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.12 | 66.61 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.14 | 66.71 | 16.18 |      | 150.0 |         |
|           |                                                            | Z | 5.09 | 66.59 | 16.11 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.20 | 66.61 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.23 | 66.72 | 16.22 |      | 150.0 |         |
|           |                                                            | Z | 5.17 | 66.59 | 16.15 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.13 | 66.62 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.16 | 66.73 | 16.24 |      | 150.0 |         |
|           |                                                            | Z | 5.10 | 66.59 | 16.16 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.11 | 66.51 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.13 | 66.61 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.08 | 66.49 | 16.10 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.26 | 66.57 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.29 | 66.67 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.23 | 66.56 | 16.15 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.33 | 66.59 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.36 | 66.69 | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 5.30 | 66.57 | 16.18 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.44 | 66.62 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.45 | 66.72 | 16.14 |      | 150.0 |         |
|           |                                                     | Z | 5.42 | 66.60 | 16.08 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.62 | 67.02 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.64 | 67.09 | 16.28 |      | 150.0 |         |
|           |                                                     | Z | 5.59 | 66.99 | 16.23 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.50 | 66.80 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.52 | 66.92 | 16.21 |      | 150.0 |         |
|           |                                                     | Z | 5.47 | 66.77 | 16.13 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.57 | 66.85 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.59 | 66.95 | 16.21 |      | 150.0 |         |
|           |                                                     | Z | 5.54 | 66.82 | 16.15 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 5.78 | 67.66 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.79 | 67.74 | 16.58 |      | 150.0 |         |
|           |                                                     | Z | 5.73 | 67.57 | 16.50 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.53 | 66.84 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.54 | 66.93 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.50 | 66.82 | 16.17 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.53 | 66.87 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.98 | 16.21 |      | 150.0 |         |
|           |                                                     | Z | 5.50 | 66.83 | 16.13 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.45 | 66.69 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.47 | 66.80 | 16.13 |      | 150.0 |         |
|           |                                                     | Z | 5.43 | 66.69 | 16.07 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.53 | 66.71 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.82 | 16.17 |      | 150.0 |         |
|           |                                                     | Z | 5.50 | 66.69 | 16.10 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.85 | 66.97 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.86 | 67.06 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.83 | 66.95 | 16.16 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.97 | 67.25 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.98 | 67.34 | 16.33 |      | 150.0 |         |
|           |                                                     | Z | 5.94 | 67.22 | 16.27 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.99 | 67.30 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.00 | 67.39 | 16.35 |      | 150.0 |         |
|           |                                                     | Z | 5.96 | 67.27 | 16.29 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.95 | 67.20 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.97 | 67.30 | 16.33 |      | 150.0 |         |
|           |                                                     | Z | 5.93 | 67.17 | 16.26 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.00 | 67.35 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.01 | 67.46 | 16.42 |      | 150.0 |         |
|           |                                                                 | Z | 5.97 | 67.32 | 16.35 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.00 | 67.21 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.01 | 67.32 | 16.39 |      | 150.0 |         |
|           |                                                                 | Z | 5.97 | 67.18 | 16.32 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 5.92 | 67.18 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.93 | 67.28 | 16.40 |      | 150.0 |         |
|           |                                                                 | Z | 5.89 | 67.15 | 16.34 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.03 | 67.51 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.05 | 67.63 | 16.58 |      | 150.0 |         |
|           |                                                                 | Z | 5.99 | 67.45 | 16.49 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.16 | 67.54 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.24 | 67.80 | 16.62 |      | 150.0 |         |
|           |                                                                 | Z | 6.09 | 67.38 | 16.42 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.84 | 66.87 | 16.39 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.86 | 66.95 | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 4.81 | 66.87 | 16.35 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.06 | 67.32 | 16.72 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.09 | 67.40 | 16.76 |      | 150.0 |         |
|           |                                                                 | Z | 5.03 | 67.32 | 16.69 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.90 | 67.15 | 16.53 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.25 | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 4.86 | 67.14 | 16.49 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.93 | 67.58 | 16.91 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.96 | 67.66 | 16.94 |      | 150.0 |         |
|           |                                                                 | Z | 4.90 | 67.58 | 16.88 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.80 | 66.88 | 16.26 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.83 | 66.98 | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 4.77 | 66.87 | 16.22 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.89 | 67.70 | 16.99 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.92 | 67.76 | 17.00 |      | 150.0 |         |
|           |                                                                 | Z | 4.87 | 67.71 | 16.96 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.92 | 67.54 | 16.91 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.95 | 67.61 | 16.94 |      | 150.0 |         |
|           |                                                                 | Z | 4.89 | 67.54 | 16.89 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.16 | 64.28 | 15.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.17 | 64.64 | 15.67 |      | 130.0 |         |
|           |                                                                 | Z | 1.15 | 64.08 | 15.27 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.18 | 64.84 | 15.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.19 | 65.22 | 16.04 |      | 130.0 |         |
|           |                                                                 | Z | 1.16 | 64.62 | 15.61 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.62 | 81.69 | 21.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 2.21 | 87.31 | 23.95 |      | 130.0 |         |
|           |                                                                 | Z | 1.35 | 78.93 | 20.83 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.28 | 70.51 | 18.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.33 | 71.36 | 19.17 |      | 130.0 |         |
|           |                                                                 | Z | 1.24 | 69.92 | 18.40 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.60 | 66.56 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.63 | 66.64 | 16.38 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.57 | 16.31 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.63 | 66.74 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.81 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 66.75 | 16.39 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.82 | 67.02 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.10 | 16.62 |      | 130.0 |         |
|           |                                                                 | Z | 4.79 | 67.02 | 16.55 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.73 | 67.20 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 67.27 | 16.73 |      | 130.0 |         |
|           |                                                                 | Z | 4.70 | 67.20 | 16.68 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.48 | 66.39 | 15.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.51 | 66.51 | 16.01 |      | 130.0 |         |
|           |                                                                 | Z | 4.45 | 66.37 | 15.90 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.52 | 66.43 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.54 | 16.03 |      | 130.0 |         |
|           |                                                                 | Z | 4.49 | 66.42 | 15.93 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.62 | 67.23 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 67.31 | 16.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.60 | 67.23 | 16.61 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.41 | 66.13 | 15.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 66.25 | 15.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.38 | 66.11 | 15.67 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.60 | 66.56 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.63 | 66.64 | 16.38 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.57 | 16.31 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.63 | 66.74 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.81 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 66.75 | 16.39 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.82 | 67.02 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.10 | 16.62 |      | 130.0 |         |
|           |                                                                 | Z | 4.79 | 67.02 | 16.55 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.73 | 67.20 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 67.27 | 16.73 |      | 130.0 |         |
|           |                                                                 | Z | 4.70 | 67.20 | 16.68 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.48 | 66.39 | 15.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.51 | 66.51 | 16.01 |      | 130.0 |         |
|           |                                                                 | Z | 4.45 | 66.37 | 15.90 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.52 | 66.43 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.55 | 66.54 | 16.03 |      | 130.0 |         |
|           |                                                                 | Z | 4.49 | 66.42 | 15.93 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.62 | 67.23 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 67.31 | 16.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.60 | 67.23 | 16.61 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.41 | 66.13 | 15.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 66.25 | 15.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.38 | 66.11 | 15.67 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.76 | 66.64 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.78 | 66.70 | 16.48 |      | 130.0 |         |
|           |                                                       | Z | 4.73 | 66.65 | 16.43 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.90 | 66.97 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 67.04 | 16.61 |      | 130.0 |         |
|           |                                                       | Z | 4.87 | 66.97 | 16.56 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.82 | 66.86 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.85 | 66.94 | 16.49 |      | 130.0 |         |
|           |                                                       | Z | 4.79 | 66.85 | 16.42 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.88 | 67.04 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.90 | 67.11 | 16.65 |      | 130.0 |         |
|           |                                                       | Z | 4.85 | 67.04 | 16.59 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.84 | 66.98 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.87 | 67.06 | 16.54 |      | 130.0 |         |
|           |                                                       | Z | 4.81 | 66.98 | 16.48 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.78 | 66.97 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.81 | 67.05 | 16.54 |      | 130.0 |         |
|           |                                                       | Z | 4.75 | 66.96 | 16.47 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.73 | 66.86 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.76 | 66.95 | 16.42 |      | 130.0 |         |
|           |                                                       | Z | 4.69 | 66.85 | 16.34 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.71 | 67.12 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.74 | 67.20 | 16.70 |      | 130.0 |         |
|           |                                                       | Z | 4.69 | 67.11 | 16.63 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.42 | 67.13 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.44 | 67.22 | 16.67 |      | 130.0 |         |
|           |                                                       | Z | 5.39 | 67.11 | 16.62 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.54 | 67.51 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.54 | 16.80 |      | 130.0 |         |
|           |                                                       | Z | 5.50 | 67.46 | 16.76 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.44 | 67.29 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.45 | 67.35 | 16.73 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.27 | 16.68 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.54 | 67.36 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.38 | 16.66 |      | 130.0 |         |
|           |                                                       | Z | 5.52 | 67.38 | 16.65 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.61 | 67.63 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.62 | 67.67 | 16.94 |      | 130.0 |         |
|           |                                                       | Z | 5.58 | 67.64 | 16.92 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.46 | 67.22 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.45 | 67.21 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 5.45 | 67.27 | 16.72 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.53 | 67.42 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.54 | 67.45 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.50 | 67.41 | 16.78 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.27 | 66.74 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.30 | 66.85 | 16.37 |      | 130.0 |         |
|           |                                                       | Z | 5.24 | 66.71 | 16.29 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.60 | 65.96 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.62 | 66.04 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.57 | 65.98 | 16.06 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.77 | 66.35 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.80 | 66.43 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 4.74 | 66.36 | 16.22 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.66 | 66.18 | 16.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.69 | 66.28 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.63 | 66.18 | 16.04 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.71 | 66.35 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.44 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 4.68 | 66.36 | 16.21 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.63 | 66.15 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.24 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.60 | 66.15 | 16.05 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.63 | 66.27 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.38 | 16.15 |      | 130.0 |         |
|           |                                                   | Z | 4.59 | 66.27 | 16.08 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.63 | 66.15 | 15.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.26 | 16.04 |      | 130.0 |         |
|           |                                                   | Z | 4.59 | 66.13 | 15.95 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.58 | 66.38 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.61 | 66.48 | 16.29 |      | 130.0 |         |
|           |                                                   | Z | 4.56 | 66.37 | 16.22 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.62 | 65.95 | 15.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.65 | 66.05 | 15.89 |      | 130.0 |         |
|           |                                                   | Z | 4.59 | 65.95 | 15.80 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.24 | 66.41 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.26 | 66.49 | 16.30 |      | 130.0 |         |
|           |                                                   | Z | 5.21 | 66.40 | 16.25 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.31 | 66.58 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.32 | 66.64 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 5.28 | 66.57 | 16.31 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.20 | 66.60 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.21 | 66.67 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.60 | 16.34 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.20 | 66.38 | 16.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.22 | 66.46 | 16.20 |      | 130.0 |         |
|           |                                                   | Z | 5.18 | 66.37 | 16.15 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.29 | 66.42 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.31 | 66.50 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 5.26 | 66.40 | 16.22 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.31 | 66.59 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.32 | 66.66 | 16.47 |      | 130.0 |         |
|           |                                                   | Z | 5.28 | 66.59 | 16.44 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.31 | 66.74 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.33 | 66.80 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 5.29 | 66.75 | 16.51 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.19 | 66.24 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.21 | 66.33 | 16.17 |      | 130.0 |         |
|           |                                                     | Z | 5.16 | 66.23 | 16.11 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.38 | 66.45 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.40 | 66.52 | 16.33 |      | 130.0 |         |
|           |                                                     | Z | 5.35 | 66.44 | 16.29 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 5.69 | 67.26 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.73 | 67.39 | 16.82 |      | 130.0 |         |
|           |                                                     | Z | 5.62 | 67.15 | 16.69 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.54 | 66.47 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.55 | 16.25 |      | 130.0 |         |
|           |                                                     | Z | 5.52 | 66.47 | 16.21 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 5.77 | 67.01 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.77 | 67.06 | 16.46 |      | 130.0 |         |
|           |                                                     | Z | 5.74 | 66.99 | 16.44 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.56 | 66.51 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.58 | 66.61 | 16.18 |      | 130.0 |         |
|           |                                                     | Z | 5.53 | 66.48 | 16.12 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.63 | 66.57 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.65 | 66.66 | 16.19 |      | 130.0 |         |
|           |                                                     | Z | 5.61 | 66.55 | 16.14 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.00 | 67.86 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.01 | 67.93 | 16.83 |      | 130.0 |         |
|           |                                                     | Z | 5.94 | 67.73 | 16.73 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 5.95 | 67.83 | 17.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.97 | 67.92 | 17.02 |      | 130.0 |         |
|           |                                                     | Z | 5.91 | 67.77 | 16.96 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 5.75 | 67.12 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.75 | 67.15 | 16.65 |      | 130.0 |         |
|           |                                                     | Z | 5.73 | 67.12 | 16.65 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.63 | 66.72 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.65 | 66.81 | 16.31 |      | 130.0 |         |
|           |                                                     | Z | 5.61 | 66.70 | 16.26 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.62 | 66.75 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.64 | 66.85 | 16.39 |      | 130.0 |         |
|           |                                                     | Z | 5.59 | 66.74 | 16.34 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.48 | 66.01 | 15.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.51 | 66.14 | 15.76 |      | 130.0 |         |
|           |                                                     | Z | 5.45 | 65.98 | 15.67 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.96 | 66.83 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.96 | 66.90 | 16.33 |      | 130.0 |         |
|           |                                                     | Z | 5.94 | 66.82 | 16.30 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.11 | 67.19 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.11 | 67.25 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 6.08 | 67.17 | 16.46 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.11 | 67.17 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.11 | 67.25 | 16.46 |      | 130.0 |         |
|           |                                                     | Z | 6.08 | 67.16 | 16.42 |      | 130.0 |         |

|           |                                                        |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.08  | 67.12 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.09  | 67.20 | 16.48 |      | 130.0 |         |
|           |                                                        | Z | 6.06  | 67.10 | 16.44 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.08  | 67.10 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.09  | 67.19 | 16.42 |      | 130.0 |         |
|           |                                                        | Z | 6.05  | 67.07 | 16.36 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.13  | 67.03 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.13  | 67.10 | 16.39 |      | 130.0 |         |
|           |                                                        | Z | 6.11  | 67.02 | 16.36 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.18  | 67.31 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.19  | 67.39 | 16.71 |      | 130.0 |         |
|           |                                                        | Z | 6.15  | 67.29 | 16.67 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.01  | 66.96 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.01  | 67.04 | 16.43 |      | 130.0 |         |
|           |                                                        | Z | 5.98  | 66.94 | 16.38 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.14  | 67.38 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.16  | 67.50 | 16.68 |      | 130.0 |         |
|           |                                                        | Z | 6.11  | 67.32 | 16.59 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.34  | 67.58 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.43  | 67.90 | 16.84 |      | 130.0 |         |
|           |                                                        | Z | 6.25  | 67.39 | 16.59 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 12.03 | 96.53 | 31.61 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 13.68 | 98.80 | 32.22 |      | 60.0  |         |
|           |                                                        | Z | 11.35 | 95.67 | 31.51 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 10.87 | 95.02 | 31.23 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 12.42 | 97.44 | 31.90 |      | 60.0  |         |
|           |                                                        | Z | 10.19 | 94.02 | 31.08 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.71  | 64.17 | 11.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.76  | 65.11 | 11.91 |      | 150.0 |         |
|           |                                                        | Z | 0.68  | 63.86 | 10.84 |      | 150.0 |         |

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



Accredited by the Swiss Accreditation Service (SAS)  
 The Swiss Accreditation Service is one of the signatories to the EA  
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-7406\_Apr17**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7406**

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

Calibration date: **April 18, 2017**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-17 (No. 217-02525)         | Apr-18                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| 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-16) | In house check: Oct-17 |

|                                                                                                                 |                              |                                          |                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------|
| Calibrated by:                                                                                                  | Name<br><b>Michael Weber</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:                                                                                                    | Name<br><b>Katja Pokovic</b> | Function<br><b>Technical Manager</b>     | Signature<br> |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                              |                                          | Issued: April 18, 2017                                                                             |



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Accreditation No.: **SCS 0108**

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Multilateral Agreement for the recognition of calibration certificates

## Glossary:

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

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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:7406

Manufactured: November 24, 2015  
Calibrated: April 18, 2017

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7406

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|-----------------------------------------------------------|----------|----------|----------|-----------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.47     | 0.42     | 0.45     | ± 10.1 %  |
| DCP (mV) <sup>B</sup>                                     | 99.5     | 98.3     | 95.1     |           |

### 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    | 138.9    | ±2.5 %                    |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 129.6    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 128.2    |                           |

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 | 48.83    | 366.9    | 36.13                       | 15.06                               | 1.101                               | 4.968    | 0.251                 | 0.437                 | 1.003 |
| Y | 19.57    | 145.7    | 35.6                        | 3.888                               | 0.704                               | 4.934    | 0                     | 0.021                 | 1.004 |
| Z | 45.42    | 343.9    | 36.58                       | 10.69                               | 0.846                               | 4.98     | 0                     | 0.36                  | 1.004 |

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:7406

### 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) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 600                  | 42.7                               | 0.88                            | 10.42   | 10.42   | 10.42   | 0.10               | 1.20                    | ± 13.3 %  |
| 750                  | 41.9                               | 0.89                            | 10.26   | 10.26   | 10.26   | 0.52               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.97    | 9.97    | 9.97    | 0.53               | 0.81                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.88    | 8.88    | 8.88    | 0.42               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.40    | 8.40    | 8.40    | 0.26               | 0.87                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.04    | 8.04    | 8.04    | 0.25               | 0.80                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.68    | 7.68    | 7.68    | 0.38               | 0.80                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.44    | 7.44    | 7.44    | 0.40               | 0.83                    | ± 12.0 %  |

<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:7406

### Calibration Parameter Determined in Body Tissue Simulating Media

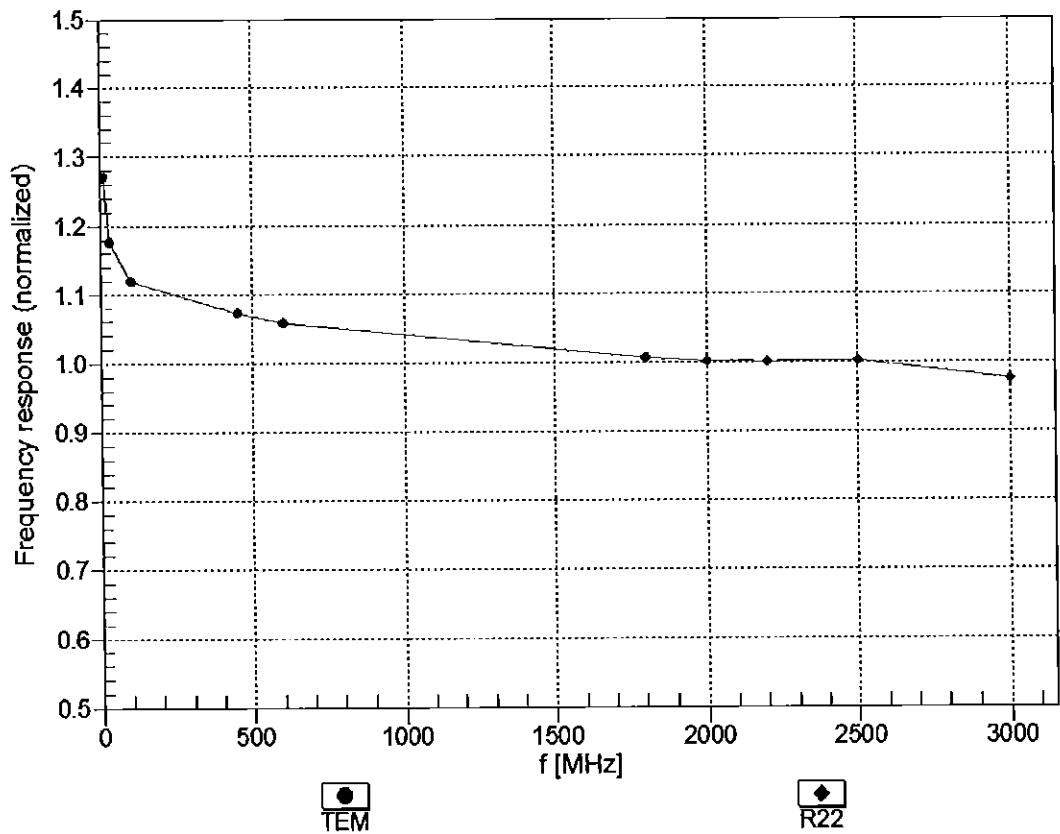
| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 600                  | 56.1                               | 0.95                            | 10.82   | 10.82   | 10.82   | 0.10               | 1.20                    | ± 13.3 %  |
| 750                  | 55.5                               | 0.96                            | 9.90    | 9.90    | 9.90    | 0.51               | 0.83                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.77    | 9.77    | 9.77    | 0.46               | 0.80                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.08    | 8.08    | 8.08    | 0.41               | 0.85                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.81    | 7.81    | 7.81    | 0.44               | 0.80                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.65    | 7.65    | 7.65    | 0.38               | 0.84                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.60    | 7.60    | 7.60    | 0.33               | 0.89                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.31    | 7.31    | 7.31    | 0.31               | 0.94                    | ± 12.0 %  |

<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.

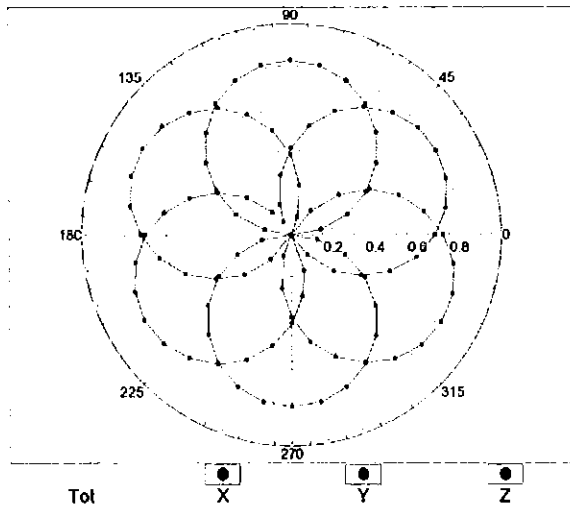
**Frequency Response of E-Field**  
(TEM-Cell:ifi110 EXX, Waveguide: R22)



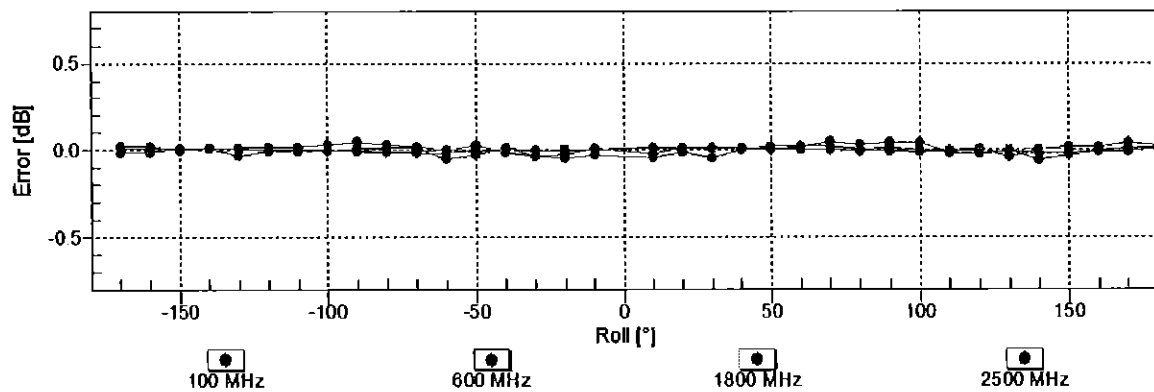
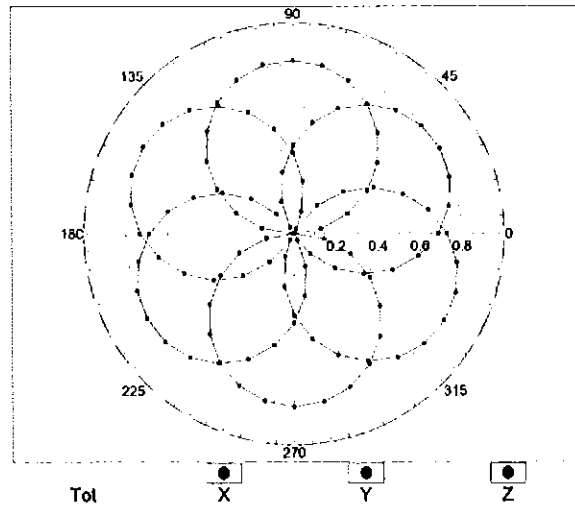
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

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

f=600 MHz, TEM



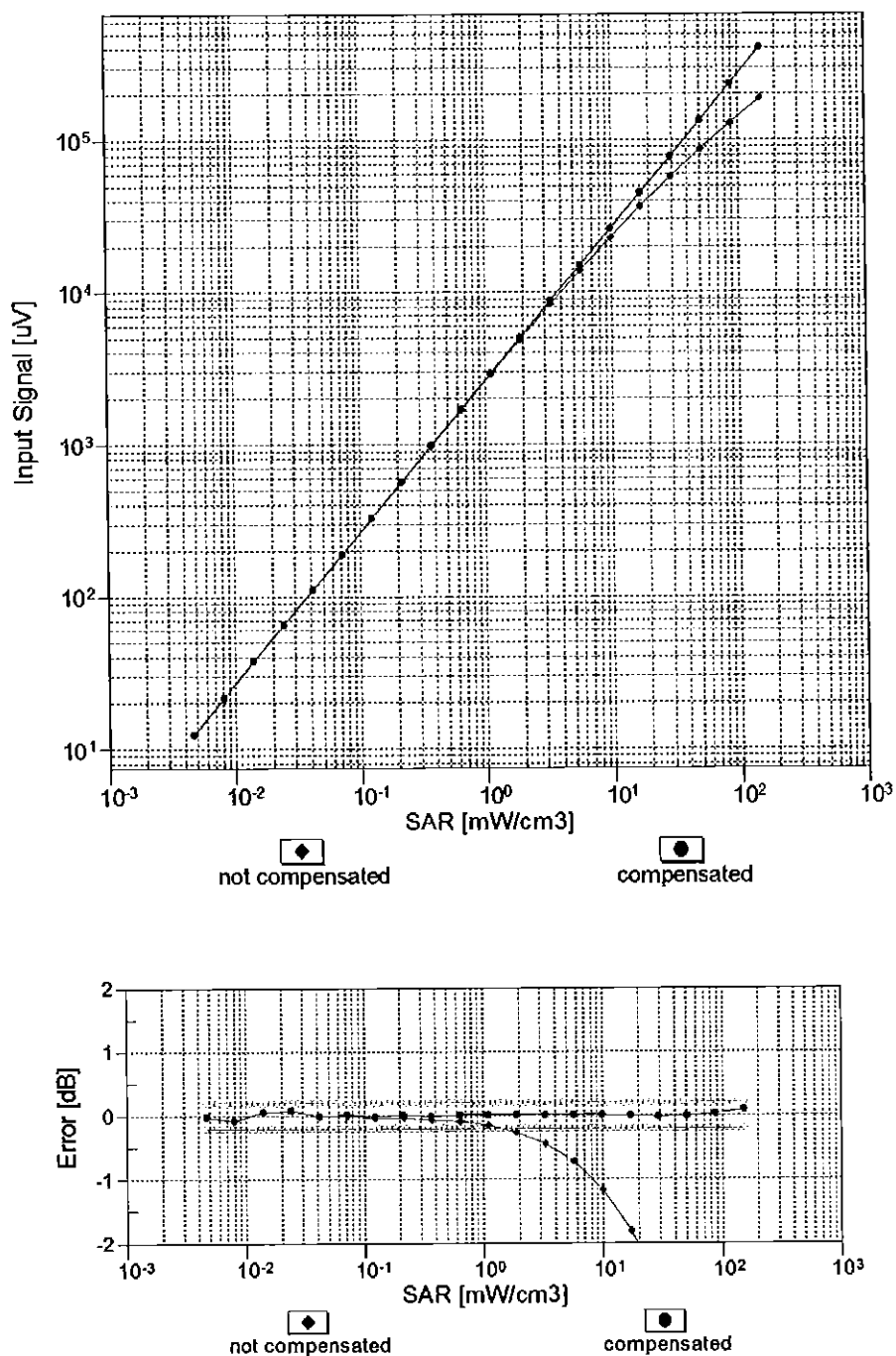
f=1800 MHz, R22



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

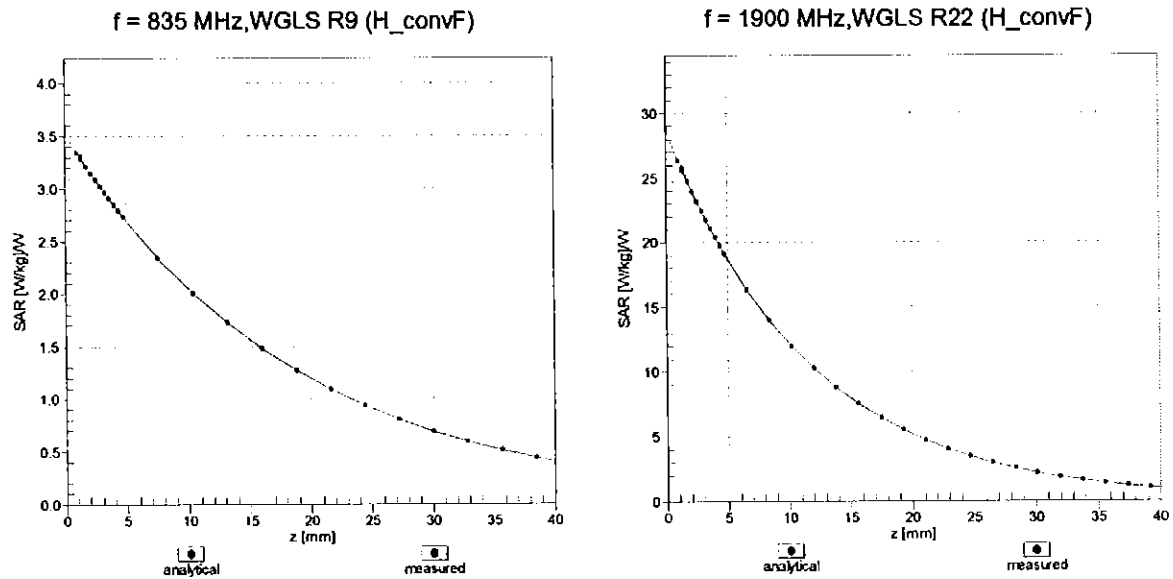
# Dynamic Range f(SAR<sub>head</sub>)

(TEM cell , f<sub>eval</sub>= 1900 MHz)



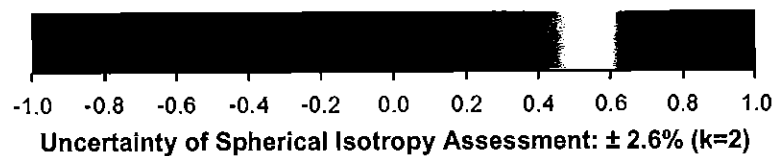
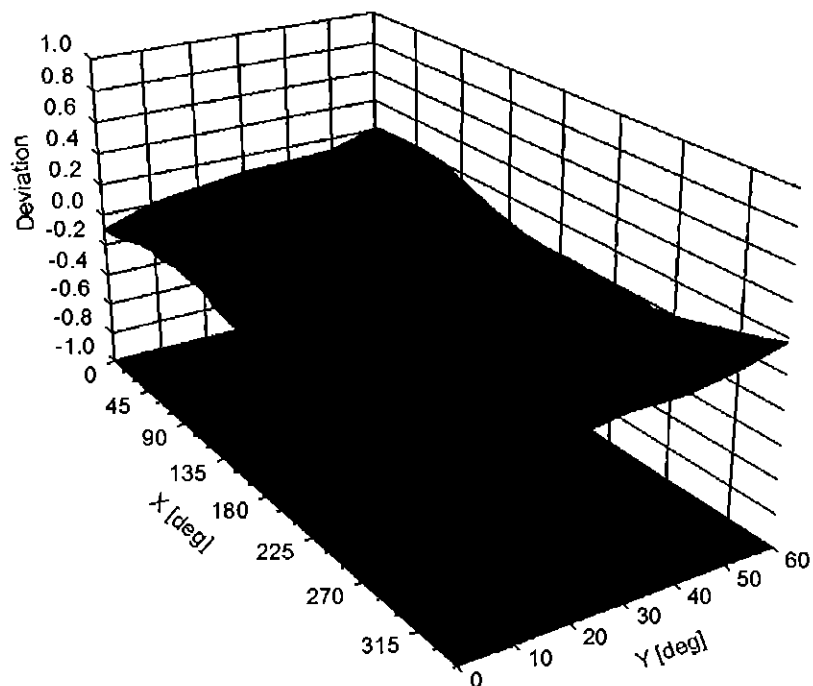
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  (k=2)

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7406

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 0          |
| 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    | 138.9    | $\pm 2.5\%$                      |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 129.6    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 128.2    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.73    | 66.22                  | 10.89 | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 2.50    | 65.91                  | 10.39 |         | 20.0     |                                  |
|               |                                               | Z | 2.53    | 65.90                  | 10.54 |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.16    | 69.53                  | 16.71 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.55    | 76.79                  | 19.47 |         | 150.0    |                                  |
|               |                                               | Z | 1.09    | 68.24                  | 15.96 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.21    | 64.38                  | 15.70 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.20    | 65.37                  | 16.13 |         | 150.0    |                                  |
|               |                                               | Z | 1.18    | 63.82                  | 15.33 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.87    | 66.56                  | 16.98 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.34    | 67.27                  | 16.96 |         | 150.0    |                                  |
|               |                                               | Z | 4.83    | 66.50                  | 16.95 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 9.99    | 82.36                  | 18.50 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 13.63   | 85.86                  | 18.88 |         | 50.0     |                                  |
|               |                                               | Z | 18.22   | 90.00                  | 20.60 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 8.49    | 80.16                  | 17.78 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 7.32    | 78.16                  | 16.31 |         | 50.0     |                                  |
|               |                                               | Z | 12.47   | 85.19                  | 19.17 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 18.19   | 89.55                  | 19.31 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 107.67                 | 23.01 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 108.36                 | 23.76 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 5.54    | 75.78                  | 27.74 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 8.76    | 92.32                  | 36.08 |         | 50.0     |                                  |
|               |                                               | Z | 4.44    | 70.37                  | 25.26 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 9.90    | 90.96                  | 31.21 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 5.70    | 81.99                  | 28.84 |         | 60.0     |                                  |
|               |                                               | Z | 7.85    | 86.95                  | 30.11 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 106.69                 | 22.59 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 110.45                 | 23.34 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 108.23                 | 22.93 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 107.01                 | 22.11 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 117.41                 | 25.54 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 109.42                 | 22.79 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 6.41    | 81.80                  | 26.70 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 3.86    | 73.74                  | 24.21 |         | 80.0     |                                  |
|               |                                               | Z | 5.17    | 78.18                  | 25.56 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 13.75   | 86.21                  | 17.68 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 8.41    | 82.76                  | 15.88 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 106.60                 | 22.49 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 106.42                 | 20.68 | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 120.98                 | 25.51 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 108.89                 | 21.35 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 113.18 | 22.62 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 160.14 | 39.75 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 117.70 | 24.05 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 6.02   | 81.27  | 20.17 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 2.18   | 67.67  | 12.00 |       | 70.0  |         |
|           |                                                     | Z | 5.24   | 80.63  | 20.08 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 2.82   | 75.11  | 17.10 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.75   | 61.82  | 7.32  |       | 100.0 |         |
|           |                                                     | Z | 2.29   | 73.13  | 16.28 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 2.17   | 73.18  | 16.32 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.59   | 61.24  | 6.75  |       | 100.0 |         |
|           |                                                     | Z | 1.79   | 71.19  | 15.39 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 7.12   | 83.90  | 21.15 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 2.26   | 68.25  | 12.32 |       | 70.0  |         |
|           |                                                     | Z | 6.24   | 83.43  | 21.13 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 2.66   | 74.41  | 16.79 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.71   | 61.41  | 7.10  |       | 100.0 |         |
|           |                                                     | Z | 2.15   | 72.41  | 15.96 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 2.20   | 73.62  | 16.61 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.60   | 61.36  | 6.93  |       | 100.0 |         |
|           |                                                     | Z | 1.80   | 71.51  | 15.64 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.76   | 78.09  | 18.48 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.37   | 60.00  | 5.64  |       | 150.0 |         |
|           |                                                     | Z | 2.22   | 74.97  | 16.93 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 7.43   | 78.80  | 16.12 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 8.26   | 80.71  | 16.15 |       | 50.0  |         |
|           |                                                     | Z | 12.01  | 84.59  | 17.75 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 100.49 | 0.10  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.04   | 60.00  | 50.13 |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 96.59  | 0.05  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 6.27   | 73.35  | 16.78 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 5.47   | 69.78  | 14.42 |       | 25.0  |         |
|           |                                                     | Z | 7.09   | 74.59  | 16.89 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 6.62   | 76.07  | 16.59 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 5.50   | 73.13  | 14.63 |       | 40.0  |         |
|           |                                                     | Z | 7.47   | 77.74  | 16.92 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 8.73   | 81.97  | 20.70 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 5.30   | 74.02  | 15.71 |       | 50.0  |         |
|           |                                                     | Z | 9.70   | 84.35  | 21.49 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.93   | 77.02  | 24.10 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.18   | 70.36  | 21.96 |       | 100.0 |         |
|           |                                                     | Z | 4.10   | 73.99  | 23.08 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.26   | 65.49  | 16.19 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.20   | 65.95  | 16.36 |       | 110.0 |         |
|           |                                                     | Z | 1.20   | 64.67  | 15.74 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 13.21  | 104.87 | 27.26 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 4.90   | 96.93  | 26.57 |       | 110.0 |         |
|           |                                                     | Z | 4.52   | 91.43  | 23.95 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 2.92 | 78.86 | 20.97 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 1.70 | 73.25 | 19.05 |      | 110.0 |         |
|           |                                                | Z | 2.19 | 75.27 | 19.88 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.70 | 66.68 | 16.55 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.18 | 67.42 | 16.56 |      | 100.0 |         |
|           |                                                | Z | 4.65 | 66.61 | 16.51 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.70 | 66.73 | 16.62 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.18 | 67.49 | 16.63 |      | 100.0 |         |
|           |                                                | Z | 4.66 | 66.66 | 16.57 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.99 | 66.98 | 16.82 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.36 | 67.60 | 16.75 |      | 100.0 |         |
|           |                                                | Z | 4.94 | 66.90 | 16.78 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.85 | 66.84 | 16.87 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.23 | 67.25 | 16.71 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 66.75 | 16.83 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.86 | 66.83 | 16.99 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.21 | 67.08 | 16.71 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 66.72 | 16.95 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.14 | 66.93 | 17.36 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.40 | 67.10 | 16.99 |      | 100.0 |         |
|           |                                                | Z | 5.08 | 66.86 | 17.34 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.19 | 66.98 | 17.55 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.52 | 67.37 | 17.35 |      | 100.0 |         |
|           |                                                | Z | 5.12 | 66.84 | 17.50 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.27 | 66.95 | 17.72 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.52 | 67.17 | 17.38 |      | 100.0 |         |
|           |                                                | Z | 5.20 | 66.85 | 17.69 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.96 | 66.60 | 17.22 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.44 | 67.29 | 17.20 |      | 100.0 |         |
|           |                                                | Z | 4.91 | 66.53 | 17.19 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.94 | 66.90 | 17.40 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.35 | 67.27 | 17.25 |      | 100.0 |         |
|           |                                                | Z | 4.87 | 66.79 | 17.36 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.99 | 67.03 | 17.67 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.41 | 67.49 | 17.58 |      | 100.0 |         |
|           |                                                | Z | 4.92 | 66.90 | 17.63 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.97 | 66.91 | 17.78 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.49 | 67.70 | 17.84 |      | 100.0 |         |
|           |                                                | Z | 4.90 | 66.77 | 17.74 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.02 | 67.05 | 18.08 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.55 | 67.83 | 18.12 |      | 90.0  |         |
|           |                                                | Z | 4.94 | 66.85 | 18.01 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.03 | 66.84 | 18.17 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.61 | 67.72 | 18.28 |      | 90.0  |         |
|           |                                                | Z | 4.95 | 66.65 | 18.12 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.06 | 66.90 | 18.26 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.65 | 67.85 | 18.42 |      | 90.0  |         |
|           |                                                | Z | 4.98 | 66.71 | 18.21 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.05   | 69.26  | 14.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.28   | 60.00  | 5.33  |      | 150.0 |         |
|           |                                                     | Z | 0.92   | 67.44  | 13.36 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.71   | 58.22  | 3.69  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.41   | 56.78  | 1.87  |      | 80.0  |         |
|           |                                                     | Z | 0.54   | 57.53  | 2.88  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 17.35  | 89.03  | 19.19 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 107.61 | 23.00 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 108.37 | 23.77 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.96   | 68.94  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.57   | 76.20  | 18.23 |      | 150.0 |         |
|           |                                                     | Z | 1.90   | 68.41  | 16.17 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.92   | 68.91  | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.54   | 76.26  | 18.30 |      | 150.0 |         |
|           |                                                     | Z | 1.86   | 68.36  | 16.14 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 9.94   | 91.01  | 31.21 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 5.73   | 82.09  | 28.86 |      | 60.0  |         |
|           |                                                     | Z | 7.90   | 87.03  | 30.13 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.32   | 71.40  | 17.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.95   | 71.83  | 18.07 |      | 150.0 |         |
|           |                                                     | Z | 3.20   | 70.72  | 17.06 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.33   | 67.99  | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.00   | 68.42  | 16.63 |      | 150.0 |         |
|           |                                                     | Z | 3.27   | 67.68  | 16.15 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.43   | 67.94  | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.10   | 68.46  | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 3.37   | 67.66  | 16.24 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 6.02   | 73.90  | 19.30 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.68   | 73.18  | 19.41 |      | 65.0  |         |
|           |                                                     | Z | 5.62   | 73.49  | 19.33 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 6.42   | 73.34  | 19.91 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.72   | 70.79  | 18.81 |      | 65.0  |         |
|           |                                                     | Z | 5.88   | 72.35  | 19.63 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 6.34   | 73.01  | 20.09 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.65   | 70.25  | 18.83 |      | 65.0  |         |
|           |                                                     | Z | 5.51   | 70.92  | 19.28 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.90   | 70.63  | 17.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.58   | 72.09  | 18.15 |      | 150.0 |         |
|           |                                                     | Z | 2.79   | 69.99  | 16.90 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.99   | 67.94  | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.69   | 69.27  | 16.60 |      | 150.0 |         |
|           |                                                     | Z | 2.93   | 67.61  | 16.08 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.37   | 69.82  | 16.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.17   | 72.66  | 17.66 |      | 150.0 |         |
|           |                                                     | Z | 2.27   | 69.17  | 16.53 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.75   | 69.14  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.72   | 72.65  | 17.00 |      | 150.0 |         |
|           |                                                     | Z | 2.68   | 68.77  | 16.52 |      | 150.0 |         |

|           |                                                |   |        |        |       |      |       |         |
|-----------|------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.11   | 67.90  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.81   | 69.41  | 16.67 |      | 150.0 |         |
|           |                                                | Z | 3.05   | 67.61  | 16.14 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.91   | 69.24  | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.80   | 72.45  | 16.91 |      | 150.0 |         |
|           |                                                | Z | 2.83   | 68.91  | 16.64 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.18   | 67.36  | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.69   | 67.54  | 16.80 |      | 150.0 |         |
|           |                                                | Z | 5.15   | 67.30  | 16.59 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.48   | 67.50  | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.94   | 67.76  | 16.85 |      | 150.0 |         |
|           |                                                | Z | 5.42   | 67.37  | 16.64 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.28   | 67.57  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.76   | 67.79  | 16.84 |      | 150.0 |         |
|           |                                                | Z | 5.24   | 67.47  | 16.61 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.14   | 67.22  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.68   | 67.44  | 16.77 |      | 150.0 |         |
|           |                                                | Z | 5.11   | 67.13  | 16.53 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.56   | 67.71  | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.92   | 67.65  | 16.80 |      | 150.0 |         |
|           |                                                | Z | 5.51   | 67.59  | 16.75 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.26   | 67.51  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.75   | 67.71  | 16.81 |      | 150.0 |         |
|           |                                                | Z | 5.23   | 67.43  | 16.60 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.47   | 67.94  | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.08   | 68.53  | 16.60 |      | 150.0 |         |
|           |                                                | Z | 3.41   | 67.65  | 16.15 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.59   | 68.02  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.23   | 68.87  | 16.85 |      | 150.0 |         |
|           |                                                | Z | 3.53   | 67.77  | 16.33 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.17   | 70.14  | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.93   | 72.39  | 15.85 |      | 150.0 |         |
|           |                                                | Z | 2.06   | 69.38  | 16.26 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.69   | 70.39  | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.77   | 67.88  | 12.65 |      | 150.0 |         |
|           |                                                | Z | 2.58   | 69.83  | 16.31 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.37   | 67.50  | 14.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.24   | 63.02  | 9.52  |      | 150.0 |         |
|           |                                                | Z | 2.27   | 66.99  | 14.42 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.43   | 67.32  | 13.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.41   | 60.00  | 4.04  |      | 150.0 |         |
|           |                                                | Z | 1.25   | 65.61  | 11.99 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.83   | 65.71  | 11.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 19.01  | 355.37 | 40.53 |      | 150.0 |         |
|           |                                                | Z | 1.52   | 64.01  | 10.27 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 2.14   | 67.65  | 12.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 123.11 | 63.95  | 2.67  |      | 150.0 |         |
|           |                                                | Z | 1.70   | 65.34  | 11.08 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.00 | 68.01 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.71 | 69.38 | 16.67 |      | 150.0 |         |
|           |                                            | Z | 2.94 | 67.68 | 16.14 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.12 | 67.96 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.83 | 69.51 | 16.73 |      | 150.0 |         |
|           |                                            | Z | 3.06 | 67.68 | 16.19 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 6.55 | 76.73 | 20.51 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.65 | 75.11 | 19.92 |      | 65.0  |         |
|           |                                            | Z | 5.91 | 75.87 | 20.37 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.92 | 73.14 | 19.51 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.14 | 70.22 | 17.64 |      | 65.0  |         |
|           |                                            | Z | 5.38 | 72.11 | 19.20 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 6.32 | 74.15 | 20.32 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.49 | 71.52 | 18.62 |      | 65.0  |         |
|           |                                            | Z | 5.75 | 73.14 | 20.03 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.44 | 70.37 | 17.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.24 | 73.24 | 17.96 |      | 150.0 |         |
|           |                                            | Z | 2.32 | 69.67 | 16.83 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.75 | 69.15 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.75 | 72.83 | 17.10 |      | 150.0 |         |
|           |                                            | Z | 2.68 | 68.79 | 16.53 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.05 | 70.60 | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.46 | 69.42 | 13.50 |      | 150.0 |         |
|           |                                            | Z | 1.92 | 69.63 | 16.11 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.25 | 68.47 | 15.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 0.93 | 61.53 | 7.91  |      | 150.0 |         |
|           |                                            | Z | 2.13 | 67.76 | 14.53 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.91 | 69.31 | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84 | 72.68 | 17.03 |      | 150.0 |         |
|           |                                            | Z | 2.84 | 68.99 | 16.70 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.39 | 69.07 | 15.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 0.94 | 61.44 | 7.84  |      | 150.0 |         |
|           |                                            | Z | 2.25 | 68.30 | 14.85 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.87 | 69.48 | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.53 | 71.06 | 17.44 |      | 150.0 |         |
|           |                                            | Z | 2.80 | 69.08 | 16.66 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.02 | 67.94 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.72 | 69.68 | 16.46 |      | 150.0 |         |
|           |                                            | Z | 2.96 | 67.65 | 16.13 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.13 | 68.07 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84 | 70.03 | 16.63 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.81 | 16.24 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.48 | 69.00 | 18.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.37 | 66.02 | 18.17 |      | 150.0 |         |
|           |                                            | Z | 3.30 | 68.39 | 18.62 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.17 | 71.58 | 19.19 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.29 | 67.15 | 18.12 |      | 150.0 |         |
|           |                                            | Z | 3.79 | 70.56 | 18.83 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.66 | 74.00 | 20.63 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48 | 69.25 | 19.67 |      | 150.0 |         |
|           |                                            | Z | 4.22 | 72.96 | 20.30 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.83 | 68.21 | 18.52 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.98 | 64.24 | 17.28 |      | 150.0 |         |
|           |                                            | Z | 2.57 | 66.84 | 17.97 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.78 | 73.87 | 20.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.95 | 66.56 | 18.68 |      | 150.0 |         |
|           |                                            | Z | 3.16 | 71.49 | 20.02 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.08 | 69.63 | 17.94 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.72 | 64.21 | 16.34 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 67.80 | 17.26 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 5.42 | 80.62 | 23.60 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 2.15 | 69.85 | 20.42 |      | 65.0  |         |
|           |                                            | Z | 4.45 | 78.76 | 23.36 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 8.97 | 86.28 | 23.79 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 2.26 | 72.00 | 19.72 |      | 65.0  |         |
|           |                                            | Z | 6.61 | 83.59 | 23.38 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 7.82 | 83.09 | 22.18 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 1.97 | 69.58 | 18.06 |      | 65.0  |         |
|           |                                            | Z | 5.22 | 78.89 | 21.15 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.79 | 67.90 | 18.26 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.97 | 64.07 | 17.08 |      | 150.0 |         |
|           |                                            | Z | 2.54 | 66.56 | 17.72 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.78 | 73.89 | 20.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.95 | 66.57 | 18.69 |      | 150.0 |         |
|           |                                            | Z | 3.16 | 71.52 | 20.03 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.82 | 68.06 | 18.36 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.98 | 64.12 | 17.12 |      | 150.0 |         |
|           |                                            | Z | 2.56 | 66.70 | 17.81 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.74 | 73.65 | 20.71 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.95 | 66.53 | 18.65 |      | 150.0 |         |
|           |                                            | Z | 3.13 | 71.32 | 19.91 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.39 | 71.59 | 19.23 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.82 | 65.39 | 17.45 |      | 150.0 |         |
|           |                                            | Z | 2.87 | 69.52 | 18.50 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 3.08 | 69.55 | 17.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.72 | 64.21 | 16.33 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 67.75 | 17.21 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.81 | 68.04 | 18.35 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.97 | 64.11 | 17.12 |      | 150.0 |         |
|           |                                            | Z | 2.56 | 66.68 | 17.80 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.73 | 73.62 | 20.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.95 | 66.51 | 18.64 |      | 150.0 |         |
|           |                                            | Z | 3.13 | 71.29 | 19.90 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 3.07 | 69.53 | 17.87 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.72 | 64.19 | 16.32 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 67.72 | 17.20 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.82 | 68.08 | 18.37 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.98 | 64.13 | 17.13 |      | 150.0 |         |
|           |                                               | Z | 2.56 | 66.72 | 17.83 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.75 | 73.70 | 20.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.96 | 66.56 | 18.67 |      | 150.0 |         |
|           |                                               | Z | 3.14 | 71.36 | 19.94 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 3.09 | 69.60 | 17.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.73 | 64.23 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 2.65 | 67.78 | 17.23 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.83 | 68.13 | 18.43 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.99 | 64.22 | 17.23 |      | 150.0 |         |
|           |                                               | Z | 2.57 | 66.77 | 17.89 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.88 | 74.41 | 21.15 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.98 | 66.86 | 18.93 |      | 150.0 |         |
|           |                                               | Z | 3.23 | 71.97 | 20.32 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 3.15 | 70.02 | 18.19 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 1.74 | 64.44 | 16.55 |      | 150.0 |         |
|           |                                               | Z | 2.70 | 68.15 | 17.50 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.57 | 66.79 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.14 | 67.99 | 16.59 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 66.72 | 16.28 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.75 | 67.11 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 68.00 | 16.68 |      | 150.0 |         |
|           |                                               | Z | 4.70 | 67.02 | 16.41 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.79 | 67.14 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.23 | 67.92 | 16.65 |      | 150.0 |         |
|           |                                               | Z | 4.74 | 67.05 | 16.43 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.58 | 66.86 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.11 | 67.92 | 16.54 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 66.78 | 16.30 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.76 | 67.13 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.23 | 68.00 | 16.69 |      | 150.0 |         |
|           |                                               | Z | 4.71 | 67.04 | 16.42 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.79 | 67.15 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 67.91 | 16.64 |      | 150.0 |         |
|           |                                               | Z | 4.74 | 67.07 | 16.44 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.53 | 66.88 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.08 | 68.06 | 16.58 |      | 150.0 |         |
|           |                                               | Z | 4.49 | 66.80 | 16.27 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.76 | 67.10 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 67.96 | 16.67 |      | 150.0 |         |
|           |                                               | Z | 4.71 | 67.01 | 16.41 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.80 | 67.08 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.25 | 67.92 | 16.65 |      | 150.0 |         |
|           |                                               | Z | 4.75 | 67.00 | 16.42 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.12 | 67.23 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.67 | 67.48 | 16.77 |      | 150.0 |         |
|           |                                               | Z | 5.09 | 67.14 | 16.52 |      | 150.0 |         |

|           |                                           |   |      |       |       |      |       |         |
|-----------|-------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.42 | 67.42 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.85 | 67.57 | 16.77 |      | 150.0 |         |
|           |                                           | Z | 5.40 | 67.40 | 16.67 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.17 | 67.35 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.71 | 67.68 | 16.79 |      | 150.0 |         |
|           |                                           | Z | 5.13 | 67.25 | 16.51 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.87 | 66.58 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.38 | 67.09 | 13.98 |      | 150.0 |         |
|           |                                           | Z | 2.82 | 66.38 | 15.50 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 9.50 | 87.34 | 24.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.34 | 72.67 | 20.10 |      | 65.0  |         |
|           |                                           | Z | 6.98 | 84.60 | 23.83 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 8.72 | 84.77 | 22.80 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.21 | 71.55 | 18.95 |      | 65.0  |         |
|           |                                           | Z | 6.78 | 83.00 | 22.65 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 7.70 | 87.24 | 26.02 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.35 | 71.63 | 21.26 |      | 65.0  |         |
|           |                                           | Z | 5.43 | 82.72 | 24.92 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 9.03 | 86.38 | 23.83 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.27 | 72.06 | 19.75 |      | 65.0  |         |
|           |                                           | Z | 6.67 | 83.69 | 23.42 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 8.29 | 83.90 | 22.43 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.13 | 70.90 | 18.60 |      | 65.0  |         |
|           |                                           | Z | 6.44 | 82.12 | 22.26 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 7.38 | 86.38 | 25.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.30 | 71.12 | 20.95 |      | 65.0  |         |
|           |                                           | Z | 5.24 | 81.97 | 24.56 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 9.02 | 86.36 | 23.83 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.27 | 72.05 | 19.75 |      | 65.0  |         |
|           |                                           | Z | 6.65 | 83.67 | 23.41 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 8.28 | 83.89 | 22.42 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.13 | 70.87 | 18.59 |      | 65.0  |         |
|           |                                           | Z | 6.43 | 82.09 | 22.25 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 7.10 | 85.54 | 25.23 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.26 | 70.79 | 20.68 |      | 65.0  |         |
|           |                                           | Z | 5.08 | 81.30 | 24.19 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 9.02 | 86.38 | 23.84 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.27 | 72.05 | 19.76 |      | 65.0  |         |
|           |                                           | Z | 6.65 | 83.69 | 23.42 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 8.34 | 83.99 | 22.45 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.15 | 70.97 | 18.63 |      | 65.0  |         |
|           |                                           | Z | 6.48 | 82.21 | 22.28 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 7.38 | 86.43 | 25.66 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.30 | 71.11 | 20.95 |      | 65.0  |         |
|           |                                           | Z | 5.24 | 82.00 | 24.57 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 9.00 | 86.33 | 23.82 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 2.26 | 72.03 | 19.74 |      | 65.0  |         |
|           |                                           | Z | 6.63 | 83.64 | 23.40 |      | 65.0  |         |

|           |                                            |   |      |       |       |      |      |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 8.25 | 83.86 | 22.41 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.13 | 70.85 | 18.59 |      | 65.0 |         |
|           |                                            | Z | 6.41 | 82.06 | 22.24 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 7.36 | 86.38 | 25.64 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.30 | 71.11 | 20.95 |      | 65.0 |         |
|           |                                            | Z | 5.22 | 81.96 | 24.56 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 7.65 | 78.90 | 23.86 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.15 | 74.63 | 23.03 |      | 65.0 |         |
|           |                                            | Z | 6.65 | 77.23 | 23.41 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.40 | 78.25 | 23.51 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.84 | 73.21 | 22.33 |      | 65.0 |         |
|           |                                            | Z | 6.07 | 75.38 | 22.52 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 6.13 | 75.50 | 23.22 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.68 | 71.24 | 22.18 |      | 65.0 |         |
|           |                                            | Z | 5.17 | 72.72 | 22.17 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 4.96 | 71.78 | 16.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.47 | 60.59 | 6.86  |      | 65.0 |         |
|           |                                            | Z | 4.27 | 70.57 | 15.63 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 4.90 | 71.39 | 16.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.47 | 60.48 | 6.73  |      | 65.0 |         |
|           |                                            | Z | 4.22 | 70.14 | 15.39 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 4.94 | 75.03 | 17.94 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.46 | 62.04 | 8.51  |      | 65.0 |         |
|           |                                            | Z | 4.23 | 73.72 | 17.40 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 4.94 | 72.43 | 17.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.10 | 63.24 | 9.90  |      | 65.0 |         |
|           |                                            | Z | 4.38 | 71.34 | 17.07 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 4.96 | 72.03 | 17.39 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.10 | 62.93 | 9.72  |      | 65.0 |         |
|           |                                            | Z | 4.40 | 70.92 | 16.87 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 6.07 | 78.35 | 20.13 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.33 | 67.19 | 12.94 |      | 65.0 |         |
|           |                                            | Z | 5.28 | 77.21 | 19.80 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 5.95 | 75.24 | 20.37 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.82 | 70.93 | 16.95 |      | 65.0 |         |
|           |                                            | Z | 5.33 | 74.14 | 20.02 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.69 | 73.28 | 19.20 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.45 | 68.36 | 15.25 |      | 65.0 |         |
|           |                                            | Z | 5.13 | 72.25 | 18.83 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 6.58 | 78.88 | 21.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.11 | 75.12 | 18.99 |      | 65.0 |         |
|           |                                            | Z | 5.80 | 77.80 | 21.07 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.80 | 72.65 | 19.29 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.01 | 69.64 | 16.98 |      | 65.0 |         |
|           |                                            | Z | 5.29 | 71.67 | 18.98 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 6.17 | 73.58 | 20.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.31 | 70.68 | 17.76 |      | 65.0 |         |
|           |                                            | Z | 5.63 | 72.60 | 19.71 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 6.29 | 76.23 | 20.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.41 | 74.27 | 19.43 |      | 65.0 |         |
|           |                                             | Z | 5.67 | 75.30 | 20.34 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 3.88 | 68.28 | 13.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.05 | 58.86 | 4.54  |      | 65.0 |         |
|           |                                             | Z | 3.28 | 66.95 | 12.85 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 3.85 | 67.85 | 13.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.05 | 58.75 | 4.36  |      | 65.0 |         |
|           |                                             | Z | 3.25 | 66.51 | 12.54 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 3.78 | 70.85 | 15.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.11 | 60.00 | 5.99  |      | 65.0 |         |
|           |                                             | Z | 3.18 | 69.35 | 14.58 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 5.33 | 73.49 | 18.59 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.60 | 65.55 | 12.14 |      | 65.0 |         |
|           |                                             | Z | 4.76 | 72.43 | 18.16 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 5.38 | 73.29 | 18.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.62 | 65.36 | 12.01 |      | 65.0 |         |
|           |                                             | Z | 4.80 | 72.23 | 18.08 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 6.02 | 77.89 | 20.37 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.87 | 69.70 | 14.96 |      | 65.0 |         |
|           |                                             | Z | 5.26 | 76.76 | 20.06 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 5.94 | 75.19 | 20.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.80 | 70.83 | 16.88 |      | 65.0 |         |
|           |                                             | Z | 5.32 | 74.09 | 19.98 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.68 | 73.26 | 19.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.45 | 68.35 | 15.24 |      | 65.0 |         |
|           |                                             | Z | 5.12 | 72.23 | 18.82 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 6.52 | 78.70 | 21.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.06 | 74.89 | 18.86 |      | 65.0 |         |
|           |                                             | Z | 5.75 | 77.62 | 20.97 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.92 | 73.14 | 19.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.14 | 70.23 | 17.64 |      | 65.0 |         |
|           |                                             | Z | 5.38 | 72.12 | 19.20 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 6.31 | 74.13 | 20.31 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.49 | 71.50 | 18.60 |      | 65.0 |         |
|           |                                             | Z | 5.75 | 73.12 | 20.02 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 6.54 | 76.70 | 20.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.64 | 75.05 | 19.89 |      | 65.0 |         |
|           |                                             | Z | 5.90 | 75.83 | 20.35 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.58 | 73.24 | 19.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.89 | 71.06 | 18.92 |      | 65.0 |         |
|           |                                             | Z | 6.05 | 72.29 | 19.72 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.56 | 72.88 | 19.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.96 | 70.94 | 18.86 |      | 65.0 |         |
|           |                                             | Z | 6.05 | 71.95 | 19.63 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.52 | 74.64 | 19.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.97 | 73.67 | 19.72 |      | 65.0 |         |
|           |                                             | Z | 5.98 | 73.87 | 19.71 |      | 65.0 |         |

|           |                                                                    |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.66   | 67.03  | 15.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.34   | 68.55  | 14.63 |      | 150.0 |         |
|           |                                                                    | Z | 2.62   | 66.83  | 15.48 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.75   | 69.41  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.02   | 74.91  | 18.12 |      | 150.0 |         |
|           |                                                                    | Z | 1.67   | 68.59  | 16.06 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 2.57   | 62.13  | 7.82  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.60   | 59.68  | 4.94  |      | 50.0  |         |
|           |                                                                    | Z | 2.26   | 61.44  | 7.11  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 4.26   | 69.41  | 14.02 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.29   | 61.84  | 7.55  |      | 50.0  |         |
|           |                                                                    | Z | 3.87   | 68.64  | 13.41 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 4.37   | 69.66  | 14.18 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.31   | 61.88  | 7.61  |      | 50.0  |         |
|           |                                                                    | Z | 3.97   | 68.90  | 13.58 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.85   | 72.31  | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.36   | 60.00  | 5.29  |      | 150.0 |         |
|           |                                                                    | Z | 1.58   | 70.17  | 14.63 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.02   | 68.88  | 14.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.28   | 60.00  | 5.31  |      | 150.0 |         |
|           |                                                                    | Z | 0.90   | 67.15  | 13.20 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.80   | 77.95  | 18.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.38   | 62.69  | 7.21  |      | 150.0 |         |
|           |                                                                    | Z | 1.39   | 74.03  | 16.69 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 5.83   | 95.82  | 25.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 100.00 | 107.50 | 20.43 |      | 150.0 |         |
|           |                                                                    | Z | 3.54   | 87.74  | 22.15 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 7.34   | 78.85  | 20.80 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 17.07  | 85.10  | 19.02 |      | 50.0  |         |
|           |                                                                    | Z | 7.80   | 80.40  | 21.29 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.92   | 70.76  | 17.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.60   | 72.27  | 18.25 |      | 150.0 |         |
|           |                                                                    | Z | 2.80   | 70.10  | 16.98 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.81   | 69.98  | 15.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.52   | 60.00  | 6.04  |      | 150.0 |         |
|           |                                                                    | Z | 1.63   | 68.52  | 14.51 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 2.47   | 68.97  | 14.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.58   | 60.00  | 4.73  |      | 150.0 |         |
|           |                                                                    | Z | 2.10   | 67.38  | 13.05 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.87   | 64.64  | 11.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.56   | 60.00  | 4.04  |      | 150.0 |         |
|           |                                                                    | Z | 1.64   | 63.62  | 10.41 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.64   | 64.99  | 17.32 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 3.97   | 66.09  | 16.87 |      | 50.0  |         |
|           |                                                                    | Z | 4.63   | 65.19  | 17.38 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.19   | 65.93  | 18.20 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.41   | 66.55  | 17.60 |      | 50.0  |         |
|           |                                                                    | Z | 5.08   | 65.68  | 18.02 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.95 | 65.59 | 18.05 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 66.62 | 17.49 |       | 50.0  |         |
|           |                                                                     | Z | 4.83 | 65.30 | 17.84 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.75 | 65.47 | 17.56 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.05 | 66.34 | 16.93 |       | 50.0  |         |
|           |                                                                     | Z | 4.65 | 65.23 | 17.38 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.49 | 67.73 | 19.78 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.71 | 67.28 | 16.67 |       | 35.0  |         |
|           |                                                                     | Z | 4.28 | 66.94 | 19.23 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.75 | 66.48 | 19.22 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.04 | 67.06 | 17.49 |       | 35.0  |         |
|           |                                                                     | Z | 4.60 | 65.99 | 18.86 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.67 | 66.74 | 19.24 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.93 | 66.99 | 17.33 |       | 35.0  |         |
|           |                                                                     | Z | 4.50 | 66.15 | 18.83 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.65 | 66.96 | 19.39 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.96 | 67.42 | 17.62 |       | 35.0  |         |
|           |                                                                     | Z | 4.47 | 66.34 | 18.96 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.80 | 66.69 | 19.36 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.07 | 67.23 | 17.68 |       | 35.0  |         |
|           |                                                                     | Z | 4.64 | 66.17 | 18.98 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.70 | 66.58 | 19.22 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.03 | 67.27 | 17.61 |       | 35.0  |         |
|           |                                                                     | Z | 4.55 | 66.06 | 18.84 |       | 35.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.29 | 69.98 | 16.90 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.90 | 70.63 | 17.62 |       | 150.0 |         |
|           |                                                                     | Z | 3.17 | 69.35 | 16.60 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 3.28 | 70.39 | 14.65 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 2.53 | 71.17 | 15.80 |       | 70.0  |         |
|           |                                                                     | Z | 2.85 | 70.12 | 14.78 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 4.28 | 75.46 | 19.37 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 4.79 | 80.62 | 22.06 |       | 30.0  |         |
|           |                                                                     | Z | 4.09 | 76.26 | 19.99 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.12 | 64.41 | 15.77 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.15 | 65.92 | 16.47 |       | 150.0 |         |
|           |                                                                     | Z | 1.10 | 63.89 | 15.39 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.61 | 66.72 | 16.37 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.09 | 67.47 | 16.39 |       | 150.0 |         |
|           |                                                                     | Z | 4.56 | 66.65 | 16.32 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.61 | 66.72 | 16.37 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.09 | 67.47 | 16.39 |       | 150.0 |         |
|           |                                                                     | Z | 4.56 | 66.65 | 16.32 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.74 | 67.15 | 16.46 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.09 | 67.65 | 16.48 |       | 150.0 |         |
|           |                                                                     | Z | 4.69 | 67.06 | 16.40 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.44 | 67.31 | 16.60 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.84 | 67.31 | 16.60 |       | 150.0 |         |
|           |                                                                     | Z | 5.42 | 67.27 | 16.57 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.69   | 67.61  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.24   | 67.76  | 16.80 |      | 150.0 |         |
|           |                                                                                | Z | 5.65   | 67.50  | 16.56 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 1.85   | 72.31  | 15.88 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 0.36   | 60.00  | 5.29  |      | 115.0 |         |
|           |                                                                                | Z | 1.58   | 70.17  | 14.63 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 1.85   | 72.31  | 15.88 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 0.36   | 60.00  | 5.29  |      | 115.0 |         |
|           |                                                                                | Z | 1.58   | 70.17  | 14.63 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 53.12  | 115.17 | 29.24 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 124.65 | 27.76 |      | 100.0 |         |
|           |                                                                                | Z | 28.83  | 109.13 | 27.97 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 6.68   | 83.50  | 19.17 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 1.37   | 73.33  | 16.57 |      | 80.0  |         |
|           |                                                                                | Z | 5.13   | 82.70  | 19.33 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.04   | 63.68  | 15.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.11   | 65.66  | 16.32 |      | 150.0 |         |
|           |                                                                                | Z | 1.04   | 63.32  | 15.03 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.58   | 66.83  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.11   | 67.78  | 16.58 |      | 150.0 |         |
|           |                                                                                | Z | 4.54   | 66.76  | 16.35 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.58   | 66.83  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.11   | 67.78  | 16.58 |      | 150.0 |         |
|           |                                                                                | Z | 4.54   | 66.76  | 16.35 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.57   | 67.00  | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.09   | 68.01  | 16.69 |      | 150.0 |         |
|           |                                                                                | Z | 4.53   | 66.93  | 16.39 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.59   | 66.94  | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.11   | 67.93  | 16.65 |      | 150.0 |         |
|           |                                                                                | Z | 4.55   | 66.87  | 16.38 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.71   | 66.93  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.19   | 67.82  | 16.64 |      | 150.0 |         |
|           |                                                                                | Z | 4.66   | 66.86  | 16.39 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.87   | 67.25  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.27   | 68.04  | 16.70 |      | 150.0 |         |
|           |                                                                                | Z | 4.82   | 67.16  | 16.50 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.79   | 67.20  | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.21   | 67.94  | 16.67 |      | 150.0 |         |
|           |                                                                                | Z | 4.74   | 67.12  | 16.47 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.39   | 67.48  | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.86   | 67.72  | 16.85 |      | 150.0 |         |
|           |                                                                                | Z | 5.35   | 67.38  | 16.64 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.40   | 67.51  | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.89   | 67.85  | 16.91 |      | 150.0 |         |
|           |                                                                                | Z | 5.37   | 67.47  | 16.68 |      | 150.0 |         |

|           |                                                                |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.41 | 67.49 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.87 | 67.71 | 16.83 |      | 150.0 |         |
|           |                                                                | Z | 5.37 | 67.41 | 16.64 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.48 | 71.93 | 18.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.16 | 77.88 | 19.19 |      | 150.0 |         |
|           |                                                                | Z | 4.43 | 71.96 | 18.79 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.27 | 67.46 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.63 | 68.54 | 16.11 |      | 150.0 |         |
|           |                                                                | Z | 4.21 | 67.36 | 16.35 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.56 | 67.28 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.98 | 68.25 | 16.55 |      | 150.0 |         |
|           |                                                                | Z | 4.51 | 67.19 | 16.43 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.81 | 67.24 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.24 | 68.00 | 16.70 |      | 150.0 |         |
|           |                                                                | Z | 4.76 | 67.15 | 16.49 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.67 | 73.09 | 18.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.20 | 74.62 | 16.81 |      | 150.0 |         |
|           |                                                                | Z | 4.61 | 73.09 | 18.84 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 6.37 | 82.80 | 18.90 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 1.33 | 72.76 | 16.26 |      | 80.0  |         |
|           |                                                                | Z | 4.91 | 82.00 | 19.05 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.58 | 67.63 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.52 | 66.35 | 12.95 |      | 150.0 |         |
|           |                                                                | Z | 3.50 | 67.43 | 15.64 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.11 | 67.25 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.54 | 68.41 | 16.05 |      | 150.0 |         |
|           |                                                                | Z | 4.05 | 67.14 | 16.22 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.38 | 67.12 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.87 | 68.13 | 16.50 |      | 150.0 |         |
|           |                                                                | Z | 4.33 | 67.03 | 16.33 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.57 | 67.02 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.09 | 67.80 | 16.59 |      | 150.0 |         |
|           |                                                                | Z | 4.53 | 66.93 | 16.35 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.49 | 67.88 | 15.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.00 | 64.08 | 10.79 |      | 150.0 |         |
|           |                                                                | Z | 3.38 | 67.58 | 15.21 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.26 | 68.00 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.16 | 68.95 | 17.43 |      | 150.0 |         |
|           |                                                                | Z | 6.24 | 67.94 | 16.79 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.82 | 65.46 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.61 | 66.92 | 16.42 |      | 150.0 |         |
|           |                                                                | Z | 3.81 | 65.40 | 16.06 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.29 | 67.12 | 14.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 1.44 | 60.53 | 7.42  |      | 150.0 |         |
|           |                                                                | Z | 3.18 | 66.78 | 14.49 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.43 | 65.51 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.62 | 61.35 | 10.29 |      | 150.0 |         |
|           |                                                                | Z | 4.37 | 65.53 | 15.72 |      | 150.0 |         |

|           |                                                                   |   |       |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.04  | 71.02  | 17.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.96  | 84.00  | 22.92 |      | 150.0 |         |
|           |                                                                   | Z | 0.97  | 69.34  | 16.98 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.48  | 77.15  | 17.91 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.97  | 69.25  | 15.91 |      | 80.0  |         |
|           |                                                                   | Z | 2.58  | 75.48  | 17.77 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.03  | 60.33  | 8.14  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.21  | 55.42  | 3.53  |      | 80.0  |         |
|           |                                                                   | Z | 0.84  | 60.00  | 7.93  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.01  | 60.00  | 7.51  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 28.36 | 203.22 | 3.05  |      | 80.0  |         |
|           |                                                                   | Z | 0.86  | 60.00  | 7.39  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.64  | 73.32  | 15.98 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.75  | 66.12  | 13.77 |      | 80.0  |         |
|           |                                                                   | Z | 2.03  | 72.11  | 15.91 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.99  | 60.00  | 7.91  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 29.96 | 194.97 | 5.15  |      | 80.0  |         |
|           |                                                                   | Z | 0.84  | 60.00  | 7.86  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.01  | 60.00  | 7.46  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 30.98 | 196.96 | 1.83  |      | 80.0  |         |
|           |                                                                   | Z | 0.86  | 60.00  | 7.34  |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.77  | 73.96  | 16.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.77  | 66.65  | 14.10 |      | 80.0  |         |
|           |                                                                   | Z | 2.12  | 72.73  | 16.19 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.99  | 60.08  | 7.96  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.21  | 55.39  | 3.50  |      | 80.0  |         |
|           |                                                                   | Z | 0.84  | 60.00  | 7.88  |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.01  | 60.00  | 7.46  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 30.66 | 197.41 | 1.31  |      | 80.0  |         |
|           |                                                                   | Z | 0.86  | 60.00  | 7.34  |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.76  | 73.94  | 16.23 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.77  | 66.67  | 14.10 |      | 80.0  |         |
|           |                                                                   | Z | 2.11  | 72.72  | 16.18 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.99  | 60.05  | 7.93  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 29.34 | 196.18 | 6.49  |      | 80.0  |         |
|           |                                                                   | Z | 0.84  | 60.00  | 7.87  |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.01  | 60.00  | 7.45  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 30.49 | 197.73 | 1.27  |      | 80.0  |         |
|           |                                                                   | Z | 0.86  | 60.00  | 7.33  |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.76  | 73.90  | 16.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.77  | 66.63  | 14.08 |      | 80.0  |         |
|           |                                                                   | Z | 2.11  | 72.69  | 16.16 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.99  | 60.03  | 7.93  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 29.25 | 196.25 | 6.42  |      | 80.0  |         |
|           |                                                                   | Z | 0.84  | 60.00  | 7.87  |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.01  | 60.00  | 7.45  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 30.47 | 197.62 | 1.42  |      | 80.0  |         |
|           |                                                                   | Z | 0.86  | 60.00  | 7.33  |      | 80.0  |         |

|           |                                                                     |   |       |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.98  | 60.00  | 7.89  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 29.49 | 195.72 | 5.56  |      | 80.0 |         |
|           |                                                                     | Z | 0.84  | 60.00  | 7.84  |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 1.01  | 60.00  | 7.44  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 30.62 | 197.39 | 1.80  |      | 80.0 |         |
|           |                                                                     | Z | 0.86  | 60.00  | 7.32  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.88  | 74.90  | 18.39 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.49  | 77.92  | 19.26 |      | 80.0 |         |
|           |                                                                     | Z | 3.49  | 74.59  | 18.40 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.37  | 69.78  | 14.78 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.68  | 60.27  | 8.31  |      | 80.0 |         |
|           |                                                                     | Z | 2.92  | 69.11  | 14.47 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.92  | 67.65  | 13.55 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.66  | 60.00  | 7.51  |      | 80.0 |         |
|           |                                                                     | Z | 2.50  | 66.84  | 13.14 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.52  | 68.86  | 15.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.83  | 60.00  | 6.91  |      | 80.0 |         |
|           |                                                                     | Z | 2.14  | 67.39  | 14.41 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.86  | 67.07  | 13.71 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.05  | 60.00  | 5.62  |      | 80.0 |         |
|           |                                                                     | Z | 2.44  | 65.81  | 13.01 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.80  | 66.60  | 13.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.07  | 60.00  | 5.60  |      | 80.0 |         |
|           |                                                                     | Z | 2.40  | 65.34  | 12.79 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.96  | 70.85  | 16.91 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.17  | 62.58  | 10.56 |      | 80.0 |         |
|           |                                                                     | Z | 2.58  | 69.54  | 16.39 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.96  | 67.72  | 15.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.13  | 60.00  | 7.87  |      | 80.0 |         |
|           |                                                                     | Z | 2.66  | 66.76  | 14.61 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.97  | 67.43  | 14.99 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.16  | 60.00  | 7.81  |      | 80.0 |         |
|           |                                                                     | Z | 2.67  | 66.49  | 14.47 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.38  | 70.90  | 17.67 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.25  | 69.00  | 16.17 |      | 80.0 |         |
|           |                                                                     | Z | 3.02  | 69.76  | 17.29 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.39  | 68.12  | 16.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.32  | 66.16  | 14.18 |      | 80.0 |         |
|           |                                                                     | Z | 3.13  | 67.37  | 16.26 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.49  | 68.02  | 16.54 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.33  | 65.79  | 13.96 |      | 80.0 |         |
|           |                                                                     | Z | 3.23  | 67.30  | 16.25 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.68  | 69.90  | 17.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.62  | 68.57  | 16.67 |      | 80.0 |         |
|           |                                                                     | Z | 3.36  | 68.97  | 17.13 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.77  | 67.68  | 16.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.84  | 66.78  | 15.53 |      | 80.0 |         |
|           |                                                                     | Z | 3.53  | 67.02  | 16.47 |      | 80.0 |         |

|           |                                                                      |   |       |        |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.84  | 67.59  | 16.70 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.87  | 66.60  | 15.40 |      | 80.0 |         |
|           |                                                                      | Z | 3.60  | 66.95  | 16.45 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.93  | 71.14  | 17.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.77  | 69.47  | 17.23 |      | 80.0 |         |
|           |                                                                      | Z | 3.56  | 70.11  | 17.48 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.80  | 68.03  | 16.89 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.91  | 67.12  | 16.06 |      | 80.0 |         |
|           |                                                                      | Z | 3.55  | 67.32  | 16.64 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.89  | 67.83  | 16.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.99  | 66.99  | 16.00 |      | 80.0 |         |
|           |                                                                      | Z | 3.64  | 67.16  | 16.61 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.81  | 64.83  | 12.37 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.97  | 60.00  | 4.80  |      | 80.0 |         |
|           |                                                                      | Z | 1.52  | 63.38  | 11.47 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.56  | 60.98  | 9.46  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 19.60 | 209.65 | 15.97 |      | 80.0 |         |
|           |                                                                      | Z | 1.35  | 60.00  | 8.64  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.53  | 60.58  | 9.11  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 17.31 | 229.94 | 5.52  |      | 80.0 |         |
|           |                                                                      | Z | 1.37  | 60.00  | 8.51  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.10  | 70.67  | 17.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.60  | 65.48  | 12.91 |      | 80.0 |         |
|           |                                                                      | Z | 2.73  | 69.49  | 16.71 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.16  | 67.97  | 15.73 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.34  | 60.72  | 9.33  |      | 80.0 |         |
|           |                                                                      | Z | 2.88  | 67.15  | 15.31 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.22  | 67.87  | 15.63 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.33  | 60.43  | 9.07  |      | 80.0 |         |
|           |                                                                      | Z | 2.93  | 67.06  | 15.21 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.34  | 70.72  | 17.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.22  | 68.78  | 16.06 |      | 80.0 |         |
|           |                                                                      | Z | 2.98  | 69.59  | 17.20 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.37  | 68.03  | 16.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.30  | 66.01  | 14.09 |      | 80.0 |         |
|           |                                                                      | Z | 3.11  | 67.28  | 16.20 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.47  | 67.93  | 16.49 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.31  | 65.66  | 13.87 |      | 80.0 |         |
|           |                                                                      | Z | 3.21  | 67.21  | 16.19 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.90  | 71.01  | 17.71 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.75  | 69.34  | 17.15 |      | 80.0 |         |
|           |                                                                      | Z | 3.53  | 69.98  | 17.41 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.78  | 67.97  | 16.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.90  | 67.04  | 16.01 |      | 80.0 |         |
|           |                                                                      | Z | 3.53  | 67.26  | 16.61 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.87 | 67.76 | 16.81 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 2.97 | 66.90 | 15.95 |      | 80.0  |         |
|           |                                                                     | Z | 3.63 | 67.09 | 16.57 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.29 | 70.13 | 17.39 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.19 | 68.68 | 17.10 |      | 80.0  |         |
|           |                                                                     | Z | 3.96 | 69.31 | 17.16 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.29 | 67.87 | 16.94 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.35 | 66.74 | 16.37 |      | 80.0  |         |
|           |                                                                     | Z | 4.04 | 67.22 | 16.73 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.35 | 67.67 | 16.90 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.43 | 66.67 | 16.35 |      | 80.0  |         |
|           |                                                                     | Z | 4.11 | 67.05 | 16.70 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.41 | 71.37 | 17.74 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.20 | 69.31 | 17.29 |      | 80.0  |         |
|           |                                                                     | Z | 4.03 | 70.41 | 17.47 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.17 | 68.08 | 17.01 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.27 | 66.70 | 16.44 |      | 80.0  |         |
|           |                                                                     | Z | 3.92 | 67.38 | 16.78 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.20 | 67.73 | 16.93 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.34 | 66.53 | 16.38 |      | 80.0  |         |
|           |                                                                     | Z | 3.96 | 67.07 | 16.71 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.01 | 63.92 | 15.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.07 | 66.05 | 16.52 |      | 150.0 |         |
|           |                                                                     | Z | 1.00 | 63.52 | 15.11 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.80 | 76.03 | 20.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.63 | 90.26 | 26.95 |      | 150.0 |         |
|           |                                                                     | Z | 0.67 | 72.14 | 18.59 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.88 | 66.52 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.99 | 69.72 | 18.29 |      | 150.0 |         |
|           |                                                                     | Z | 0.86 | 65.67 | 15.91 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.57 | 66.91 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.10 | 67.98 | 16.63 |      | 150.0 |         |
|           |                                                                     | Z | 4.53 | 66.84 | 16.34 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.75 | 67.14 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.20 | 68.09 | 16.69 |      | 150.0 |         |
|           |                                                                     | Z | 4.70 | 67.05 | 16.44 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.61 | 67.11 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.07 | 67.97 | 16.60 |      | 150.0 |         |
|           |                                                                     | Z | 4.56 | 67.01 | 16.37 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.54 | 67.11 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.00 | 67.83 | 16.53 |      | 150.0 |         |
|           |                                                                     | Z | 4.49 | 67.00 | 16.36 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.60 | 67.20 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.00 | 67.82 | 16.53 |      | 150.0 |         |
|           |                                                                     | Z | 4.55 | 67.12 | 16.45 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.49 | 67.08 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.01 | 68.16 | 16.68 |      | 150.0 |         |
|           |                                                            | Z | 4.44 | 67.01 | 16.31 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.54 | 67.12 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 3.97 | 67.92 | 16.63 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 67.03 | 16.42 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.54 | 66.18 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.09 | 67.26 | 16.38 |      | 150.0 |         |
|           |                                                            | Z | 4.50 | 66.10 | 16.02 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.71 | 66.55 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.14 | 67.37 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.45 | 16.16 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.63 | 66.51 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.11 | 67.44 | 16.42 |      | 150.0 |         |
|           |                                                            | Z | 4.58 | 66.41 | 16.10 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.64 | 66.53 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.10 | 67.35 | 16.39 |      | 150.0 |         |
|           |                                                            | Z | 4.59 | 66.42 | 16.13 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.64 | 66.53 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.10 | 67.35 | 16.39 |      | 150.0 |         |
|           |                                                            | Z | 4.59 | 66.42 | 16.13 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.64 | 66.64 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.06 | 67.36 | 16.37 |      | 150.0 |         |
|           |                                                            | Z | 4.58 | 66.51 | 16.14 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.50 | 66.50 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 3.98 | 67.28 | 16.33 |      | 150.0 |         |
|           |                                                            | Z | 4.44 | 66.37 | 16.07 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.65 | 66.58 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.11 | 67.58 | 16.46 |      | 150.0 |         |
|           |                                                            | Z | 4.60 | 66.49 | 16.13 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.17 | 66.59 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.70 | 66.96 | 16.45 |      | 150.0 |         |
|           |                                                            | Z | 5.13 | 66.48 | 16.18 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.24 | 66.77 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.70 | 67.00 | 16.48 |      | 150.0 |         |
|           |                                                            | Z | 5.20 | 66.68 | 16.26 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.11 | 66.73 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 67.02 | 16.47 |      | 150.0 |         |
|           |                                                            | Z | 5.07 | 66.63 | 16.22 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.17 | 66.69 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.71 | 67.16 | 16.55 |      | 150.0 |         |
|           |                                                            | Z | 5.13 | 66.59 | 16.20 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.26 | 66.70 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.72 | 66.92 | 16.45 |      | 150.0 |         |
|           |                                                            | Z | 5.21 | 66.59 | 16.24 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.19 | 66.73 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.66 | 66.87 | 16.46 |      | 150.0 |         |
|           |                                                            | Z | 5.14 | 66.60 | 16.27 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.16 | 66.59 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 4.67 | 66.90 | 16.44 |      | 150.0 |         |
|           |                                                     | Z | 5.12 | 66.48 | 16.19 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.31 | 66.65 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 4.80 | 66.97 | 16.49 |      | 150.0 |         |
|           |                                                     | Z | 5.27 | 66.55 | 16.25 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.39 | 66.68 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 4.85 | 67.01 | 16.54 |      | 150.0 |         |
|           |                                                     | Z | 5.34 | 66.57 | 16.28 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.48 | 66.68 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.09 | 66.77 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 5.46 | 66.59 | 16.17 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.68 | 67.10 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.20 | 67.11 | 16.51 |      | 150.0 |         |
|           |                                                     | Z | 5.65 | 67.02 | 16.33 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.55 | 66.89 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.10 | 66.84 | 16.37 |      | 150.0 |         |
|           |                                                     | Z | 5.51 | 66.77 | 16.22 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.62 | 66.93 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.22 | 67.15 | 16.53 |      | 150.0 |         |
|           |                                                     | Z | 5.58 | 66.82 | 16.24 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 5.87 | 67.85 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.13 | 67.04 | 16.46 |      | 150.0 |         |
|           |                                                     | Z | 5.82 | 67.71 | 16.65 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.58 | 66.91 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.24 | 67.42 | 16.68 |      | 150.0 |         |
|           |                                                     | Z | 5.55 | 66.83 | 16.27 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.58 | 66.96 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.07 | 66.77 | 16.33 |      | 150.0 |         |
|           |                                                     | Z | 5.54 | 66.84 | 16.23 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.50 | 66.76 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.09 | 66.99 | 16.43 |      | 150.0 |         |
|           |                                                     | Z | 5.47 | 66.66 | 16.15 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.58 | 66.78 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.11 | 66.82 | 16.35 |      | 150.0 |         |
|           |                                                     | Z | 5.54 | 66.67 | 16.18 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.89 | 67.03 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.98 | 16.39 |      | 150.0 |         |
|           |                                                     | Z | 5.87 | 66.94 | 16.25 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.02 | 67.33 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.61 | 67.17 | 16.48 |      | 150.0 |         |
|           |                                                     | Z | 5.99 | 67.24 | 16.37 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.04 | 67.38 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.65 | 67.28 | 16.52 |      | 150.0 |         |
|           |                                                     | Z | 6.02 | 67.29 | 16.39 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.01 | 67.28 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.60 | 67.14 | 16.47 |      | 150.0 |         |
|           |                                                     | Z | 5.97 | 67.17 | 16.35 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.05 | 67.44 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.55 | 67.02 | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 6.02 | 67.33 | 16.45 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.05 | 67.29 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.59 | 67.02 | 16.46 |      | 150.0 |         |
|           |                                                                 | Z | 6.01 | 67.17 | 16.41 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 5.97 | 67.26 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.53 | 66.98 | 16.46 |      | 150.0 |         |
|           |                                                                 | Z | 5.94 | 67.16 | 16.44 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.09 | 67.63 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.59 | 67.19 | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 6.05 | 67.48 | 16.60 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.29 | 67.85 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.86 | 67.78 | 16.84 |      | 150.0 |         |
|           |                                                                 | Z | 6.16 | 67.47 | 16.55 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.89 | 66.92 | 16.50 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.37 | 67.73 | 16.65 |      | 150.0 |         |
|           |                                                                 | Z | 4.84 | 66.85 | 16.44 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.12 | 67.38 | 16.83 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.53 | 68.17 | 16.98 |      | 150.0 |         |
|           |                                                                 | Z | 5.07 | 67.30 | 16.78 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.95 | 67.23 | 16.64 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.37 | 67.89 | 16.75 |      | 150.0 |         |
|           |                                                                 | Z | 4.90 | 67.13 | 16.58 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.98 | 67.65 | 17.02 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.44 | 68.37 | 17.19 |      | 150.0 |         |
|           |                                                                 | Z | 4.94 | 67.56 | 16.97 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.85 | 66.96 | 16.38 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.20 | 67.26 | 16.25 |      | 150.0 |         |
|           |                                                                 | Z | 4.80 | 66.87 | 16.32 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.94 | 67.75 | 17.08 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 68.76 | 17.43 |      | 150.0 |         |
|           |                                                                 | Z | 4.90 | 67.68 | 17.04 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.98 | 67.59 | 17.02 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.39 | 68.33 | 17.21 |      | 150.0 |         |
|           |                                                                 | Z | 4.93 | 67.52 | 16.97 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.19 | 64.81 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.17 | 65.59 | 16.16 |      | 130.0 |         |
|           |                                                                 | Z | 1.15 | 64.12 | 15.44 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.21 | 65.43 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.18 | 66.27 | 16.61 |      | 130.0 |         |
|           |                                                                 | Z | 1.17 | 64.67 | 15.80 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 2.73 | 90.43 | 24.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 2.86 | 95.55 | 28.03 |      | 130.0 |         |
|           |                                                                 | Z | 1.51 | 81.07 | 21.85 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.39 | 72.10 | 19.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.35 | 73.36 | 20.46 |      | 130.0 |         |
|           |                                                                 | Z | 1.26 | 70.26 | 18.73 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.65 | 66.62 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.13 | 67.33 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 66.55 | 16.40 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.68 | 66.80 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 67.68 | 16.63 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 66.73 | 16.48 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.88 | 67.09 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.28 | 67.86 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.83 | 67.01 | 16.65 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.78 | 67.27 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.22 | 68.05 | 16.92 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 67.18 | 16.77 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.53 | 66.48 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.91 | 66.80 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 66.37 | 16.01 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.58 | 66.51 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.89 | 66.66 | 15.78 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.42 | 16.03 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.68 | 67.30 | 16.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 68.18 | 16.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.63 | 67.21 | 16.71 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.47 | 66.23 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.80 | 66.45 | 15.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.42 | 66.12 | 15.78 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.65 | 66.62 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.13 | 67.33 | 16.45 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 66.55 | 16.40 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.68 | 66.80 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 67.68 | 16.63 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 66.73 | 16.48 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.88 | 67.09 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.28 | 67.86 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.83 | 67.01 | 16.65 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.78 | 67.27 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.22 | 68.05 | 16.92 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 67.18 | 16.77 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.53 | 66.48 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.91 | 66.80 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 66.37 | 16.01 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.58 | 66.51 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.89 | 66.66 | 15.78 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.42 | 16.03 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.68 | 67.30 | 16.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 68.18 | 16.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.63 | 67.21 | 16.71 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.47 | 66.23 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.80 | 66.45 | 15.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.42 | 66.12 | 15.78 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.80 | 66.69 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.29 | 67.48 | 16.65 |      | 130.0 |         |
|           |                                                       | Z | 4.76 | 66.62 | 16.52 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.96 | 67.02 | 16.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.35 | 67.66 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 4.91 | 66.95 | 16.65 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.87 | 66.92 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.28 | 67.58 | 16.60 |      | 130.0 |         |
|           |                                                       | Z | 4.82 | 66.84 | 16.52 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.93 | 67.10 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.32 | 67.69 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 4.88 | 67.02 | 16.68 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.90 | 67.04 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.28 | 67.67 | 16.66 |      | 130.0 |         |
|           |                                                       | Z | 4.85 | 66.97 | 16.57 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.83 | 67.04 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.19 | 67.48 | 16.58 |      | 130.0 |         |
|           |                                                       | Z | 4.78 | 66.95 | 16.57 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.78 | 66.93 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.17 | 67.42 | 16.44 |      | 130.0 |         |
|           |                                                       | Z | 4.73 | 66.84 | 16.44 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.77 | 67.20 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.23 | 67.87 | 16.85 |      | 130.0 |         |
|           |                                                       | Z | 4.72 | 67.09 | 16.72 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.48 | 67.23 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.11 | 68.05 | 17.18 |      | 130.0 |         |
|           |                                                       | Z | 5.44 | 67.15 | 16.74 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.60 | 67.61 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.02 | 67.79 | 17.02 |      | 130.0 |         |
|           |                                                       | Z | 5.57 | 67.57 | 16.91 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.49 | 67.38 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.99 | 67.77 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.46 | 67.31 | 16.81 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.59 | 67.40 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.00 | 67.54 | 16.84 |      | 130.0 |         |
|           |                                                       | Z | 5.57 | 67.40 | 16.76 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.67 | 67.72 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.02 | 67.69 | 17.07 |      | 130.0 |         |
|           |                                                       | Z | 5.64 | 67.68 | 17.04 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.49 | 67.21 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.00 | 67.56 | 16.96 |      | 130.0 |         |
|           |                                                       | Z | 5.49 | 67.27 | 16.82 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.59 | 67.50 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.95 | 67.41 | 16.89 |      | 130.0 |         |
|           |                                                       | Z | 5.56 | 67.47 | 16.92 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.33 | 66.83 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.96 | 67.58 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.28 | 66.72 | 16.40 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.64 | 66.02 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.16 | 66.91 | 16.36 |      | 130.0 |         |
|           |                                                   | Z | 4.60 | 65.95 | 16.15 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.83 | 66.42 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.22 | 67.08 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 4.78 | 66.34 | 16.31 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.71 | 66.26 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.14 | 66.94 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 4.67 | 66.17 | 16.14 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.77 | 66.42 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.18 | 67.09 | 16.43 |      | 130.0 |         |
|           |                                                   | Z | 4.72 | 66.34 | 16.31 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.68 | 66.22 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.10 | 66.87 | 16.26 |      | 130.0 |         |
|           |                                                   | Z | 4.63 | 66.13 | 16.14 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.69 | 66.36 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.03 | 66.77 | 16.18 |      | 130.0 |         |
|           |                                                   | Z | 4.63 | 66.26 | 16.18 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.69 | 66.24 | 16.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.05 | 66.68 | 16.06 |      | 130.0 |         |
|           |                                                   | Z | 4.63 | 66.13 | 16.05 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.64 | 66.46 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.09 | 67.10 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 4.59 | 66.36 | 16.31 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.68 | 66.02 | 15.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.06 | 66.66 | 15.97 |      | 130.0 |         |
|           |                                                   | Z | 4.62 | 65.94 | 15.90 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.29 | 66.48 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.74 | 16.52 |      | 130.0 |         |
|           |                                                   | Z | 5.26 | 66.40 | 16.35 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.36 | 66.65 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.75 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 5.33 | 66.60 | 16.42 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.25 | 66.67 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.72 | 66.85 | 16.58 |      | 130.0 |         |
|           |                                                   | Z | 5.21 | 66.61 | 16.44 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.26 | 66.46 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.77 | 66.81 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 5.22 | 66.38 | 16.26 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.35 | 66.50 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.60 | 16.41 |      | 130.0 |         |
|           |                                                   | Z | 5.31 | 66.41 | 16.33 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.35 | 66.65 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.83 | 66.85 | 16.68 |      | 130.0 |         |
|           |                                                   | Z | 5.32 | 66.59 | 16.54 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.37 | 66.81 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.79 | 66.84 | 16.68 |      | 130.0 |         |
|           |                                                   | Z | 5.33 | 66.74 | 16.61 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.24 | 66.32 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 4.72 | 66.50 | 16.34 |      | 130.0 |         |
|           |                                                     | Z | 5.20 | 66.24 | 16.22 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.43 | 66.52 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 4.88 | 66.72 | 16.52 |      | 130.0 |         |
|           |                                                     | Z | 5.40 | 66.45 | 16.39 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 5.79 | 67.47 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.00 | 67.06 | 16.76 |      | 130.0 |         |
|           |                                                     | Z | 5.70 | 67.26 | 16.85 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.59 | 66.53 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.18 | 66.57 | 16.44 |      | 130.0 |         |
|           |                                                     | Z | 5.56 | 66.46 | 16.31 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 5.83 | 67.09 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.32 | 67.03 | 16.66 |      | 130.0 |         |
|           |                                                     | Z | 5.81 | 67.05 | 16.57 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.62 | 66.61 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.14 | 66.45 | 16.28 |      | 130.0 |         |
|           |                                                     | Z | 5.58 | 66.50 | 16.22 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.69 | 66.66 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.30 | 66.90 | 16.51 |      | 130.0 |         |
|           |                                                     | Z | 5.66 | 66.57 | 16.25 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.12 | 68.14 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.23 | 66.85 | 16.50 |      | 130.0 |         |
|           |                                                     | Z | 6.06 | 67.97 | 16.95 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 6.03 | 67.99 | 17.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.35 | 67.44 | 17.00 |      | 130.0 |         |
|           |                                                     | Z | 5.98 | 67.84 | 17.09 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 5.80 | 67.18 | 16.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.50 | 67.84 | 17.20 |      | 130.0 |         |
|           |                                                     | Z | 5.78 | 67.15 | 16.76 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.68 | 66.78 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.16 | 66.59 | 16.40 |      | 130.0 |         |
|           |                                                     | Z | 5.65 | 66.69 | 16.35 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.67 | 66.82 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.24 | 66.99 | 16.65 |      | 130.0 |         |
|           |                                                     | Z | 5.63 | 66.72 | 16.43 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.54 | 66.10 | 15.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.01 | 65.92 | 15.79 |      | 130.0 |         |
|           |                                                     | Z | 5.50 | 65.99 | 15.78 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.00 | 66.89 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.65 | 66.81 | 16.48 |      | 130.0 |         |
|           |                                                     | Z | 5.98 | 66.82 | 16.39 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.16 | 67.27 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.75 | 67.13 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 6.14 | 67.21 | 16.57 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.15 | 67.24 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.76 | 67.17 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 6.13 | 67.17 | 16.53 |      | 130.0 |         |

|           |                                                        |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.13  | 67.20 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.71  | 67.01 | 16.60 |      | 130.0 |         |
|           |                                                        | Z | 6.11  | 67.11 | 16.54 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.13  | 67.19 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.60  | 66.69 | 16.38 |      | 130.0 |         |
|           |                                                        | Z | 6.11  | 67.10 | 16.47 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.18  | 67.10 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.73  | 66.87 | 16.49 |      | 130.0 |         |
|           |                                                        | Z | 6.17  | 67.05 | 16.47 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.23  | 67.38 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.75  | 67.07 | 16.76 |      | 130.0 |         |
|           |                                                        | Z | 6.20  | 67.30 | 16.77 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.06  | 67.04 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.58  | 66.67 | 16.43 |      | 130.0 |         |
|           |                                                        | Z | 6.04  | 66.97 | 16.50 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.22  | 67.52 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.68  | 67.01 | 16.62 |      | 130.0 |         |
|           |                                                        | Z | 6.17  | 67.37 | 16.71 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.52  | 68.03 | 16.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.07  | 67.95 | 17.07 |      | 130.0 |         |
|           |                                                        | Z | 6.34  | 67.53 | 16.76 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 13.12 | 97.57 | 31.83 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 3.90  | 78.39 | 26.30 |      | 60.0  |         |
|           |                                                        | Z | 9.88  | 93.63 | 31.05 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 12.04 | 96.40 | 31.56 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 3.54  | 76.66 | 25.68 |      | 60.0  |         |
|           |                                                        | Z | 8.93  | 92.04 | 30.63 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.77  | 65.21 | 11.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.27  | 60.00 | 4.67  |      | 150.0 |         |
|           |                                                        | Z | 0.71  | 64.17 | 11.12 |      | 150.0 |         |

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



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-3589\_Jan17**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3589**

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: **January 13, 2017**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| 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-16) | In house check: Oct-17 |

|                                                                                                                 |                              |                                          |                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------|
| Calibrated by:                                                                                                  | Name<br><b>Michael Weber</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:                                                                                                    | <b>Katja Pokovic</b>         | <b>Technical Manager</b>                 |               |
|                                                                                                                 |                              |                                          | Issued: January 16, 2017                                                                           |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                              |                                          |                                                                                                    |



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

### 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, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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  $E^2$ -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:3589

Manufactured: March 30, 2006  
Calibrated: January 13, 2017

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3589

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.45     | 0.39     | 0.39     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 103.1    | 103.4    | 99.2     |               |

### 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    | 161.2    | $\pm 3.3 \%$              |
|               |                                                     | Y | 0.0     | 0.0                          | 1.0  |         | 173.7    |                           |
|               |                                                     | Z | 0.0     | 0.0                          | 1.0  |         | 135.7    |                           |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)                | X | 4.33    | 68.3                         | 14.2 | 10.00   | 44.8     | $\pm 1.9 \%$              |
|               |                                                     | Y | 3.03    | 64.9                         | 12.6 |         | 44.0     |                           |
|               |                                                     | Z | 1.75    | 59.1                         | 10.5 |         | 48.9     |                           |
| 10062-<br>CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)            | X | 10.36   | 69.2                         | 21.9 | 8.68    | 126.5    | $\pm 2.7 \%$              |
|               |                                                     | Y | 10.35   | 68.8                         | 21.4 |         | 136.4    |                           |
|               |                                                     | Z | 10.74   | 70.2                         | 22.3 |         | 149.4    |                           |
| 10117-<br>CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)            | X | 10.30   | 69.0                         | 21.3 | 8.07    | 131.3    | $\pm 1.9 \%$              |
|               |                                                     | Y | 10.24   | 68.6                         | 20.9 |         | 140.6    |                           |
|               |                                                     | Z | 9.68    | 67.3                         | 20.2 |         | 105.8    |                           |
| 10196-<br>CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)             | X | 9.88    | 68.6                         | 21.2 | 8.10    | 125.0    | $\pm 2.2 \%$              |
|               |                                                     | Y | 9.95    | 68.5                         | 20.9 |         | 134.8    |                           |
|               |                                                     | Z | 9.28    | 67.0                         | 20.1 |         | 100.7    |                           |
| 10400-<br>AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle) | X | 10.17   | 68.9                         | 21.6 | 8.37    | 125.5    | $\pm 2.2 \%$              |
|               |                                                     | Y | 10.21   | 68.7                         | 21.1 |         | 134.8    |                           |
|               |                                                     | Z | 9.53    | 67.2                         | 20.4 |         | 100.7    |                           |
| 10401-<br>AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle) | X | 10.95   | 69.6                         | 21.9 | 8.60    | 134.0    | $\pm 2.5 \%$              |
|               |                                                     | Y | 10.86   | 69.1                         | 21.4 |         | 143.2    |                           |
|               |                                                     | Z | 10.34   | 67.9                         | 20.8 |         | 107.9    |                           |
| 10402-<br>AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle) | X | 11.11   | 70.0                         | 21.9 | 8.53    | 134.7    | $\pm 2.5 \%$              |
|               |                                                     | Y | 10.77   | 68.9                         | 21.1 |         | 141.7    |                           |
|               |                                                     | Z | 10.46   | 68.2                         | 20.7 |         | 107.7    |                           |

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<sup>2</sup>-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:3589

### 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) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 5250                 | 35.9                               | 4.71                            | 4.78    | 4.78    | 4.78    | 0.30               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.24    | 4.24    | 4.24    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.44    | 4.44    | 4.44    | 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:3589

### 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) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 5250                 | 48.9                               | 5.36                            | 4.19    | 4.19    | 4.19    | 0.40               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 3.82    | 3.82    | 3.82    | 0.40               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 3.83    | 3.83    | 3.83    | 0.50               | 1.90                    | ± 13.1 %  |

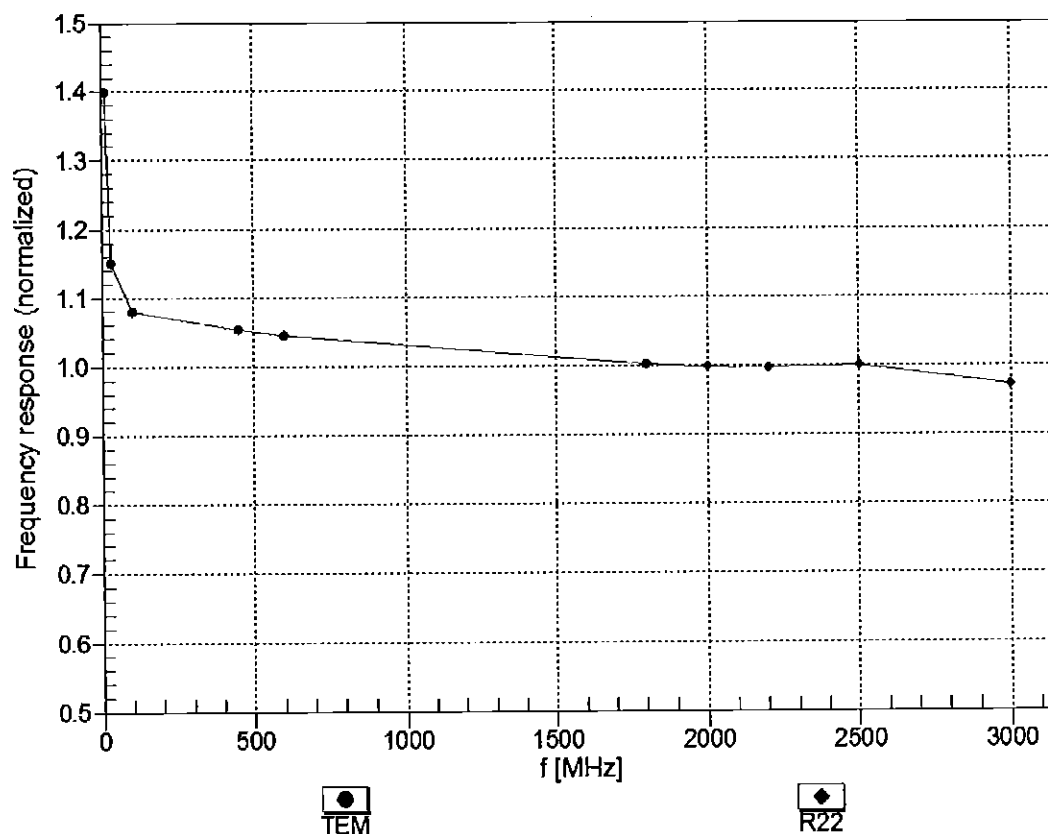
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

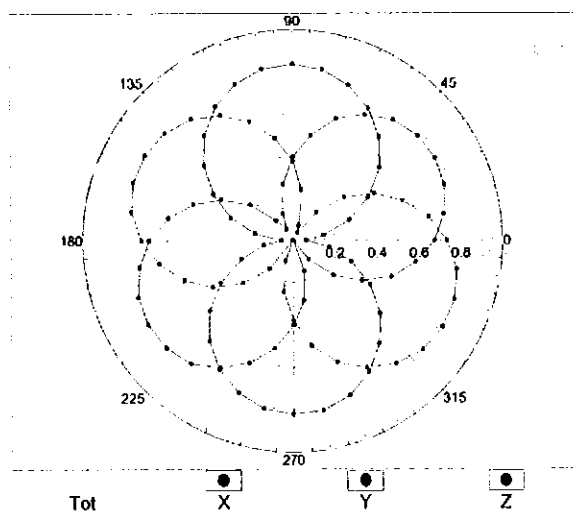
(TEM-Cell: ifi110 EXX, Waveguide: R22)



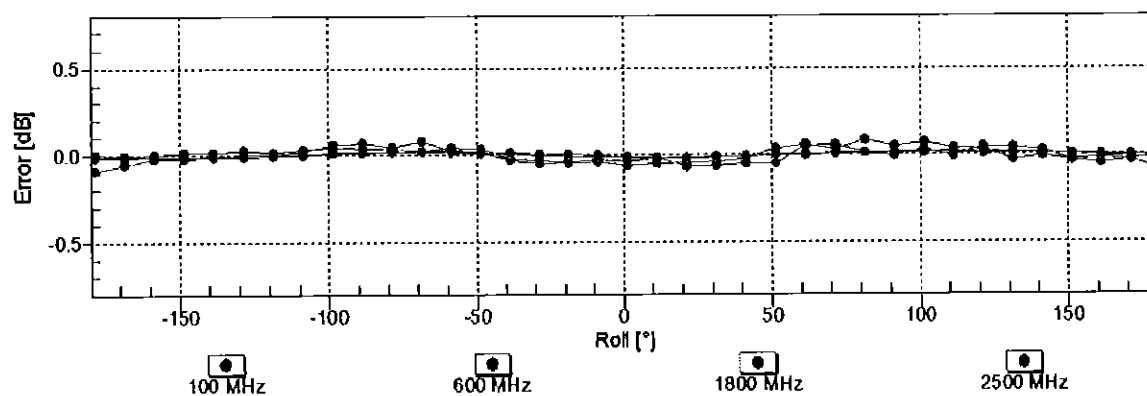
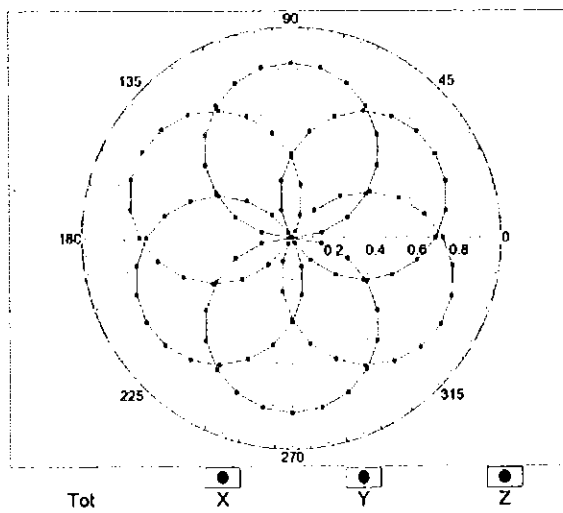
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz, TEM

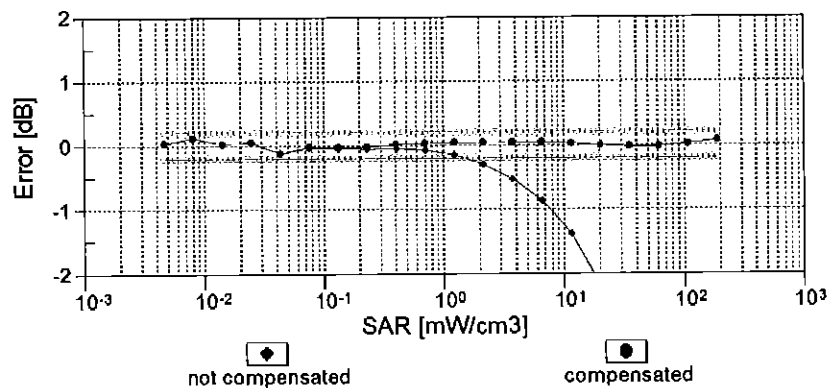
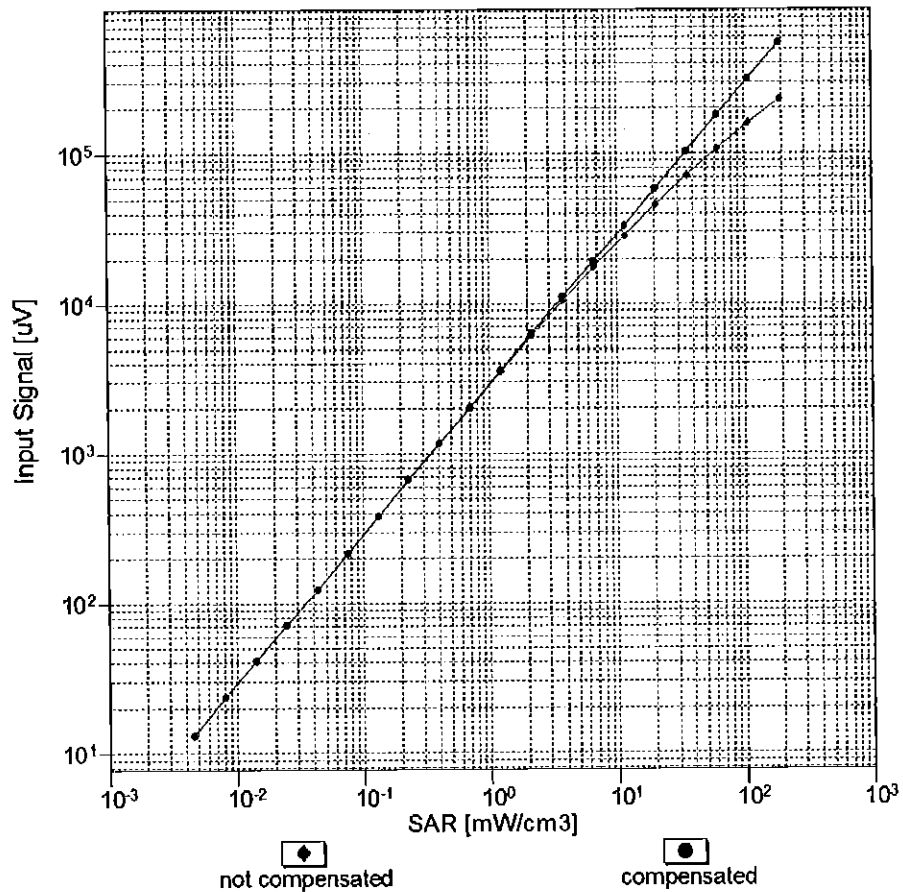


f=1800 MHz, R22



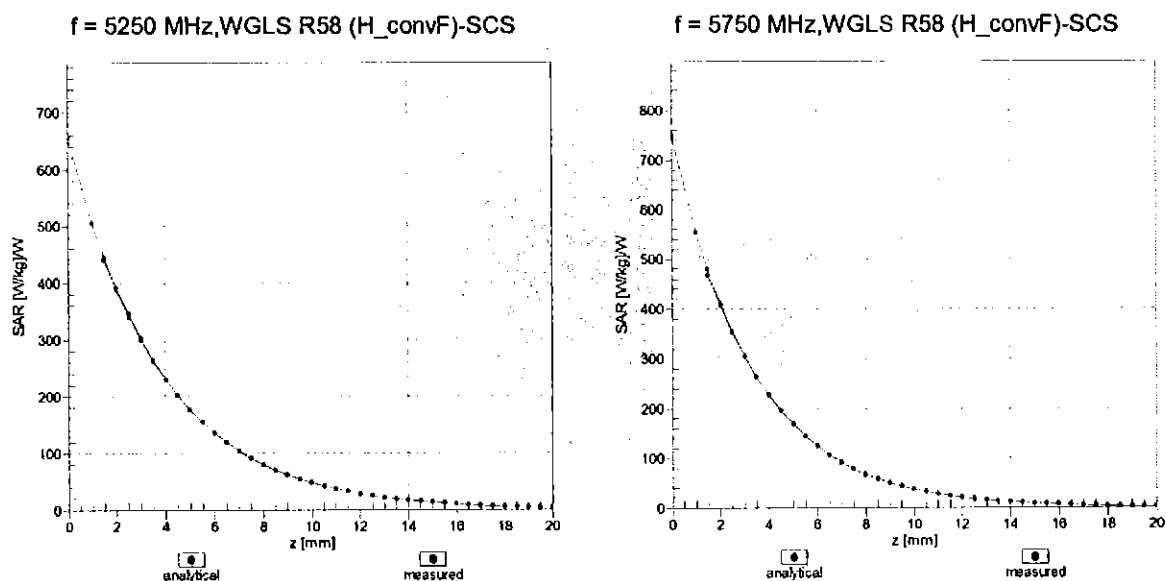
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

# Dynamic Range f(SAR<sub>head</sub>) (TEM cell , f<sub>eval</sub>= 1900 MHz)



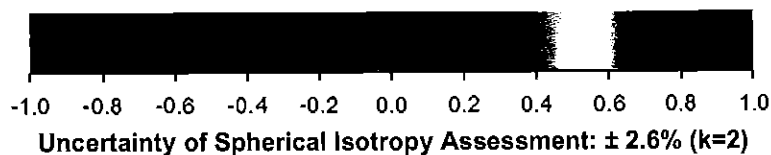
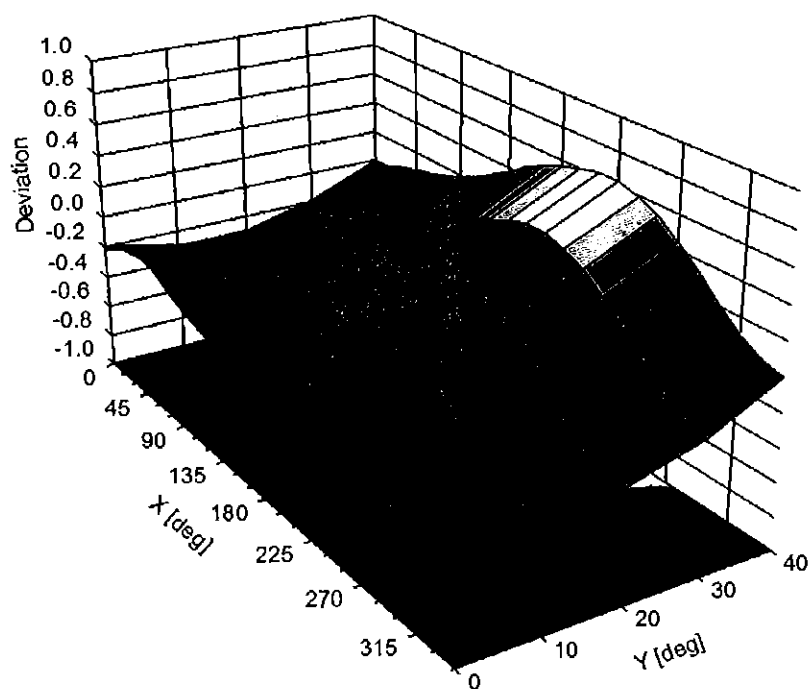
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  (k=2)

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3589

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 141.4      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

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

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

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

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

| Frequency (MHz)           | 750  | 750  | 835   | 835   | 1750 | 1750 | 1900  | 1900  | 2450-2600 | 2450-2600 | 5200-5800 | 5200-5800 |
|---------------------------|------|------|-------|-------|------|------|-------|-------|-----------|-----------|-----------|-----------|
| Tissue                    | Head | Body | Head  | Body  | Head | Body | Head  | Body  | Head      | Body      | Head      | Body      |
| Ingredients (% by weight) |      |      |       |       |      |      |       |       |           |           |           |           |
| Bactericide               |      |      | 0.1   | 0.1   |      |      |       |       |           |           |           |           |
| DCBE                      |      |      |       |       | 47   | 31   | 44.92 | 29.44 |           | 26.7      |           |           |
| HEC                       |      |      | 1     | 1     |      |      |       |       |           |           |           |           |
| NaCl                      |      |      | 1.45  | 0.94  | 0.4  | 0.2  | 0.18  | 0.39  |           | 0.1       |           |           |
| Sucrose                   |      |      | 57    | 44.9  |      |      |       |       |           |           |           |           |
| Polysorbate (Tween) 80    |      |      |       |       |      |      |       |       |           |           |           | 20        |
| Water                     |      |      | 40.45 | 53.06 | 52.6 | 68.8 | 54.9  | 70.17 |           | 73.2      |           | 80        |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 1 of 5      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                                                                  |                                                                                                                                                     |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| H <sub>2</sub> O                                                 | Water, 35 – 58%                                                                                                                                     |
| Sucrose                                                          | Sugar, white, refined, 40 – 60%                                                                                                                     |
| NaCl                                                             | Sodium Chloride, 0 – 6%                                                                                                                             |
| Hydroxyethyl-cellulose                                           | Medium Viscosity (CAS# 9004-62-0), <0.3%                                                                                                            |
| Preventol-D7                                                     | Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone, 0.1 – 0.7% |
| Relevant for safety; Refer to the respective Safety Data Sheet*. |                                                                                                                                                     |

**Figure D-1**  
**Composition of 750 MHz Head and Body Tissue Equivalent Matter**

**Note:** 750MHz liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

### Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Body Tissue Simulating Liquid (MSL750V2) |
| Product No.  | SL AAM 075 AA (Batch: 150518-2)          |
| Manufacturer | SPEAG                                    |

### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

### Setup Validation

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

### Target Parameters

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

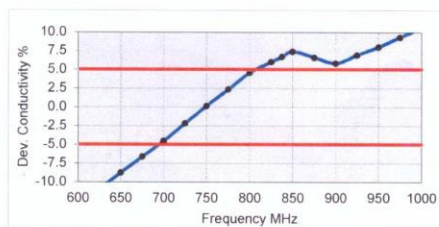
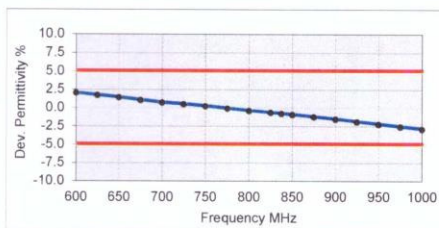
### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 20-Apr-16                                                   |
| Operator        | WM                                                          |

### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.212 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.006 kJ/(kg*K)         |

| f [MHz] | Measured |       |       | Target |       |           | Diff. to Target [%] |  |
|---------|----------|-------|-------|--------|-------|-----------|---------------------|--|
|         | e'       | e''   | sigma | eps    | sigma | Delta-eps | Delta-sigma         |  |
| 600     | 57.2     | 24.76 | 0.83  | 56.1   | 0.95  | 2.0       | -13.2               |  |
| 625     | 57.0     | 24.43 | 0.85  | 56.0   | 0.95  | 1.7       | -11.0               |  |
| 650     | 56.7     | 24.11 | 0.87  | 55.9   | 0.96  | 1.4       | -8.8                |  |
| 675     | 56.4     | 23.82 | 0.89  | 55.8   | 0.96  | 1.1       | -6.6                |  |
| 700     | 56.1     | 23.53 | 0.92  | 55.7   | 0.96  | 0.7       | -4.5                |  |
| 725     | 55.9     | 23.32 | 0.94  | 55.6   | 0.96  | 0.5       | -2.2                |  |
| 750     | 55.7     | 23.12 | 0.96  | 55.5   | 0.96  | 0.2       | 0.1                 |  |
| 775     | 55.4     | 22.93 | 0.99  | 55.4   | 0.97  | -0.1      | 2.4                 |  |
| 800     | 55.1     | 22.73 | 1.01  | 55.3   | 0.97  | -0.4      | 4.6                 |  |
| 825     | 54.9     | 22.59 | 1.04  | 55.2   | 0.98  | -0.7      | 6.0                 |  |
| 838     | 54.8     | 22.52 | 1.05  | 55.2   | 0.98  | -0.8      | 6.7                 |  |
| 850     | 54.6     | 22.45 | 1.06  | 55.2   | 0.99  | -0.9      | 7.4                 |  |
| 875     | 54.4     | 22.32 | 1.09  | 55.1   | 1.02  | -1.2      | 6.6                 |  |
| 900     | 54.1     | 22.19 | 1.11  | 55.0   | 1.05  | -1.6      | 5.8                 |  |
| 925     | 53.9     | 22.09 | 1.14  | 55.0   | 1.06  | -1.9      | 6.9                 |  |
| 950     | 53.7     | 21.98 | 1.16  | 54.9   | 1.08  | -2.2      | 8.0                 |  |
| 975     | 53.5     | 21.91 | 1.19  | 54.9   | 1.09  | -2.6      | 9.3                 |  |
| 1000    | 53.2     | 21.83 | 1.21  | 54.8   | 1.10  | -2.9      | 10.6                |  |



**Figure D-2**  
**750MHz Body Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 2 of 5      |

## Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HSL750V2) |
| Product No.  | SL AAH 075 AB (Batch: 160322-2)          |
| Manufacturer | SPEAG                                    |

### Measurement Method

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

### Setup Validation

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

### Target Parameters

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

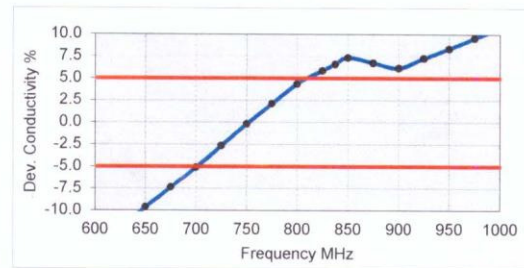
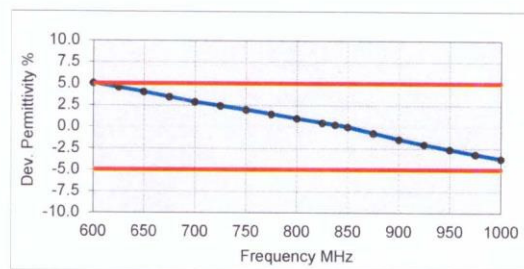
### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 23-Mar-16                                                   |
| Operator        | WM                                                          |

### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.284 g/cm <sup>3</sup> |
| TSL Heat-capacity | 2.701 kJ/(kg*K)         |

| f [MHz] | Measured |       |       | Target |       | Diff.to Target [%] |                 |
|---------|----------|-------|-------|--------|-------|--------------------|-----------------|
|         | e'       | e''   | sigma | eps    | sigma | $\Delta$ -eps      | $\Delta$ -sigma |
| 600     | 44.9     | 22.60 | 0.75  | 42.7   | 0.88  | 5.1                | -14.4           |
| 625     | 44.5     | 22.37 | 0.78  | 42.6   | 0.88  | 4.5                | -12.0           |
| 650     | 44.2     | 22.13 | 0.80  | 42.5   | 0.89  | 4.0                | -9.6            |
| 675     | 43.8     | 21.90 | 0.82  | 42.3   | 0.89  | 3.4                | -7.4            |
| 700     | 43.4     | 21.67 | 0.84  | 42.2   | 0.89  | 2.8                | -5.1            |
| 725     | 43.1     | 21.52 | 0.87  | 42.1   | 0.89  | 2.4                | -2.6            |
| 750     | 42.8     | 21.37 | 0.89  | 41.9   | 0.89  | 2.0                | -0.2            |
| 775     | 42.4     | 21.21 | 0.91  | 41.8   | 0.90  | 1.5                | 2.1             |
| 800     | 42.1     | 21.04 | 0.94  | 41.7   | 0.90  | 0.9                | 4.4             |
| 825     | 41.8     | 20.92 | 0.96  | 41.6   | 0.91  | 0.5                | 5.9             |
| 838     | 41.6     | 20.86 | 0.97  | 41.5   | 0.91  | 0.2                | 6.6             |
| 850     | 41.5     | 20.79 | 0.98  | 41.5   | 0.92  | 0.0                | 7.3             |
| 875     | 41.2     | 20.68 | 1.01  | 41.5   | 0.94  | -0.7               | 6.7             |
| 900     | 40.9     | 20.56 | 1.03  | 41.5   | 0.97  | -1.5               | 6.1             |
| 925     | 40.6     | 20.48 | 1.05  | 41.5   | 0.98  | -2.0               | 7.3             |
| 950     | 40.3     | 20.39 | 1.08  | 41.4   | 0.99  | -2.6               | 8.3             |
| 975     | 40.1     | 20.29 | 1.10  | 41.4   | 1.00  | -3.2               | 9.5             |
| 1000    | 39.8     | 20.20 | 1.12  | 41.3   | 1.01  | -3.7               | 10.7            |



**Figure D-3**  
**750MHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 3 of 5      |

### 3 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                      |              |                                     |
|----------------------|--------------|-------------------------------------|
| Water                | 50 – 73 %    |                                     |
| Non-ionic detergents | 25 – 50 %    | polyoxyethylenesorbitan monolaurate |
| NaCl                 | 0 – 2 %      |                                     |
| Preservative         | 0.05 – 0.1 % | Preventol-D7                        |

Safety relevant ingredients:

|                    |         |                                                                                                        |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|
| CAS-No. 55965-84-9 | < 0.1 % | aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone |
| CAS-No. 9005-64-5  | < 50 %  | polyoxyethylenesorbitan monolaurate                                                                    |

According to international guidelines, the product is not a dangerous mixture and therefore not required to be marked by symbols.

**Figure D-4**  
**Composition of 2.4-2.6 GHz Head Tissue Equivalent Matter**

**Note:** 2.4-2.6 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL1900-3800V3) |
| Product No.  | SL AAH 196 AB (Batch: 160330-1)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

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

#### Target Parameters

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

#### Test Condition

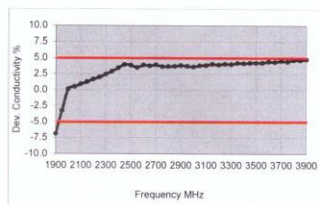
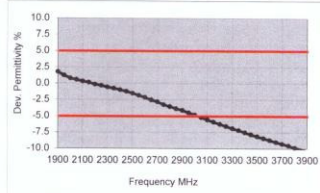
|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 30-Mar-16                                                   |
| Operator        | WM                                                          |

#### Additional Information

TSL Density 1.054 g/cm<sup>3</sup>

TSL Heat-capacity 3.389 kJ/(kg·K)

| f [MHz] | e'   | e''  | sigma | eps  | sigma | Delta-eps | Delta-sigma |
|---------|------|------|-------|------|-------|-----------|-------------|
| 1900    | 40.7 | 12.3 | 1.3   | 40.0 | 1.4   | 1.7       | -6.9        |
| 1950    | 40.5 | 12.5 | 1.4   | 40.0 | 1.4   | 1.2       | -3.3        |
| 2000    | 40.3 | 12.6 | 1.4   | 40.0 | 1.4   | 0.8       | 0.1         |
| 2050    | 40.1 | 12.7 | 1.5   | 39.9 | 1.4   | 0.6       | 0.5         |
| 2100    | 39.9 | 12.9 | 1.5   | 39.8 | 1.5   | 0.3       | 0.9         |
| 2150    | 39.8 | 13.0 | 1.6   | 39.7 | 1.5   | -0.1      | 1.2         |
| 2200    | 39.6 | 13.1 | 1.6   | 39.6 | 1.6   | -0.2      | 1.7         |
| 2250    | 39.4 | 13.2 | 1.7   | 39.6 | 1.6   | -0.3      | 2.0         |
| 2300    | 39.2 | 13.3 | 1.7   | 39.5 | 1.7   | -0.6      | 2.4         |
| 2350    | 39.1 | 13.5 | 1.8   | 39.4 | 1.7   | -0.8      | 2.9         |
| 2400    | 38.9 | 13.6 | 1.8   | 39.3 | 1.8   | -1.0      | 3.4         |
| 2450    | 38.7 | 13.7 | 1.9   | 39.2 | 1.8   | -1.2      | 4.0         |
| 2500    | 38.5 | 13.8 | 1.9   | 39.1 | 1.9   | -1.5      | 3.9         |
| 2550    | 38.3 | 13.9 | 2.0   | 39.1 | 1.9   | -1.9      | 3.5         |
| 2600    | 38.2 | 14.1 | 2.0   | 39.0 | 2.0   | -2.2      | 3.9         |
| 2650    | 37.9 | 14.2 | 2.1   | 38.9 | 2.0   | -2.6      | 3.8         |
| 2700    | 37.8 | 14.3 | 2.2   | 38.9 | 2.1   | -2.8      | 3.9         |
| 2750    | 37.5 | 14.4 | 2.2   | 38.8 | 2.1   | -3.3      | 3.6         |
| 2800    | 37.4 | 14.5 | 2.3   | 38.8 | 2.2   | -3.6      | 3.6         |
| 2850    | 37.2 | 14.6 | 2.3   | 38.7 | 2.2   | -3.9      | 3.7         |
| 2900    | 37.0 | 14.7 | 2.4   | 38.6 | 2.3   | -4.1      | 3.8         |
| 2950    | 36.8 | 14.8 | 2.4   | 38.6 | 2.3   | -4.5      | 3.7         |
| 3000    | 36.6 | 14.9 | 2.5   | 38.5 | 2.4   | -4.8      | 3.6         |
| 3050    | 36.4 | 15.0 | 2.5   | 38.4 | 2.5   | -5.2      | 3.8         |
| 3100    | 36.2 | 15.1 | 2.6   | 38.4 | 2.5   | -5.6      | 3.8         |
| 3150    | 36.1 | 15.2 | 2.7   | 38.3 | 2.6   | -5.9      | 4.0         |
| 3200    | 35.9 | 15.2 | 2.7   | 38.3 | 2.6   | -6.2      | 3.9         |
| 3250    | 35.7 | 15.3 | 2.8   | 38.2 | 2.7   | -6.6      | 4.1         |
| 3300    | 35.5 | 15.3 | 2.8   | 38.2 | 2.7   | -6.9      | 4.0         |
| 3350    | 35.4 | 15.4 | 2.9   | 38.1 | 2.8   | -7.2      | 4.2         |
| 3400    | 35.2 | 15.5 | 2.9   | 38.0 | 2.8   | -7.5      | 4.1         |
| 3450    | 35.0 | 15.5 | 3.0   | 38.0 | 2.9   | -7.8      | 4.2         |
| 3500    | 34.9 | 15.6 | 3.0   | 37.9 | 2.9   | -8.1      | 4.2         |
| 3550    | 34.7 | 15.6 | 3.1   | 37.9 | 3.0   | -8.4      | 4.2         |
| 3600    | 34.5 | 15.7 | 3.1   | 37.8 | 3.0   | -8.7      | 4.4         |
| 3650    | 34.4 | 15.8 | 3.2   | 37.8 | 3.1   | -9.0      | 4.3         |
| 3700    | 34.2 | 15.8 | 3.3   | 37.7 | 3.1   | -9.3      | 4.5         |
| 3750    | 34.1 | 15.9 | 3.3   | 37.6 | 3.2   | -9.5      | 4.4         |
| 3800    | 33.9 | 15.9 | 3.4   | 37.6 | 3.2   | -9.9      | 4.7         |
| 3850    | 33.7 | 16.0 | 3.4   | 37.5 | 3.3   | -10.1     | 4.7         |



**Figure D-5**  
**2.4-2.6 GHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 4 of 5      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|             |          |
|-------------|----------|
| Water       | 50 – 65% |
| Mineral oil | 10 – 30% |
| Emulsifiers | 8 – 25%  |
| Sodium salt | 0 – 1.5% |

**Figure D-6**

### Composition of 5 GHz Head Tissue Equivalent Matter

**Note:** 5GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL3500-5800V5) |
| Product No.  | SL AAH 502 AG (Batch: 160331-2)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

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

#### Target Parameters

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

#### Test Condition

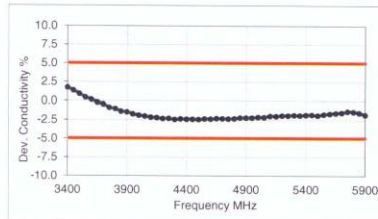
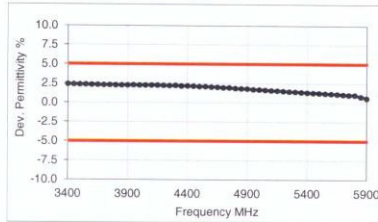
|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 4-Apr-16                                                    |
| Operator        | WM                                                          |

#### Additional Information

TSL Density 0.985 g/cm<sup>3</sup>

TSL Heat-capacity 3.383 kJ/(kg\*K)

| Measured |             |              |          | Target      |              | Diff.to Target [%] |                    |
|----------|-------------|--------------|----------|-------------|--------------|--------------------|--------------------|
| f [MHz]  | $\epsilon'$ | $\epsilon''$ | $\sigma$ | $\epsilon'$ | $\epsilon''$ | $\Delta\epsilon'$  | $\Delta\epsilon''$ |
| 3400     | 39.0        | 15.12        | 2.86     | 38.0        | 2.81         | 2.5                | 1.8                |
| 3500     | 38.8        | 15.09        | 2.94     | 37.9        | 2.91         | 2.3                | 0.9                |
| 3600     | 38.7        | 15.08        | 3.02     | 37.8        | 3.02         | 2.3                | 0.2                |
| 3700     | 38.6        | 15.08        | 3.10     | 37.7        | 3.12         | 2.4                | -0.6               |
| 3800     | 38.4        | 15.07        | 3.19     | 37.6        | 3.22         | 2.2                | -0.9               |
| 3900     | 38.3        | 15.09        | 3.27     | 37.5        | 3.32         | 2.2                | -1.6               |
| 4000     | 38.2        | 15.10        | 3.36     | 37.4        | 3.43         | 2.3                | -1.9               |
| 4100     | 38.1        | 15.13        | 3.45     | 37.2        | 3.53         | 2.3                | -2.2               |
| 4200     | 38.0        | 15.18        | 3.55     | 37.1        | 3.63         | 2.3                | -2.2               |
| 4300     | 37.8        | 15.22        | 3.64     | 37.0        | 3.73         | 2.1                | -2.5               |
| 4400     | 37.7        | 15.29        | 3.74     | 36.9        | 3.84         | 2.2                | -2.5               |
| 4500     | 37.6        | 15.34        | 3.84     | 36.8        | 3.94         | 2.2                | -2.5               |
| 4600     | 37.4        | 15.41        | 3.94     | 36.7        | 4.04         | 2.0                | -2.5               |
| 4700     | 37.3        | 15.47        | 4.05     | 36.6        | 4.14         | 2.0                | -2.2               |
| 4800     | 37.1        | 15.53        | 4.15     | 36.4        | 4.25         | 1.8                | -2.2               |
| 4850     | 37.1        | 15.57        | 4.20     | 36.4        | 4.30         | 2.0                | -2.2               |
| 4900     | 37.0        | 15.60        | 4.25     | 36.3        | 4.35         | 1.8                | -2.2               |
| 4950     | 36.9        | 15.62        | 4.30     | 36.3        | 4.40         | 1.7                | -2.2               |
| 5000     | 36.8        | 15.66        | 4.35     | 36.2        | 4.45         | 1.6                | -2.2               |
| 5050     | 36.8        | 15.68        | 4.40     | 36.2        | 4.50         | 1.8                | -2.2               |
| 5100     | 36.7        | 15.73        | 4.46     | 36.1        | 4.55         | 1.7                | -2.0               |
| 5150     | 36.6        | 15.75        | 4.51     | 36.0        | 4.60         | 1.5                | -2.0               |
| 5200     | 36.5        | 15.78        | 4.57     | 36.0        | 4.66         | 1.4                | -1.8               |
| 5250     | 36.4        | 15.80        | 4.62     | 35.9        | 4.71         | 1.3                | -1.8               |
| 5300     | 36.4        | 15.84        | 4.67     | 35.9        | 4.76         | 1.5                | -1.8               |
| 5350     | 36.3        | 15.85        | 4.72     | 35.8        | 4.81         | 1.4                | -1.8               |
| 5400     | 36.2        | 15.88        | 4.77     | 35.8        | 4.86         | 1.2                | -1.9               |
| 5450     | 36.2        | 15.90        | 4.82     | 35.7        | 4.91         | 1.4                | -1.9               |
| 5500     | 36.1        | 15.91        | 4.87     | 35.6        | 4.96         | 1.3                | -1.9               |
| 5550     | 36.0        | 15.95        | 4.93     | 35.6        | 5.01         | 1.2                | -1.7               |
| 5600     | 35.9        | 15.99        | 4.98     | 35.5        | 5.07         | 1.0                | -1.7               |
| 5650     | 35.9        | 16.02        | 5.04     | 35.5        | 5.12         | 1.2                | -1.5               |
| 5700     | 35.8        | 16.05        | 5.09     | 35.4        | 5.17         | 1.1                | -1.5               |
| 5750     | 35.7        | 16.09        | 5.15     | 35.4        | 5.22         | 1.0                | -1.3               |
| 5800     | 35.7        | 16.10        | 5.20     | 35.3        | 5.27         | 1.1                | -1.3               |
| 5850     | 35.6        | 16.14        | 5.25     | 35.3        | 5.34         | 0.8                | -1.6               |
| 5900     | 35.5        | 16.15        | 5.30     | 35.3        | 5.40         | 0.6                | -1.9               |



**Figure D-7**

### 5GHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 5 of 5      |

## APPENDIX E: SAR SYSTEM VALIDATION

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

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

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

| SAR SYSTEM # | FREQ. [MHz] | DATE      | PROBE SN | PROBE TYPE | PROBE CAL. POINT |      | COND. | PERM.  | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|-----------|----------|------------|------------------|------|-------|--------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |           |          |            |                  |      | (σ)   | (ε)    | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| J            | 750         | 6/21/2017 | 3209     | ES3DV3     | 750              | Head | 0.868 | 39.874 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| J            | 835         | 7/11/2017 | 3209     | ES3DV3     | 835              | Head | 0.897 | 40.348 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| H            | 1750        | 3/22/2017 | 3318     | ES3DV3     | 1750             | Head | 1.338 | 38.950 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| G            | 1900        | 9/29/2016 | 3287     | ES3DV3     | 1900             | Head | 1.395 | 38.777 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| I            | 2450        | 6/1/2017  | 3213     | ES3DV3     | 2450             | Head | 1.876 | 40.253 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| I            | 2600        | 6/1/2017  | 3213     | ES3DV3     | 2600             | Head | 2.059 | 39.650 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| H            | 5250        | 6/10/2017 | 3914     | EX3DV4     | 5250             | Head | 4.580 | 35.029 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H            | 5600        | 6/10/2017 | 3914     | EX3DV4     | 5600             | Head | 4.940 | 34.501 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H            | 5750        | 6/10/2017 | 3914     | EX3DV4     | 5750             | Head | 5.103 | 34.300 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| I            | 750         | 3/7/2017  | 3213     | ES3DV3     | 750              | Body | 0.955 | 56.554 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| K            | 750         | 5/3/2017  | 7406     | EX3DV4     | 750              | Body | 0.952 | 53.745 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| K            | 835         | 5/2/2017  | 7406     | EX3DV4     | 835              | Body | 0.966 | 53.380 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| H            | 1750        | 4/13/2017 | 3318     | ES3DV3     | 1750             | Body | 1.512 | 51.846 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| J            | 1750        | 6/5/2017  | 3209     | ES3DV3     | 1750             | Body | 1.474 | 51.981 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| H            | 1900        | 3/15/2017 | 3318     | ES3DV3     | 1900             | Body | 1.556 | 52.524 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| G            | 2450        | 9/28/2016 | 3287     | ES3DV3     | 2450             | Body | 2.030 | 50.891 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| G            | 2600        | 9/27/2016 | 3287     | ES3DV3     | 2600             | Body | 2.236 | 50.316 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| D            | 5250        | 2/2/2017  | 3589     | EX3DV4     | 5250             | Body | 5.422 | 47.823 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5600        | 2/2/2017  | 3589     | EX3DV4     | 5600             | Body | 5.882 | 47.193 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5750        | 2/2/2017  | 3589     | EX3DV4     | 5750             | Body | 6.117 | 46.985 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

**Table E-III**  
**10 g SAR System Validation Summary**

| SAR SYSTEM # | FREQ. [MHz] | DATE     | PROBE SN | PROBE TYPE | PROBE CAL. POINT |      | COND. | PERM.  | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|----------|----------|------------|------------------|------|-------|--------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |          |          |            |                  |      | (σ)   | (ε)    | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| D            | 5250        | 2/2/2017 | 3589     | EX3DV4     | 5250             | Body | 5.422 | 47.823 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5600        | 2/2/2017 | 3589     | EX3DV4     | 5600             | Body | 5.882 | 47.193 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

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

|                                    |                                                                                     |                            |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT      |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset                                                       | APPENDIX E:<br>Page 1 of 1 |                                                                                       |                                 |

## APPENDIX G: WIFI POWER REDUCTION VERIFICATION

This device was tested by the test lab to verify power reduction in WIFI power levels when audio is routed through the ear-piece of the device.

### G1. Test Procedure

The following procedure was utilized to verify power reduction in normal operating conditions:

1. The WIFI antenna of the DUT is connected via a conducted connection to a CMW500 with WIFI signaling and measurement functions.
2. A WIFI data transmission is initiated and WIFI power is measured by the CMW500.
3. The DUT is connected via a radiated connection to a second CMW500 and a speech call is initiated, simultaneously with the WIFI data transmission.
4. Audio is verified to be routed through the held-to-ear speaker and the WIFI power is measured. The speakerphone is toggled on and off to ensure power reduction is reactivated when audio is restored to the held-to-ear speaker.
5. The WIFI powers are measured and compared to the reduced power levels to verify the WIFI power reduction mechanism.
6. Repeat for each WIFI mode (e.g. 802.11b, 802.11g, etc...) supported by the DUT.

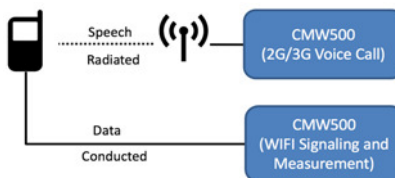


Figure 1 – Verification of WIFI Power Reduction

### G2. Verification Data Summary

The WIFI power reduction mechanism was verified under the above test procedures and conditions. The maximum and reduced WIFI power levels were within the tune-up range.

Table 1 – Data Summary of Power Reduction

| FCC ID  | IMEI  | Hardware Version | Antenna | Mode    | Channel | Target Max Power (dBm) | Measured Power (dBm) | Target Reduced Power (dBm) | Measured Power (dBm) |
|---------|-------|------------------|---------|---------|---------|------------------------|----------------------|----------------------------|----------------------|
| ZNFH932 | 05490 | Rev.1.0          | 1       | 802.11b | 6       | 19.00                  | 19.41                | 16.00                      | 16.95                |
|         |       |                  | 1       | 802.11g | 6       | 17.50                  | 18.06                | 16.00                      | 16.49                |
|         |       |                  | 1       | 802.11n | 6       | 16.50                  | 17.39                | 16.00                      | 16.95                |
|         |       |                  | 2       | 802.11b | 6       | 18.50                  | 19.45                | 16.00                      | 16.49                |
|         |       |                  | 2       | 802.11g | 6       | 17.50                  | 17.51                | 16.00                      | 15.79                |
|         |       |                  | 2       | 802.11n | 6       | 16.50                  | 16.85                | 16.00                      | 15.82                |

Maximum Allowed Output Power: Target Power +1 dB  
IEEE 802.11ac was not evaluated due to equipment limitation.

|                                    |                                        |                            |    |                                 |
|------------------------------------|----------------------------------------|----------------------------|----|---------------------------------|
| FCC ID: ZNFH932                    | PCTEST<br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT      | LG | Reviewed by:<br>Quality Manager |
| Test Dates:<br>07/10/17 – 07/26/17 | DUT Type:<br>Portable Handset          | APPENDIX G:<br>Page 1 of 1 |    |                                 |

## APPENDIX H: CONDUCTED POWERS FOR 4X4 DL MIMO

This device supports downlink 4x4 MIMO operations for LTE Bands 66, 4, 2 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Note: Per FCC guidance LTE Band 66 SISO powers were used to select measurement configurations for LTE Band 4

### H.1 Single Carrier 4x4 Downlink MIMO

Table H-1  
Additional Maximum Output Powers

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 4        | 20              | 20300   | 1745            | QPSK       | 1       | 0         | 24.67                       | 24.70                          | 24.2               |
| 66       | 20              | 132572  | 1770            | QPSK       | 1       | 0         | 24.62                       | 24.70                          | 24.2               |
| 2        | 20              | 19100   | 1900            | QPSK       | 1       | 0         | 24.55                       | 24.70                          | 24.2               |

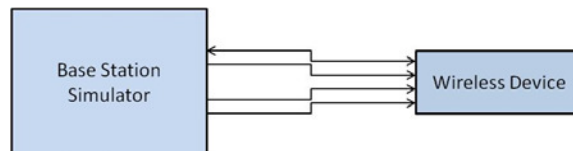


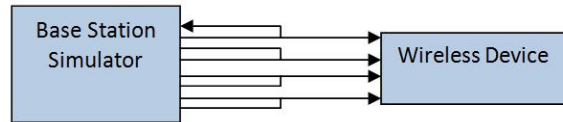
Figure H-1  
Power Measurement Setup

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 - 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | Appendix H<br>Page 1 of 3       |

## H.2 Carrier Aggregation Scenarios with 2 Component Carriers with 4x4 Downlink MIMO

**Table H-2**  
**Additional Maximum Output Powers – 2 Component Carriers**

| Combination   | PCC Band | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC        |                  |                  |                          |                          | SCC      |                     |                  |                          | DL Antenna Configuration | Power                                 |                                   |
|---------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|--------------------------|----------|---------------------|------------------|--------------------------|--------------------------|---------------------------------------|-----------------------------------|
|               |          |                     |                  |                          |            | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Frequency [MHz] | DL Antenna Configuration | SCC Band | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] |                          | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA 2A-2A      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | 24.70                                 | 24.70                             |
| CA 2A-2A      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 4x4 MIMO                 | 24.68                                 | 24.70                             |
| CA 2C         | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B2   | 20                  | 902              | 1960.2                   | 4x4 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | 24.63                                 | 24.70                             |
| CA 2A-5A      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.56                                 | 24.70                             |
| CA 2A-66A (2) | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 2x2 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-66A (2) | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 24.69                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | 24.68                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-66A (2) | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 24.63                                 | 24.70                             |
| CA 2A-12A (1) | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 24.69                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | 24.70                                 | 24.70                             |
| CA 2A-4A (2)  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 24.67                                 | 24.70                             |
| CA 4A-4A      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B4   | 5                   | 1975             | 2112.5                   | 2x2 MIMO                 | 24.65                                 | 24.70                             |
| CA 4A-4A      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B4   | 5                   | 1975             | 2112.5                   | 4x4 MIMO                 | 24.66                                 | 24.70                             |
| CA 4A-5A (1)  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA 4A-12A (1) | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-5A      | LTE B5   | 10                  | 20525            | 836.5                    | QPSK       | 1          | 0                | 2525             | 881.5                    | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 25.44                                 | 25.50                             |
| CA 4A-5A (1)  | LTE B5   | 10                  | 20525            | 836.5                    | QPSK       | 1          | 0                | 2525             | 881.5                    | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | 25.42                                 | 25.50                             |
| CA 5A-66A     | LTE B5   | 10                  | 20525            | 836.5                    | QPSK       | 1          | 0                | 2525             | 881.5                    | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 25.39                                 | 25.50                             |
| CA 2A-66A (2) | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-66A (2) | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-66A (2) | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 24.65                                 | 24.70                             |
| CA 5A-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA 12A-66A    | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 66A-66A    | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | 24.61                                 | 24.70                             |
| CA 66A-66A    | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 4x4 MIMO                 | 24.70                                 | 24.70                             |
| CA 66B        | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 4x4 MIMO                 | LTE B66  | 15                  | 67018            | 2168.2                   | 4x4 MIMO                 | 24.45                                 | 24.70                             |
| CA 66C        | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 4x4 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-12A (1) | LTE B12  | 10                  | 23095            | 707.5                    | QPSK       | 1          | 25               | 5095             | 737.5                    | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | 25.46                                 | 25.50                             |
| CA 4A-12A (1) | LTE B12  | 10                  | 23095            | 707.5                    | QPSK       | 1          | 25               | 5095             | 737.5                    | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | 25.48                                 | 25.50                             |
| CA 12A-66A    | LTE B12  | 10                  | 23095            | 707.5                    | QPSK       | 1          | 25               | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 25.49                                 | 25.50                             |



**Figure H-2**  
**Power Measurement Setup**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 - 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | Appendix H<br>Page 2 of 3       |

# H.3 Carrier Aggregation Scenarios with 3 Component Carriers with 4x4 Downlink MIMO

Table H-3  
Additional Maximum Output Powers – 3 Component Carriers

| Combination    | PCC Band | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC              |                          |                          |          | SCC 1               |                  |                          |                          | SCC 2    |                     |                  |                          | Power                    |                                       |                                   |
|----------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|--------------------------|----------|---------------------|------------------|--------------------------|--------------------------|----------|---------------------|------------------|--------------------------|--------------------------|---------------------------------------|-----------------------------------|
|                |          |                     |                  |                          |            |            |                  | PCC (DL) Channel | PCC (DL) Frequency [MHz] | DL Antenna Configuration | SCC Band | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | DL Antenna Configuration | SCC Band | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | DL Antenna Configuration | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA 66A-66B     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B66  | 15                  | 66562            | 2122.6                   | 2x2 MIMO                 | LTE B66  | 5                   | 66469            | 2113.3                   | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 66B-66A     | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 2x2 MIMO                 | LTE B66  | 15                  | 67204            | 2186.8                   | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 4x4 MIMO                 | 24.68                                 | 24.70                             |
| CA 66A-66B     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B66  | 15                  | 66562            | 2122.6                   | 4x4 MIMO                 | LTE B66  | 5                   | 66469            | 2113.3                   | 4x4 MIMO                 | 24.66                                 | 24.70                             |
| CA 66B-66A     | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 4x4 MIMO                 | LTE B66  | 15                  | 67204            | 2186.8                   | 4x4 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | 24.67                                 | 24.70                             |
| CA 66A-66C     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B66  | 20                  | 66586            | 2125                     | 2x2 MIMO                 | LTE B66  | 5                   | 66469            | 2113.3                   | 2x2 MIMO                 | 24.65                                 | 24.70                             |
| CA 66C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 4x4 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 2x2 MIMO                 | 24.68                                 | 24.70                             |
| CA 66A-66C     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B66  | 20                  | 66586            | 2125                     | 4x4 MIMO                 | LTE B66  | 5                   | 66469            | 2113.3                   | 4x4 MIMO                 | 24.60                                 | 24.70                             |
| CA 66C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 4x4 MIMO                 | 24.61                                 | 24.70                             |
| CA 2A-2A-66A   | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | 24.67                                 | 24.70                             |
| CA 2A-2A-66A   | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-12A-66A  | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.61                                 | 24.70                             |
| CA 2A-12A-66A  | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-66A-66A  | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | 24.68                                 | 24.70                             |
| CA 2A-66A-66A  | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-66A-66A  | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 4x4 MIMO                 | 24.64                                 | 24.70                             |
| CA 2A-66B      | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B66  | 15                  | 67204            | 2186.8                   | 2x2 MIMO                 | 24.43                                 | 24.70                             |
| CA 2A-66B      | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B66  | 15                  | 67204            | 2186.8                   | 4x4 MIMO                 | 24.53                                 | 24.70                             |
| CA 2A-66C      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 2x2 MIMO                 | 24.61                                 | 24.70                             |
| CA 2A-66C      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 4x4 MIMO                 | 24.66                                 | 24.70                             |
| CA 12A-66A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 2x2 MIMO                 | 24.67                                 | 24.70                             |
| CA 12A-66A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 5                   | 66461            | 2112.5                   | 4x4 MIMO                 | 24.66                                 | 24.70                             |
| CA 12A-66B     | LTE B66  | 5                   | 132647           | 1777.5                   | QPSK       | 1          | 24               | 67111            | 2177.5                   | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 15                  | 67204            | 2186.8                   | 4x4 MIMO                 | 24.41                                 | 24.70                             |
| CA 12A-66C     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 20                  | 66838            | 2150.2                   | 4x4 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-2A-4A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | 24.65                                 | 24.70                             |
| CA 2A-2A-4A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | 24.66                                 | 24.70                             |
| CA 2A-2A-12A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-2A-12A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.66                                 | 24.70                             |
| CA 2A-2A-66A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 2x2 MIMO                 | 24.67                                 | 24.70                             |
| CA 2A-2A-66A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 4x4 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 2x2 MIMO                 | 24.69                                 | 24.70                             |
| CA 2A-4A-4A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-4A-4A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | LTE B4   | 5                   | 2375             | 2152.5                   | 2x2 MIMO                 | 24.70                                 | 24.70                             |
| CA 2A-4A-5A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-4A-5A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA 2A-4A-12A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.61                                 | 24.70                             |
| CA 2A-4A-12A   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.65                                 | 24.70                             |
| CA 2A-12A-66A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-12A-66A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | 24.64                                 | 24.70                             |
| CA 2A-66A-66A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B66  | 5                   | 66786            | 2145                     | 2x2 MIMO                 | LTE B66  | 5                   | 67311            | 2197.5                   | 2x2 MIMO                 | 24.70                                 | 24.70                             |
| CA 2A-66A-66A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B66  | 5                   | 66786            | 2145                     | 4x4 MIMO                 | LTE B66  | 5                   | 67311            | 2197.5                   | 2x2 MIMO                 | 24.66                                 | 24.70                             |
| CA 2A-66B      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B66  | 15                  | 66786            | 2145                     | 2x2 MIMO                 | LTE B66  | 5                   | 66693            | 2135.7                   | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA 2A-66B      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B66  | 15                  | 66786            | 2145                     | 4x4 MIMO                 | LTE B66  | 5                   | 66693            | 2135.7                   | 4x4 MIMO                 | 24.60                                 | 24.70                             |
| CA 2A-66C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 2x2 MIMO                 | LTE B66  | 20                  | 66984            | 2164.8                   | 2x2 MIMO                 | 24.64                                 | 24.70                             |
| CA 2A-66C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B66  | 20                  | 66786            | 2145                     | 4x4 MIMO                 | LTE B66  | 20                  | 66984            | 2164.8                   | 4x4 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-2A-4A    | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 2x2 MIMO                 | LTE B2   | 5                   | 625              | 1932.5                   | 2x2 MIMO                 | LTE B4   | 20                  | 2175             | 2132.5                   | 4x4 MIMO                 | 24.62                                 | 24.70                             |
| CA 2A-2A-4A    | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B4   | 5                   | 1975             | 2112.5                   | 2x2 MIMO                 | 24.54                                 | 24.70                             |
| CA 2A-4A-4A    | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B4   | 5                   | 1975             | 2112.5                   | 2x2 MIMO                 | 24.55                                 | 24.70                             |
| CA 2A-4A-4A    | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B4   | 5                   | 1975             | 2112.5                   | 4x4 MIMO                 | 24.49                                 | 24.70                             |
| CA 2A-4A-5A    | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.52                                 | 24.70                             |
| CA 2A-4A-5A    | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 4x4 MIMO                 | LTE B5   | 10                  | 2525             | 881.5                    | 2x2 MIMO                 | 24.56                                 | 24.70                             |
| CA 2A-4A-12A   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B2   | 20                  | 900              | 1960                     | 2x2 MIMO                 | LTE B12  | 10                  | 5095             | 737.5                    | 2x2 MIMO                 | 24.53                                 | 24.70                             |
| CA 2A-4A-12A   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 2x2 MIMO                 | LTE B2   |                     |                  |                          |                          |          |                     |                  |                          |                          |                                       |                                   |

## APPENDIX I: CONDUCTED POWERS FOR LAA

This device supports LAA with downlink carrier aggregation only for B46. All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

Per FCC Guidance and KDB Publication 941225 D05A v01r02, for every supported combination, additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

The PCC uplink channel was selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation per 3GPP requirements. The SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band carriers, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For LAA operations, each Band 46 sub-band was evaluated independently due to the wide downlink bandwidth.

Per FCC guidance LTE Band 66 SISO powers were used to select measurement configurations for LTE Band 4

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

### I.1 Downlink MIMO LAA Additional Conducted Powers

**Table I-1**  
**Additional Maximum Output Powers – 2 Component Carriers**

| Combination              | PCC      |                     |                  |                          |            |            |                  |                  |                          | SCC                  |                     |                  |                          | Power                                 |                                   |
|--------------------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|----------------------|---------------------|------------------|--------------------------|---------------------------------------|-----------------------------------|
|                          | PCC Band | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Frequency [MHz] | SCC Band             | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46 <sub>A</sub> A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 24.63                                 | 24.70                             |
| CA_2A-46 <sub>B</sub> A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 24.65                                 | 24.70                             |
| CA_2A-46 <sub>C</sub> A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 24.68                                 | 24.70                             |
| CA_2A-46 <sub>D</sub> A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 24.68                                 | 24.70                             |
| CA_4A-46 <sub>A</sub> A  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 24.66                                 | 24.70                             |
| CA_4A-46 <sub>B</sub> A  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 24.70                                 | 24.70                             |
| CA_4A-46 <sub>C</sub> A  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 24.70                                 | 24.70                             |
| CA_4A-46 <sub>D</sub> A  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 24.69                                 | 24.70                             |
| CA_46 <sub>A</sub> A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 24.69                                 | 24.70                             |
| CA_46 <sub>B</sub> A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 24.67                                 | 24.70                             |
| CA_46 <sub>C</sub> A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 24.67                                 | 24.70                             |
| CA_46 <sub>D</sub> A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 24.70                                 | 24.70                             |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFH932                    |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 - 07/26/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | Appendix I<br>Page 1 of 3       |

**Table I-2**  
**Additional Maximum Output Powers – 3 Component Carriers**

| Combination    | PCC      |                     |                  |                          |            |            |                  |                  | SCC 1                    |                      |                     |                  | SCC 2                    |                      |                     |                  | Power                    |                                       |                                   |
|----------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|----------------------|---------------------|------------------|--------------------------|----------------------|---------------------|------------------|--------------------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Frequency [MHz] | SCC Band             | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | SCC Band             | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>C</sub> | 20                  | 47290            | 5200                     | LTE B46 <sub>C</sub> | 20                  | 47488            | 5219.8                   | 24.66                                 | 24.70                             |
| CA_2A-46C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>C</sub> | 20                  | 48290            | 5300                     | LTE B46 <sub>C</sub> | 20                  | 48488            | 5319.8                   | 24.67                                 | 24.70                             |
| CA_2A-46C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | LTE B46 <sub>C</sub> | 20                  | 51488            | 5619.8                   | 24.68                                 | 24.70                             |
| CA_2A-46C      | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>C</sub> | 20                  | 53140            | 5785                     | LTE B46 <sub>C</sub> | 20                  | 53338            | 5804.8                   | 24.70                                 | 24.70                             |
| CA_2A-46A-46A  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | LTE B46 <sub>A</sub> | 20                  | 47090            | 5180                     | LTE B46 <sub>B</sub> | 20                  | 53540            | 5825                     | 24.66                                 | 24.70                             |
| CA_4A-46C      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | LTE B46 <sub>A</sub> | 20                  | 47488            | 5219.8                   | 24.68                                 | 24.70                             |
| CA_4A-46C      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | LTE B46 <sub>B</sub> | 20                  | 48488            | 5319.8                   | 24.69                                 | 24.70                             |
| CA_4A-46C      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | LTE B46 <sub>C</sub> | 20                  | 51488            | 5619.8                   | 24.67                                 | 24.70                             |
| CA_4A-46C      | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | LTE B46 <sub>D</sub> | 20                  | 53338            | 5804.8                   | 24.66                                 | 24.70                             |
| CA_4A-46A-46A  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | LTE B46 <sub>A</sub> | 20                  | 47090            | 5180                     | LTE B46 <sub>B</sub> | 20                  | 53540            | 5825                     | 24.69                                 | 24.70                             |
| CA_46C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>C</sub> | 20                  | 47290            | 5200                     | LTE B46 <sub>C</sub> | 20                  | 47488            | 5219.8                   | 24.65                                 | 24.70                             |
| CA_46C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>D</sub> | 20                  | 48290            | 5300                     | LTE B46 <sub>D</sub> | 20                  | 48488            | 5319.8                   | 24.66                                 | 24.70                             |
| CA_46C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | LTE B46 <sub>C</sub> | 20                  | 51488            | 5619.8                   | 24.70                                 | 24.70                             |
| CA_46C-66A     | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | LTE B46 <sub>D</sub> | 20                  | 53338            | 5804.8                   | 24.63                                 | 24.70                             |
| CA_46A-46A-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | LTE B46 <sub>C</sub> | 20                  | 47090            | 5180                     | LTE B46 <sub>D</sub> | 20                  | 53540            | 5825                     | 24.69                                 | 24.70                             |

**Table I-3**  
**Additional Maximum Output Powers – 4 Component Carriers**

| Combination    | PCC Band | PCC          |                  |                      |            |            |                  | SCC 1            |                      |                      |              | SCC 2            |                      |                      |              | SCC 3            |                      |                      |              | Power            |                      |                                       |                                   |
|----------------|----------|--------------|------------------|----------------------|------------|------------|------------------|------------------|----------------------|----------------------|--------------|------------------|----------------------|----------------------|--------------|------------------|----------------------|----------------------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                |          | PCC BW [MHz] | PCC (UL) Channel | PCC (UL) Freq. [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46D      | LTE B2   | 20           | 19100            | 1900                 | QPSK       | 1          | 0                | 1100             | 1980                 | LTE B46 <sub>A</sub> | 20           | 47290            | 5200                 | LTE B46 <sub>A</sub> | 20           | 47488            | 5219.8               | LTE B46 <sub>A</sub> | 20           | 47092            | 5180.2               | 24.57                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100            | 1900                 | QPSK       | 1          | 0                | 1100             | 1980                 | LTE B46 <sub>B</sub> | 20           | 48290            | 5300                 | LTE B46 <sub>B</sub> | 20           | 48488            | 5319.8               | LTE B46 <sub>B</sub> | 20           | 48092            | 5280.2               | 24.64                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100            | 1900                 | QPSK       | 1          | 0                | 1100             | 1980                 | LTE B46 <sub>C</sub> | 20           | 51290            | 5600                 | LTE B46 <sub>C</sub> | 20           | 51488            | 5619.8               | LTE B46 <sub>C</sub> | 20           | 51092            | 5580.2               | 24.62                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100            | 1900                 | QPSK       | 1          | 0                | 1100             | 1980                 | LTE B46 <sub>D</sub> | 20           | 53140            | 5785                 | LTE B46 <sub>D</sub> | 20           | 53338            | 5804.8               | LTE B46 <sub>D</sub> | 20           | 52942            | 5765.2               | 24.67                                 | 24.70                             |
| CA_2A-46A-46C  | LTE B2   | 20           | 19100            | 1900                 | QPSK       | 1          | 0                | 1100             | 1980                 | LTE B46 <sub>A</sub> | 20           | 47090            | 5180                 | LTE B46 <sub>B</sub> | 20           | 53540            | 5825                 | LTE B46 <sub>C</sub> | 20           | 53342            | 5805.2               | 24.63                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300            | 1745                 | QPSK       | 1          | 0                | 2300             | 2145                 | LTE B46 <sub>A</sub> | 20           | 47290            | 5200                 | LTE B46 <sub>A</sub> | 20           | 47488            | 5219.8               | LTE B46 <sub>B</sub> | 20           | 47092            | 5180.2               | 24.66                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300            | 1745                 | QPSK       | 1          | 0                | 2300             | 2145                 | LTE B46 <sub>B</sub> | 20           | 48290            | 5300                 | LTE B46 <sub>B</sub> | 20           | 48488            | 5319.8               | LTE B46 <sub>C</sub> | 20           | 48092            | 5280.2               | 24.67                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300            | 1745                 | QPSK       | 1          | 0                | 2300             | 2145                 | LTE B46 <sub>C</sub> | 20           | 51290            | 5600                 | LTE B46 <sub>C</sub> | 20           | 51488            | 5619.8               | LTE B46 <sub>D</sub> | 20           | 51092            | 5580.2               | 24.68                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300            | 1745                 | QPSK       | 1          | 0                | 2300             | 2145                 | LTE B46 <sub>D</sub> | 20           | 53140            | 5785                 | LTE B46 <sub>D</sub> | 20           | 53338            | 5804.8               | LTE B46 <sub>A</sub> | 20           | 52942            | 5765.2               | 24.63                                 | 24.70                             |
| CA_4A-46A-46C  | LTE B4   | 20           | 20300            | 1745                 | QPSK       | 1          | 0                | 2300             | 2145                 | LTE B46 <sub>A</sub> | 20           | 47090            | 5180                 | LTE B46 <sub>B</sub> | 20           | 53540            | 5825                 | LTE B46 <sub>C</sub> | 20           | 53342            | 5805.2               | 24.70                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572           | 1770                 | QPSK       | 1          | 0                | 67036            | 2170                 | LTE B46 <sub>A</sub> | 20           | 47290            | 5200                 | LTE B46 <sub>B</sub> | 20           | 47488            | 5219.8               | LTE B46 <sub>C</sub> | 20           | 47092            | 5180.2               | 24.66                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572           | 1770                 | QPSK       | 1          | 0                | 67036            | 2170                 | LTE B46 <sub>B</sub> | 20           | 48290            | 5300                 | LTE B46 <sub>C</sub> | 20           | 48488            | 5319.8               | LTE B46 <sub>D</sub> | 20           | 48092            | 5280.2               | 24.55                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572           | 1770                 | QPSK       | 1          | 0                | 67036            | 2170                 | LTE B46 <sub>C</sub> | 20           | 51290            | 5600                 | LTE B46 <sub>D</sub> | 20           | 51488            | 5619.8               | LTE B46 <sub>A</sub> | 20           | 51092            | 5580.2               | 24.57                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572           | 1770                 | QPSK       | 1          | 0                | 67036            | 2170                 | LTE B46 <sub>D</sub> | 20           | 53140            | 5785                 | LTE B46 <sub>A</sub> | 20           | 53338            | 5804.8               | LTE B46 <sub>B</sub> | 20           | 52942            | 5765.2               | 24.70                                 | 24.70                             |
| CA_46A-46C-66A | LTE B66  | 20           | 132572           | 1770                 | QPSK       | 1          | 0                | 67036            | 2170                 | LTE B46 <sub>A</sub> | 20           | 47090            | 5180                 | LTE B46 <sub>B</sub> | 20           | 53540            | 5825                 | LTE B46 <sub>C</sub> | 20           | 53342            | 5805.2               | 24.62                                 | 24.70                             |

## I.2 Downlink 4x4 MIMO LAA Additional Conducted Powers

**Table I-4**  
**Additional Maximum Output Powers – 2 Component Carriers**

|                         | PCC      |                     |                  |                          |            |            |                  |                  |                          |                          | SCC                  |                     |                  |                          |                          | Power                                 |                                   |
|-------------------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|--------------------------|----------------------|---------------------|------------------|--------------------------|--------------------------|---------------------------------------|-----------------------------------|
| Combination             | PCC Band | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Frequency [MHz] | DL Antenna Configuration | SCC Band             | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | DL Antenna Configuration | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46 <sub>A</sub>   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA_2A-46 <sub>A</sub>   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 2x2 MIMO                 | 24.65                                 | 24.70                             |
| CA_2A-46 <sub>A</sub>   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA_2A-46 <sub>A</sub>   | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO                 | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA_4A-46 <sub>A</sub>   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 2x2 MIMO                 | 24.60                                 | 24.70                             |
| CA_4A-46 <sub>A</sub>   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 2x2 MIMO                 | 24.64                                 | 24.70                             |
| CA_4A-46 <sub>A</sub>   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 2x2 MIMO                 | 24.59                                 | 24.70                             |
| CA_4A-46 <sub>A</sub>   | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO                 | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA_46 <sub>A</sub> -66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B46 <sub>A</sub> | 20                  | 47290            | 5200                     | 2x2 MIMO                 | 24.63                                 | 24.70                             |
| CA_46 <sub>A</sub> -66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B46 <sub>B</sub> | 20                  | 48290            | 5300                     | 2x2 MIMO                 | 24.66                                 | 24.70                             |
| CA_46 <sub>A</sub> -66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B46 <sub>C</sub> | 20                  | 51290            | 5600                     | 2x2 MIMO                 | 24.64                                 | 24.70                             |
| CA_46 <sub>A</sub> -66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO                 | LTE B46 <sub>D</sub> | 20                  | 53140            | 5785                     | 2x2 MIMO                 | 24.66                                 | 24.70                             |

|                                           |                                                                                     |                                  |                                                                                       |                                        |
|-------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> ZNFH932                    |  | <b>SAR EVALUATION REPORT</b>     |  | <b>Approved by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>07/10/17 - 07/26/17 | <b>DUT Type:</b><br>Portable Handset                                                | <b>Appendix I</b><br>Page 2 of 3 |                                                                                       |                                        |

Table I-5  
Additional Maximum Output Powers – 3 Component Carriers

| Combination     | PCC Band | PCC                 |                  |                          |            | DL         |                  |                  |                          | SCC 1                 |          |                     |                  | DL                       |                       |          |                     | SCC 2            |                          |                       |                                       | Power                             |  |
|-----------------|----------|---------------------|------------------|--------------------------|------------|------------|------------------|------------------|--------------------------|-----------------------|----------|---------------------|------------------|--------------------------|-----------------------|----------|---------------------|------------------|--------------------------|-----------------------|---------------------------------------|-----------------------------------|--|
|                 |          | PCC Bandwidth [MHz] | PCC (UL) Channel | PCC (UL) Frequency [MHz] | Modulation | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Frequency [MHz] | Antenna Configuration | SCC Band | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | Antenna Configuration | SCC Band | SCC Bandwidth [MHz] | SCC (DL) Channel | SCC (DL) Frequency [MHz] | Antenna Configuration | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA_2A-46c       | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO              | LTE B46c | 20                  | 47290            | 5200                     | 2x2 MIMO              | LTE B46c | 20                  | 47488            | 5219.8                   | 2x2 MIMO              | 24.63                                 | 24.70                             |  |
| CA_2A-46c       | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO              | LTE B46c | 20                  | 48290            | 5300                     | 2x2 MIMO              | LTE B46c | 20                  | 48488            | 5319.8                   | 2x2 MIMO              | 24.64                                 | 24.70                             |  |
| CA_2A-46c       | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO              | LTE B46c | 20                  | 51290            | 5600                     | 2x2 MIMO              | LTE B46c | 20                  | 51488            | 5619.8                   | 2x2 MIMO              | 24.63                                 | 24.70                             |  |
| CA_2A-46c       | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO              | LTE B46c | 20                  | 53140            | 5785                     | 2x2 MIMO              | LTE B46c | 20                  | 53338            | 5804.8                   | 2x2 MIMO              | 24.62                                 | 24.70                             |  |
| CA_2A-46A-46cA  | LTE B2   | 20                  | 19100            | 1900                     | QPSK       | 1          | 0                | 1100             | 1980                     | 4x4 MIMO              | LTE B46c | 20                  | 47090            | 5180                     | 2x2 MIMO              | LTE B46c | 20                  | 53540            | 5825                     | 2x2 MIMO              | 24.61                                 | 24.70                             |  |
| CA_4A-46c       | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO              | LTE B46c | 20                  | 47290            | 5200                     | 2x2 MIMO              | LTE B46c | 20                  | 47488            | 5219.8                   | 2x2 MIMO              | 24.64                                 | 24.70                             |  |
| CA_4A-46c       | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO              | LTE B46c | 20                  | 48290            | 5300                     | 2x2 MIMO              | LTE B46c | 20                  | 48488            | 5319.8                   | 2x2 MIMO              | 24.66                                 | 24.70                             |  |
| CA_4A-46c       | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO              | LTE B46c | 20                  | 51290            | 5600                     | 2x2 MIMO              | LTE B46c | 20                  | 51488            | 5619.8                   | 2x2 MIMO              | 24.65                                 | 24.70                             |  |
| CA_4A-46c       | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO              | LTE B46c | 20                  | 53140            | 5785                     | 2x2 MIMO              | LTE B46c | 20                  | 53338            | 5804.8                   | 2x2 MIMO              | 24.65                                 | 24.70                             |  |
| CA_4A-46A-46cA  | LTE B4   | 20                  | 20300            | 1745                     | QPSK       | 1          | 0                | 2300             | 2145                     | 4x4 MIMO              | LTE B46c | 20                  | 47090            | 5180                     | 2x2 MIMO              | LTE B46c | 20                  | 53540            | 5825                     | 2x2 MIMO              | 24.63                                 | 24.70                             |  |
| CA_46c-66A      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO              | LTE B46c | 20                  | 47290            | 5200                     | 2x2 MIMO              | LTE B46c | 20                  | 47488            | 5219.8                   | 2x2 MIMO              | 24.68                                 | 24.70                             |  |
| CA_46c-66A      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO              | LTE B46c | 20                  | 48290            | 5300                     | 2x2 MIMO              | LTE B46c | 20                  | 48488            | 5319.8                   | 2x2 MIMO              | 24.63                                 | 24.70                             |  |
| CA_46c-66A      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO              | LTE B46c | 20                  | 51290            | 5600                     | 2x2 MIMO              | LTE B46c | 20                  | 51488            | 5619.8                   | 2x2 MIMO              | 24.58                                 | 24.70                             |  |
| CA_46c-66A      | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO              | LTE B46c | 20                  | 53140            | 5785                     | 2x2 MIMO              | LTE B46c | 20                  | 53338            | 5804.8                   | 2x2 MIMO              | 24.62                                 | 24.70                             |  |
| CA_46A-46cA-66A | LTE B66  | 20                  | 132572           | 1770                     | QPSK       | 1          | 0                | 67036            | 2170                     | 4x4 MIMO              | LTE B46c | 20                  | 47090            | 5180                     | 2x2 MIMO              | LTE B46c | 20                  | 53540            | 5825                     | 2x2 MIMO              | 24.65                                 | 24.70                             |  |

Table I-5  
Additional Maximum Output Powers – 4 Component Carriers

| Combination    | PCC Band | PCC          |              |                      |      |           |                  |              |                      | SCC 1           |          |              |              | SCC 2                |                 |          |              | SCC 3        |                      |                 |          | Power        |              |                      |                 |                                       |                                   |
|----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                |          | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (UL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46D      | LTE B2   | 20           | 19100        | 1900                 | QPSK | 1         | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B46c | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46c | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46c | 20           | 47092        | 5180.2               | 2x2 MIMO        | 24.69                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100        | 1900                 | QPSK | 1         | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B46c | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46c | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46c | 20           | 48092        | 5280.2               | 2x2 MIMO        | 24.62                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100        | 1900                 | QPSK | 1         | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B46c | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46c | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46c | 20           | 51092        | 5580.2               | 2x2 MIMO        | 24.67                                 | 24.70                             |
| CA_2A-46D      | LTE B2   | 20           | 19100        | 1900                 | QPSK | 1         | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B46c | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46c | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46c | 20           | 52942        | 5765.2               | 2x2 MIMO        | 24.62                                 | 24.70                             |
| CA_2A-46A-46c  | LTE B2   | 20           | 19100        | 1900                 | QPSK | 1         | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B46c | 20           | 47090        | 5180                 | 2x2 MIMO        | LTE B46c | 20           | 53540        | 5825                 | 2x2 MIMO        | LTE B46c | 20           | 53342        | 5805.2               | 2x2 MIMO        | 24.62                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300        | 1745                 | QPSK | 1         | 0                | 2300         | 2145                 | 4x4 MIMO        | LTE B46c | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46c | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46c | 20           | 47092        | 5180.2               | 2x2 MIMO        | 24.68                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300        | 1745                 | QPSK | 1         | 0                | 2300         | 2145                 | 4x4 MIMO        | LTE B46c | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46c | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46c | 20           | 48092        | 5280.2               | 2x2 MIMO        | 24.68                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300        | 1745                 | QPSK | 1         | 0                | 2300         | 2145                 | 4x4 MIMO        | LTE B46c | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46c | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46c | 20           | 51092        | 5580.2               | 2x2 MIMO        | 24.67                                 | 24.70                             |
| CA_4A-46D      | LTE B4   | 20           | 20300        | 1745                 | QPSK | 1         | 0                | 2300         | 2145                 | 4x4 MIMO        | LTE B46c | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46c | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46c | 20           | 52942        | 5765.2               | 2x2 MIMO        | 24.64                                 | 24.70                             |
| CA_4A-46A-46c  | LTE B4   | 20           | 20300        | 1745                 | QPSK | 1         | 0                | 2300         | 2145                 | 4x4 MIMO        | LTE B46c | 20           | 47090        | 5180                 | 2x2 MIMO        | LTE B46c | 20           | 53540        | 5825                 | 2x2 MIMO        | LTE B46c | 20           | 53342        | 5805.2               | 2x2 MIMO        | 24.67                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572       | 1770                 | QPSK | 1         | 0                | 67036        | 2170                 | 4x4 MIMO        | LTE B46c | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46c | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46c | 20           | 47092        | 5180.2               | 2x2 MIMO        | 24.69                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572       | 1770                 | QPSK | 1         | 0                | 67036        | 2170                 | 4x4 MIMO        | LTE B46c | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46c | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46c | 20           | 48092        | 5280.2               | 2x2 MIMO        | 24.59                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572       | 1770                 | QPSK | 1         | 0                | 67036        | 2170                 | 4x4 MIMO        | LTE B46c | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46c | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46c | 20           | 51092        | 5580.2               | 2x2 MIMO        | 24.60                                 | 24.70                             |
| CA_46D-66A     | LTE B66  | 20           | 132572       | 1770                 | QPSK | 1         | 0                | 67036        | 2170                 | 4x4 MIMO        | LTE B46c | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46c | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46c | 20           | 52942        | 5765.2               | 2x2 MIMO        | 24.63                                 | 24.70                             |
| CA_46A-46c-66A | LTE B66  | 20           | 132572       | 1770                 | QPSK | 1         | 0                | 67036        | 2170                 | 4x4 MIMO        | LTE B46c | 20           | 47090        | 5180                 | 2x2 MIMO        | LTE B46c | 20           | 53540        | 5825                 | 2x2 MIMO        | LTE B46c | 20           | 53342        | 5805.2               | 2x2 MIMO        | 24.59                                 | 24.70                             |

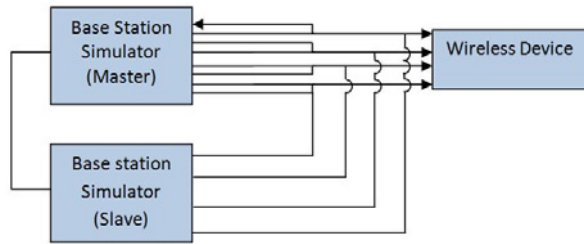


Figure I 1  
Power Measurement Setup

|                                    |                               |                       |  |                                 |
|------------------------------------|-------------------------------|-----------------------|--|---------------------------------|
| FCC ID: ZNFH932                    |                               | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>07/10/17 - 07/26/17 | DUT Type:<br>Portable Handset |                       |  | Appendix I<br>Page 3 of 3       |