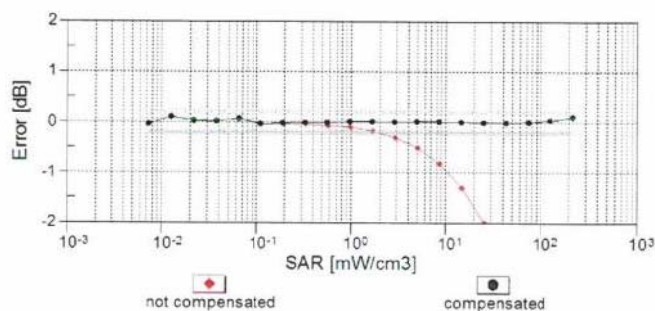
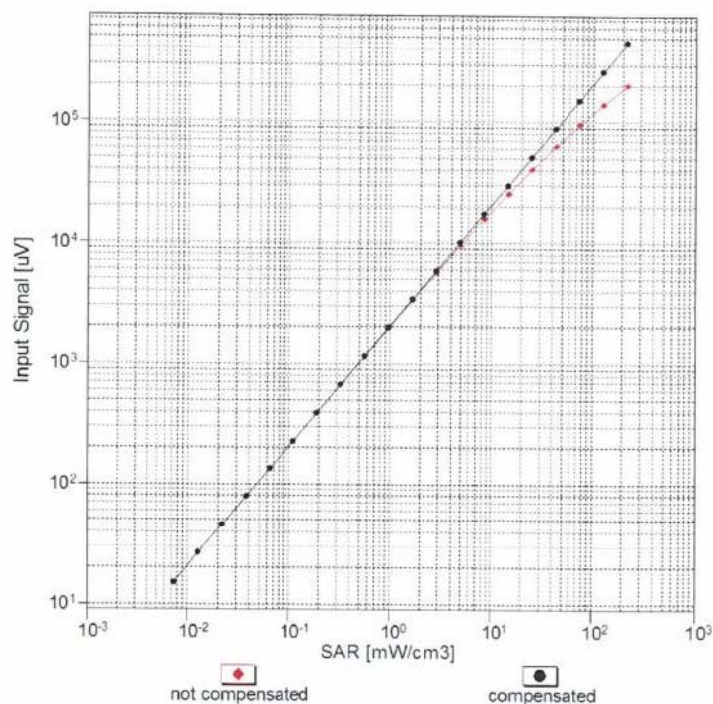


EX3DV4- SN:3898

June 27, 2017

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

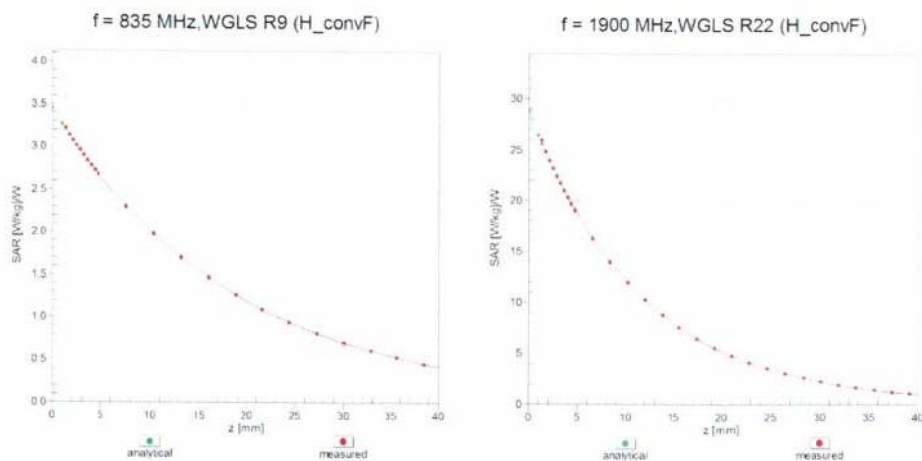


Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

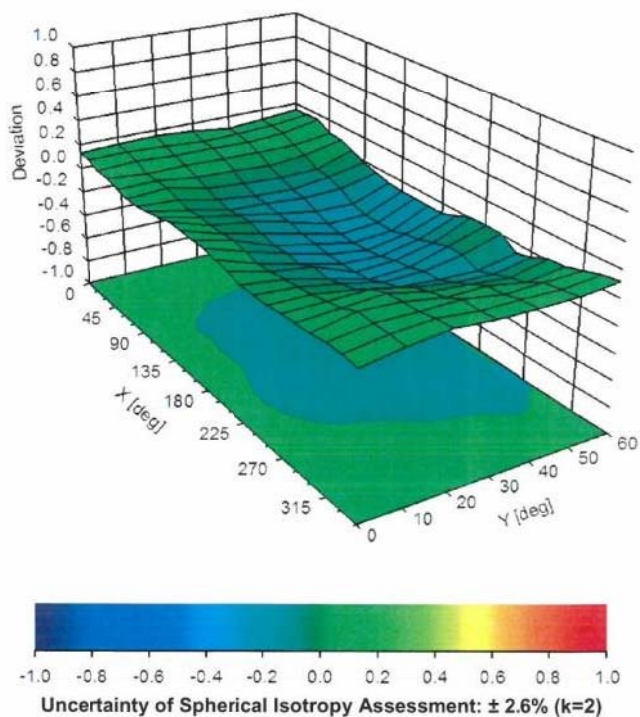
EX3DV4- SN:3898

June 27, 2017

## Conversion Factor Assessment



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





EX3DV4- SN:3898

June 27, 2017

**DASY/EASY - Parameters of Probe: EX3DV4 - SN:3898****Other Probe Parameters**

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 112        |
| 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     |



EX3DV4- SN:3898

June 27, 2017

**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    | 143.9    | $\pm 2.7\%$                      |
|               |                                               | Y | 0.00    | 0.00            | 1.00  |         | 142.2    |                                  |
|               |                                               | Z | 0.00    | 0.00            | 1.00  |         | 145.7    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.36    | 65.22           | 10.01 | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 2.38    | 65.50           | 10.11 |         | 20.0     |                                  |
|               |                                               | Z | 2.49    | 65.99           | 10.50 |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 0.97    | 66.94           | 14.95 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.04    | 68.03           | 15.67 |         | 150.0    |                                  |
|               |                                               | Z | 0.97    | 66.89           | 14.93 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.16    | 63.59           | 14.83 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.18    | 63.88           | 15.16 |         | 150.0    |                                  |
|               |                                               | Z | 1.15    | 63.44           | 14.80 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.63    | 66.61           | 16.74 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.65    | 66.69           | 16.86 |         | 150.0    |                                  |
|               |                                               | Z | 4.62    | 66.62           | 16.77 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 9.40    | 81.38           | 17.52 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 16.05   | 87.81           | 19.48 |         | 50.0     |                                  |
|               |                                               | Z | 22.43   | 92.46           | 21.10 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 7.11    | 77.84           | 16.31 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 10.05   | 82.09           | 17.71 |         | 50.0     |                                  |
|               |                                               | Z | 11.78   | 84.47           | 18.73 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 13.45   | 86.10           | 17.72 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 106.94          | 22.92 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 108.65          | 23.66 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 3.63    | 65.06           | 22.13 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 5.18    | 76.12           | 28.60 |         | 50.0     |                                  |
|               |                                               | Z | 3.25    | 61.92           | 20.33 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 6.62    | 83.09           | 28.34 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 7.13    | 86.03           | 30.02 |         | 60.0     |                                  |
|               |                                               | Z | 5.66    | 79.86           | 27.23 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 105.78          | 21.78 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 107.41          | 22.39 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 109.53          | 23.24 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 107.00          | 21.71 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 109.56          | 22.70 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 112.11          | 23.68 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 4.64    | 75.90           | 24.34 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 4.68    | 76.87           | 25.15 |         | 80.0     |                                  |
|               |                                               | Z | 4.08    | 73.46           | 23.48 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 5.90    | 78.01           | 14.62 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 25.51   | 92.34           | 18.68 |         | 70.0     |                                  |
|               |                                               | Z | 25.49   | 93.66           | 19.29 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 106.02          | 20.18 | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 109.92          | 21.67 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 111.87          | 22.32 |         | 100.0    |                                  |

Certificate No: EX3-3898\_Jun17

Page 12 of 38





EX3DV4- SN:3898

June 27, 2017

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 114.56 | 22.90 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 122.28 | 25.84 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 123.55 | 26.18 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 3.55   | 73.49  | 16.00 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 4.05   | 76.03  | 17.25 |       | 70.0  |         |
|           |                                                     | Z | 3.36   | 73.75  | 16.36 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 1.68   | 68.28  | 12.61 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.85   | 69.87  | 13.55 |       | 100.0 |         |
|           |                                                     | Z | 1.56   | 68.16  | 12.68 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 1.37   | 67.38  | 12.10 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.50   | 68.80  | 12.97 |       | 100.0 |         |
|           |                                                     | Z | 1.28   | 67.19  | 12.08 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 3.90   | 74.92  | 16.61 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 4.61   | 77.96  | 18.03 |       | 70.0  |         |
|           |                                                     | Z | 3.72   | 75.34  | 17.04 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 1.57   | 67.63  | 12.31 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.70   | 69.04  | 13.19 |       | 100.0 |         |
|           |                                                     | Z | 1.45   | 67.44  | 12.35 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.37   | 67.55  | 12.30 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.50   | 69.01  | 13.19 |       | 100.0 |         |
|           |                                                     | Z | 1.28   | 67.33  | 12.27 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 1.30   | 69.04  | 12.94 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.55   | 71.17  | 14.03 |       | 150.0 |         |
|           |                                                     | Z | 1.24   | 68.56  | 12.61 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 5.68   | 76.10  | 14.67 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 9.76   | 82.03  | 16.60 |       | 50.0  |         |
|           |                                                     | Z | 12.77  | 85.55  | 17.89 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.01   | 90.50  | 0.61  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.01   | 91.46  | 2.87  |       | 150.0 |         |
|           |                                                     | Z | 0.01   | 90.61  | 1.44  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 5.51   | 71.14  | 15.12 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 6.15   | 72.46  | 15.57 |       | 25.0  |         |
|           |                                                     | Z | 6.71   | 73.40  | 16.16 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 5.68   | 73.94  | 15.07 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 6.47   | 75.65  | 15.68 |       | 40.0  |         |
|           |                                                     | Z | 7.05   | 76.86  | 16.35 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 6.87   | 78.23  | 18.34 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 8.46   | 81.68  | 19.73 |       | 50.0  |         |
|           |                                                     | Z | 7.33   | 79.69  | 19.06 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 3.79   | 72.47  | 22.17 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.76   | 72.88  | 22.68 |       | 100.0 |         |
|           |                                                     | Z | 3.40   | 70.54  | 21.50 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.18   | 64.29  | 15.13 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.19   | 64.62  | 15.50 |       | 110.0 |         |
|           |                                                     | Z | 1.15   | 64.01  | 15.07 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 2.28   | 80.40  | 19.85 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 3.16   | 86.37  | 22.34 |       | 110.0 |         |
|           |                                                     | Z | 1.76   | 77.97  | 19.44 |       | 110.0 |         |

Certificate No: EX3-3898\_Jun17

Page 13 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 1.88 | 72.36 | 18.12 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 1.96 | 73.75 | 19.06 |      | 110.0 |         |
|           |                                                | Z | 1.64 | 70.87 | 17.81 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.44 | 66.67 | 16.29 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.47 | 66.75 | 16.40 |      | 100.0 |         |
|           |                                                | Z | 4.43 | 66.68 | 16.31 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.45 | 66.73 | 16.35 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.47 | 66.82 | 16.46 |      | 100.0 |         |
|           |                                                | Z | 4.44 | 66.74 | 16.38 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.67 | 66.90 | 16.51 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.70 | 66.98 | 16.63 |      | 100.0 |         |
|           |                                                | Z | 4.66 | 66.90 | 16.54 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.54 | 66.69 | 16.54 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.57 | 66.78 | 16.66 |      | 100.0 |         |
|           |                                                | Z | 4.53 | 66.69 | 16.57 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.55 | 66.64 | 16.64 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.57 | 66.74 | 16.77 |      | 100.0 |         |
|           |                                                | Z | 4.53 | 66.63 | 16.67 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 4.82 | 66.89 | 17.07 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.85 | 67.00 | 17.21 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 66.88 | 17.10 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 4.85 | 66.79 | 17.19 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.88 | 66.89 | 17.34 |      | 100.0 |         |
|           |                                                | Z | 4.84 | 66.77 | 17.22 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 4.91 | 66.79 | 17.35 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 66.90 | 17.51 |      | 100.0 |         |
|           |                                                | Z | 4.89 | 66.76 | 17.38 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.72 | 66.64 | 16.98 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.74 | 66.72 | 17.11 |      | 100.0 |         |
|           |                                                | Z | 4.70 | 66.64 | 17.01 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.66 | 66.81 | 17.11 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.68 | 66.91 | 17.25 |      | 100.0 |         |
|           |                                                | Z | 4.64 | 66.80 | 17.14 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.72 | 66.97 | 17.39 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.74 | 67.07 | 17.55 |      | 100.0 |         |
|           |                                                | Z | 4.70 | 66.94 | 17.43 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.74 | 66.94 | 17.53 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.76 | 67.04 | 17.69 |      | 100.0 |         |
|           |                                                | Z | 4.72 | 66.91 | 17.56 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.77 | 66.95 | 17.74 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.78 | 67.04 | 17.91 |      | 90.0  |         |
|           |                                                | Z | 4.74 | 66.89 | 17.77 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.81 | 66.85 | 17.91 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.82 | 66.94 | 18.08 |      | 90.0  |         |
|           |                                                | Z | 4.79 | 66.79 | 17.94 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.85 | 66.95 | 18.02 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.86 | 67.03 | 18.19 |      | 90.0  |         |
|           |                                                | Z | 4.82 | 66.88 | 18.05 |      | 90.0  |         |

Certificate No: EX3-3898\_Jun17

Page 14 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.66   | 64.51  | 10.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.73   | 65.64  | 11.22 |      | 150.0 |         |
|           |                                                     | Z | 0.65   | 64.36  | 10.28 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.56   | 57.02  | 2.34  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.50   | 57.27  | 2.55  |      | 80.0  |         |
|           |                                                     | Z | 0.72   | 60.56  | 4.69  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 12.76  | 85.53  | 17.57 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 106.92 | 22.92 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 108.63 | 23.67 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.81   | 68.44  | 15.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.88   | 69.07  | 16.03 |      | 150.0 |         |
|           |                                                     | Z | 1.81   | 68.48  | 15.60 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.77   | 68.36  | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.84   | 69.01  | 16.01 |      | 150.0 |         |
|           |                                                     | Z | 1.77   | 68.40  | 15.57 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 6.65   | 83.17  | 28.36 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 7.18   | 86.14  | 30.05 |      | 60.0  |         |
|           |                                                     | Z | 5.69   | 79.94  | 27.25 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.91   | 69.85  | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.00   | 70.32  | 16.93 |      | 150.0 |         |
|           |                                                     | Z | 2.90   | 69.77  | 16.63 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.08   | 67.30  | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.12   | 67.53  | 16.02 |      | 150.0 |         |
|           |                                                     | Z | 3.07   | 67.26  | 15.83 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.19   | 67.35  | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.22   | 67.55  | 16.12 |      | 150.0 |         |
|           |                                                     | Z | 3.18   | 67.32  | 15.96 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 5.34   | 73.16  | 19.00 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.40   | 73.67  | 19.39 |      | 65.0  |         |
|           |                                                     | Z | 4.60   | 71.12  | 18.33 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 5.56   | 71.82  | 19.11 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.54   | 72.04  | 19.38 |      | 65.0  |         |
|           |                                                     | Z | 5.21   | 71.00  | 18.89 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.34   | 70.90  | 19.01 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.32   | 71.12  | 19.27 |      | 65.0  |         |
|           |                                                     | Z | 4.66   | 68.69  | 18.12 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.51   | 69.21  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.58   | 69.70  | 16.77 |      | 150.0 |         |
|           |                                                     | Z | 2.50   | 69.15  | 16.45 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.72   | 67.32  | 15.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.77   | 67.58  | 15.90 |      | 150.0 |         |
|           |                                                     | Z | 2.71   | 67.30  | 15.69 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.00   | 68.45  | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.08   | 69.04  | 16.29 |      | 150.0 |         |
|           |                                                     | Z | 1.99   | 68.40  | 15.88 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.48   | 68.76  | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.54   | 69.09  | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 2.48   | 68.79  | 15.99 |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 15 of 38





EX3DV4- SN:3898

June 27, 2017

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.85 | 67.43 | 15.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.89 | 67.66 | 15.98 |      | 150.0 |         |
|           |                                                | Z | 2.84 | 67.42 | 15.79 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.63 | 68.98 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.68 | 69.26 | 16.38 |      | 150.0 |         |
|           |                                                | Z | 2.62 | 69.01 | 16.14 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 4.93 | 67.18 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.96 | 67.24 | 16.50 |      | 150.0 |         |
|           |                                                | Z | 4.93 | 67.19 | 16.45 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.17 | 67.22 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.19 | 67.28 | 16.52 |      | 150.0 |         |
|           |                                                | Z | 5.16 | 67.22 | 16.46 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.00 | 67.33 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.03 | 67.41 | 16.51 |      | 150.0 |         |
|           |                                                | Z | 5.00 | 67.33 | 16.45 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.92 | 67.09 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 67.16 | 16.48 |      | 150.0 |         |
|           |                                                | Z | 4.91 | 67.08 | 16.41 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.24 | 67.41 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.27 | 67.48 | 16.62 |      | 150.0 |         |
|           |                                                | Z | 5.23 | 67.40 | 16.55 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.01 | 67.35 | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.04 | 67.42 | 16.53 |      | 150.0 |         |
|           |                                                | Z | 5.01 | 67.36 | 16.47 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.20 | 67.37 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.24 | 67.57 | 16.03 |      | 150.0 |         |
|           |                                                | Z | 3.19 | 67.34 | 15.86 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.33 | 67.58 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.37 | 67.75 | 16.23 |      | 150.0 |         |
|           |                                                | Z | 3.32 | 67.56 | 16.09 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.77 | 68.44 | 15.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.85 | 69.19 | 15.67 |      | 150.0 |         |
|           |                                                | Z | 1.75 | 68.38 | 15.13 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.28 | 69.18 | 15.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.37 | 69.74 | 15.46 |      | 150.0 |         |
|           |                                                | Z | 2.25 | 69.10 | 14.98 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 1.90 | 65.81 | 12.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.97 | 66.25 | 13.19 |      | 150.0 |         |
|           |                                                | Z | 1.87 | 65.68 | 12.71 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 0.75 | 61.28 | 7.87  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.79 | 61.77 | 8.31  |      | 150.0 |         |
|           |                                                | Z | 0.72 | 60.96 | 7.53  |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 0.94 | 60.26 | 6.31  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.97 | 60.64 | 6.68  |      | 150.0 |         |
|           |                                                | Z | 0.88 | 60.00 | 6.02  |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 0.98 | 60.58 | 6.58  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.02 | 61.02 | 6.98  |      | 150.0 |         |
|           |                                                | Z | 0.91 | 60.11 | 6.15  |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 16 of 38





EX3DV4- SN:3898

June 27, 2017

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.73 | 67.39 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 67.65 | 15.96 |      | 150.0 |         |
|           |                                            | Z | 2.72 | 67.37 | 15.75 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.86 | 67.50 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.90 | 67.73 | 16.03 |      | 150.0 |         |
|           |                                            | Z | 2.85 | 67.49 | 15.84 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 5.53 | 75.34 | 19.83 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.61 | 76.00 | 20.31 |      | 65.0  |         |
|           |                                            | Z | 5.08 | 74.50 | 19.70 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.02 | 71.45 | 18.44 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.02 | 71.77 | 18.77 |      | 65.0  |         |
|           |                                            | Z | 4.68 | 70.65 | 18.22 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 5.43 | 72.70 | 19.38 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.41 | 72.94 | 19.67 |      | 65.0  |         |
|           |                                            | Z | 5.06 | 71.88 | 19.17 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.05 | 68.86 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.12 | 69.44 | 16.53 |      | 150.0 |         |
|           |                                            | Z | 2.04 | 68.82 | 16.14 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.49 | 68.81 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.54 | 69.14 | 16.28 |      | 150.0 |         |
|           |                                            | Z | 2.48 | 68.84 | 16.03 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.58 | 68.16 | 14.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.68 | 69.02 | 15.13 |      | 150.0 |         |
|           |                                            | Z | 1.56 | 68.05 | 14.47 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.70 | 65.93 | 12.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.78 | 66.49 | 12.89 |      | 150.0 |         |
|           |                                            | Z | 1.66 | 65.72 | 12.29 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.64 | 69.08 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.69 | 69.36 | 16.44 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 69.12 | 16.21 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.78 | 66.26 | 12.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.86 | 66.85 | 13.10 |      | 150.0 |         |
|           |                                            | Z | 1.74 | 66.02 | 12.46 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.56 | 68.64 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.63 | 69.06 | 16.53 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 68.63 | 16.25 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.75 | 67.48 | 15.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.79 | 67.73 | 15.91 |      | 150.0 |         |
|           |                                            | Z | 2.74 | 67.48 | 15.70 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.86 | 67.74 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.90 | 67.97 | 16.06 |      | 150.0 |         |
|           |                                            | Z | 2.85 | 67.74 | 15.86 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.15 | 68.95 | 18.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.17 | 69.13 | 19.12 |      | 150.0 |         |
|           |                                            | Z | 3.08 | 68.65 | 18.81 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.77 | 72.21 | 19.51 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.79 | 72.51 | 19.79 |      | 150.0 |         |
|           |                                            | Z | 3.62 | 71.66 | 19.32 |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 17 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.40 | 75.66 | 21.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.36 | 75.65 | 21.58 |      | 150.0 |         |
|           |                                            | Z | 4.22 | 75.12 | 21.31 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.61 | 67.74 | 18.35 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59 | 67.78 | 18.53 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 67.29 | 18.17 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.58 | 74.69 | 21.32 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.46 | 74.45 | 21.40 |      | 150.0 |         |
|           |                                            | Z | 3.38 | 73.77 | 21.02 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.81 | 69.59 | 17.94 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 69.86 | 18.27 |      | 150.0 |         |
|           |                                            | Z | 2.67 | 68.85 | 17.66 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.79 | 76.98 | 22.56 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.93 | 78.65 | 23.67 |      | 65.0  |         |
|           |                                            | Z | 2.71 | 71.26 | 20.45 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 6.07 | 83.26 | 22.96 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.67 | 86.09 | 24.37 |      | 65.0  |         |
|           |                                            | Z | 4.93 | 80.81 | 22.46 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.48 | 74.02 | 19.09 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.11 | 80.99 | 22.02 |      | 65.0  |         |
|           |                                            | Z | 2.54 | 69.95 | 17.79 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.58 | 67.41 | 18.08 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.56 | 67.49 | 18.28 |      | 150.0 |         |
|           |                                            | Z | 2.52 | 66.97 | 17.90 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.58 | 74.71 | 21.34 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.47 | 74.48 | 21.41 |      | 150.0 |         |
|           |                                            | Z | 3.38 | 73.80 | 21.04 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.60 | 67.55 | 18.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.58 | 67.61 | 18.36 |      | 150.0 |         |
|           |                                            | Z | 2.53 | 67.10 | 17.98 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.55 | 74.51 | 21.23 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.44 | 74.31 | 21.32 |      | 150.0 |         |
|           |                                            | Z | 3.35 | 73.60 | 20.93 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.14 | 71.91 | 19.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.09 | 72.04 | 19.71 |      | 150.0 |         |
|           |                                            | Z | 2.97 | 71.07 | 19.16 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.81 | 69.54 | 17.90 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 69.82 | 18.24 |      | 150.0 |         |
|           |                                            | Z | 2.67 | 68.81 | 17.63 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.59 | 67.53 | 18.16 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.57 | 67.60 | 18.35 |      | 150.0 |         |
|           |                                            | Z | 2.53 | 67.08 | 17.98 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.55 | 74.48 | 21.21 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.44 | 74.29 | 21.31 |      | 150.0 |         |
|           |                                            | Z | 3.35 | 73.57 | 20.91 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.80 | 69.52 | 17.89 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 69.80 | 18.23 |      | 150.0 |         |
|           |                                            | Z | 2.67 | 68.78 | 17.61 |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 18 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.60 | 67.57 | 18.18 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.58 | 67.63 | 18.37 |      | 150.0 |         |
|           |                                               | Z | 2.54 | 67.12 | 18.00 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.57 | 74.57 | 21.26 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.45 | 74.37 | 21.35 |      | 150.0 |         |
|           |                                               | Z | 3.36 | 73.66 | 20.96 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.81 | 69.58 | 17.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.79 | 69.86 | 18.26 |      | 150.0 |         |
|           |                                               | Z | 2.68 | 68.85 | 17.65 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.61 | 67.66 | 18.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.59 | 67.72 | 18.46 |      | 150.0 |         |
|           |                                               | Z | 2.55 | 67.21 | 18.09 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.70 | 75.36 | 21.71 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.56 | 75.05 | 21.74 |      | 150.0 |         |
|           |                                               | Z | 3.49 | 74.43 | 21.41 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.88 | 70.03 | 18.23 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.85 | 70.29 | 18.55 |      | 150.0 |         |
|           |                                               | Z | 2.74 | 69.27 | 17.94 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.34 | 66.89 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.37 | 66.96 | 16.21 |      | 150.0 |         |
|           |                                               | Z | 4.34 | 66.91 | 16.13 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.47 | 67.10 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.50 | 67.17 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.46 | 67.10 | 16.26 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.50 | 67.10 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.53 | 67.18 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.49 | 67.10 | 16.27 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.32 | 66.87 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.35 | 66.94 | 16.19 |      | 150.0 |         |
|           |                                               | Z | 4.31 | 66.88 | 16.11 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.48 | 67.09 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.51 | 67.17 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.47 | 67.10 | 16.27 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.50 | 67.09 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.52 | 67.17 | 16.35 |      | 150.0 |         |
|           |                                               | Z | 4.48 | 67.10 | 16.27 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.28 | 66.92 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.31 | 66.99 | 16.17 |      | 150.0 |         |
|           |                                               | Z | 4.27 | 66.93 | 16.09 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.47 | 67.06 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.50 | 67.13 | 16.33 |      | 150.0 |         |
|           |                                               | Z | 4.46 | 67.06 | 16.25 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.51 | 67.05 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.54 | 67.12 | 16.34 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 67.05 | 16.26 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.90 | 67.09 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.92 | 67.16 | 16.47 |      | 150.0 |         |
|           |                                               | Z | 4.89 | 67.09 | 16.41 |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 19 of 38





EX3DV4- SN:3898

June 27, 2017

|           |                                           |   |      |       |       |      |       |         |
|-----------|-------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.14 | 67.23 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.17 | 67.30 | 16.55 |      | 150.0 |         |
|           |                                           | Z | 5.13 | 67.21 | 16.47 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.93 | 67.22 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.96 | 67.28 | 16.46 |      | 150.0 |         |
|           |                                           | Z | 4.93 | 67.22 | 16.40 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.62 | 66.31 | 14.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.66 | 66.52 | 15.02 |      | 150.0 |         |
|           |                                           | Z | 2.61 | 66.30 | 14.77 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 6.48 | 84.45 | 23.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.14 | 87.35 | 24.90 |      | 65.0  |         |
|           |                                           | Z | 5.23 | 81.91 | 22.96 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 6.16 | 82.63 | 22.19 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.82 | 85.45 | 23.56 |      | 65.0  |         |
|           |                                           | Z | 5.09 | 80.65 | 21.86 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 4.45 | 80.06 | 23.79 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.60 | 81.69 | 24.86 |      | 65.0  |         |
|           |                                           | Z | 3.70 | 77.27 | 23.00 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 6.12 | 83.36 | 23.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.72 | 86.19 | 24.41 |      | 65.0  |         |
|           |                                           | Z | 4.96 | 80.92 | 22.50 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 5.79 | 81.58 | 21.75 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.38 | 84.30 | 23.09 |      | 65.0  |         |
|           |                                           | Z | 4.80 | 79.65 | 21.42 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 4.29 | 79.30 | 23.42 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.43 | 80.94 | 24.49 |      | 65.0  |         |
|           |                                           | Z | 3.58 | 76.59 | 22.64 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 6.11 | 83.34 | 23.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.71 | 86.18 | 24.41 |      | 65.0  |         |
|           |                                           | Z | 4.95 | 80.90 | 22.50 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 5.77 | 81.55 | 21.74 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.36 | 84.27 | 23.09 |      | 65.0  |         |
|           |                                           | Z | 4.79 | 79.62 | 21.41 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 4.16 | 78.66 | 23.05 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.31 | 80.31 | 24.14 |      | 65.0  |         |
|           |                                           | Z | 3.49 | 76.04 | 22.30 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 6.11 | 83.36 | 23.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.72 | 86.20 | 24.42 |      | 65.0  |         |
|           |                                           | Z | 4.95 | 80.91 | 22.50 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 5.82 | 81.66 | 21.77 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.43 | 84.41 | 23.13 |      | 65.0  |         |
|           |                                           | Z | 4.83 | 79.73 | 21.44 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 4.28 | 79.31 | 23.42 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.43 | 80.96 | 24.51 |      | 65.0  |         |
|           |                                           | Z | 3.57 | 76.59 | 22.65 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 6.09 | 83.32 | 22.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.69 | 86.15 | 24.40 |      | 65.0  |         |
|           |                                           | Z | 4.94 | 80.87 | 22.48 |      | 65.0  |         |

Certificate No: EX3-3898\_Jun17

Page 20 of 38





EX3DV4- SN:3898

June 27, 2017

|           |                                            |   |      |       |       |      |      |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 5.75 | 81.51 | 21.73 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.34 | 84.22 | 23.07 |      | 65.0 |         |
|           |                                            | Z | 4.77 | 79.58 | 21.39 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 4.28 | 79.29 | 23.41 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.42 | 80.94 | 24.50 |      | 65.0 |         |
|           |                                            | Z | 3.57 | 76.57 | 22.64 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 6.77 | 79.45 | 24.10 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.85 | 80.27 | 24.72 |      | 65.0 |         |
|           |                                            | Z | 6.13 | 77.95 | 23.67 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.14 | 77.59 | 23.28 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.25 | 78.54 | 23.96 |      | 65.0 |         |
|           |                                            | Z | 4.91 | 73.61 | 21.77 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.06 | 74.01 | 22.62 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.14 | 74.80 | 23.27 |      | 65.0 |         |
|           |                                            | Z | 4.26 | 70.67 | 21.23 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 3.23 | 66.79 | 12.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.28 | 67.33 | 12.79 |      | 65.0 |         |
|           |                                            | Z | 2.96 | 66.23 | 12.11 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 3.19 | 66.42 | 12.11 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.22 | 66.91 | 12.53 |      | 65.0 |         |
|           |                                            | Z | 2.93 | 65.87 | 11.87 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 2.96 | 68.62 | 13.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.06 | 69.45 | 14.37 |      | 65.0 |         |
|           |                                            | Z | 2.72 | 68.15 | 13.68 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 3.59 | 68.52 | 14.48 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.63 | 68.99 | 14.89 |      | 65.0 |         |
|           |                                            | Z | 3.34 | 68.01 | 14.32 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 3.58 | 68.09 | 14.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.61 | 68.50 | 14.66 |      | 65.0 |         |
|           |                                            | Z | 3.33 | 67.54 | 14.09 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 4.18 | 73.60 | 17.26 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.38 | 74.81 | 17.99 |      | 65.0 |         |
|           |                                            | Z | 3.80 | 72.97 | 17.18 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.93 | 73.22 | 18.87 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.93 | 73.57 | 19.23 |      | 65.0 |         |
|           |                                            | Z | 4.57 | 72.45 | 18.70 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 4.63 | 71.06 | 17.52 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.65 | 71.45 | 17.89 |      | 65.0 |         |
|           |                                            | Z | 4.30 | 70.32 | 17.31 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 5.25 | 76.57 | 19.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.40 | 77.56 | 20.62 |      | 65.0 |         |
|           |                                            | Z | 4.75 | 75.64 | 19.84 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.96 | 71.14 | 18.18 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.96 | 71.44 | 18.50 |      | 65.0 |         |
|           |                                            | Z | 4.63 | 70.37 | 17.96 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.31 | 72.19 | 18.96 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.29 | 72.43 | 19.26 |      | 65.0 |         |
|           |                                            | Z | 4.96 | 71.40 | 18.75 |      | 65.0 |         |

Certificate No: EX3-3898\_Jun17

Page 21 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 5.33 | 74.86 | 19.75 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.39 | 75.47 | 20.21 |      | 65.0 |         |
|           |                                             | Z | 4.90 | 73.99 | 19.59 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 2.38 | 63.32 | 9.37  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.38 | 63.59 | 9.67  |      | 65.0 |         |
|           |                                             | Z | 2.18 | 62.86 | 9.11  |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 2.36 | 63.00 | 9.11  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.36 | 63.24 | 9.38  |      | 65.0 |         |
|           |                                             | Z | 2.17 | 62.55 | 8.84  |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 2.16 | 64.45 | 10.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.18 | 64.85 | 11.00 |      | 65.0 |         |
|           |                                             | Z | 1.99 | 64.02 | 10.45 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 4.09 | 70.30 | 16.08 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.13 | 70.78 | 16.51 |      | 65.0 |         |
|           |                                             | Z | 3.80 | 69.71 | 15.93 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 4.13 | 70.10 | 15.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.16 | 70.56 | 16.39 |      | 65.0 |         |
|           |                                             | Z | 3.84 | 69.52 | 15.83 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 4.48 | 74.35 | 18.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.65 | 75.44 | 18.83 |      | 65.0 |         |
|           |                                             | Z | 4.08 | 73.63 | 18.05 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.91 | 73.13 | 18.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.91 | 73.49 | 19.17 |      | 65.0 |         |
|           |                                             | Z | 4.55 | 72.36 | 18.64 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 4.63 | 71.04 | 17.51 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.64 | 71.43 | 17.88 |      | 65.0 |         |
|           |                                             | Z | 4.30 | 70.31 | 17.31 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 5.19 | 76.37 | 19.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.35 | 77.36 | 20.52 |      | 65.0 |         |
|           |                                             | Z | 4.70 | 75.44 | 19.74 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.02 | 71.45 | 18.45 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.02 | 71.77 | 18.78 |      | 65.0 |         |
|           |                                             | Z | 4.68 | 70.65 | 18.23 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 5.43 | 72.69 | 19.37 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.41 | 72.93 | 19.66 |      | 65.0 |         |
|           |                                             | Z | 5.06 | 71.87 | 19.16 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 5.52 | 75.30 | 19.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.60 | 75.96 | 20.29 |      | 65.0 |         |
|           |                                             | Z | 5.07 | 74.46 | 19.68 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 5.75 | 71.95 | 19.26 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.72 | 72.12 | 19.51 |      | 65.0 |         |
|           |                                             | Z | 5.40 | 71.15 | 19.04 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 5.78 | 71.69 | 19.18 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.74 | 71.84 | 19.41 |      | 65.0 |         |
|           |                                             | Z | 5.43 | 70.91 | 18.96 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 5.71 | 73.67 | 19.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.72 | 74.02 | 19.72 |      | 65.0 |         |
|           |                                             | Z | 5.33 | 72.93 | 19.27 |      | 65.0 |         |

Certificate No: EX3-3898\_Jun17

Page 22 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.47  | 66.92 | 14.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.52  | 67.22 | 15.16 |      | 150.0 |         |
|           |                                                                    | Z | 2.46  | 66.92 | 14.87 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.51  | 67.86 | 15.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.59  | 68.65 | 15.81 |      | 150.0 |         |
|           |                                                                    | Z | 1.51  | 67.83 | 15.27 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.93  | 60.30 | 5.80  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.90  | 60.39 | 5.82  |      | 50.0  |         |
|           |                                                                    | Z | 1.85  | 60.15 | 5.70  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 2.95  | 64.62 | 10.30 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.95  | 64.90 | 10.48 |      | 50.0  |         |
|           |                                                                    | Z | 2.89  | 64.62 | 10.32 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 3.00  | 64.77 | 10.42 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 3.00  | 65.06 | 10.62 |      | 50.0  |         |
|           |                                                                    | Z | 2.93  | 64.75 | 10.45 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 0.97  | 65.51 | 10.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.07  | 66.68 | 11.73 |      | 150.0 |         |
|           |                                                                    | Z | 0.93  | 65.15 | 10.70 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.65  | 64.31 | 10.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.71  | 65.39 | 11.08 |      | 150.0 |         |
|           |                                                                    | Z | 0.64  | 64.16 | 10.15 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.98  | 69.87 | 13.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.27  | 73.08 | 14.92 |      | 150.0 |         |
|           |                                                                    | Z | 0.97  | 69.74 | 13.20 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 3.47  | 85.51 | 19.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 8.72  | 97.43 | 23.23 |      | 150.0 |         |
|           |                                                                    | Z | 3.75  | 86.24 | 19.59 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 9.05  | 80.79 | 19.88 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.39 | 83.34 | 20.97 |      | 50.0  |         |
|           |                                                                    | Z | 10.43 | 83.10 | 20.75 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.52  | 69.33 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.60  | 69.81 | 16.85 |      | 150.0 |         |
|           |                                                                    | Z | 2.51  | 69.27 | 16.53 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.13  | 65.04 | 11.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.21  | 65.84 | 12.00 |      | 150.0 |         |
|           |                                                                    | Z | 1.10  | 64.74 | 11.18 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.48  | 63.88 | 9.66  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.56  | 64.58 | 10.18 |      | 150.0 |         |
|           |                                                                    | Z | 1.37  | 63.27 | 9.22  |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.17  | 61.20 | 7.51  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.21  | 61.53 | 7.83  |      | 150.0 |         |
|           |                                                                    | Z | 1.11  | 60.84 | 7.18  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.17  | 64.58 | 16.68 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.21  | 64.70 | 16.82 |      | 50.0  |         |
|           |                                                                    | Z | 4.18  | 64.69 | 16.72 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.78  | 65.73 | 17.66 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.81  | 65.86 | 17.81 |      | 50.0  |         |
|           |                                                                    | Z | 4.78  | 65.91 | 17.76 |      | 50.0  |         |

Certificate No: EX3-3898\_Jun17

Page 23 of 38





EX3DV4-- SN:3898

June 27, 2017

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.55 | 65.41 | 17.46 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 65.52 | 17.61 |       | 50.0  |         |
|           |                                                                     | Z | 4.56 | 65.64 | 17.60 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.38 | 65.40 | 17.04 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.41 | 65.50 | 17.18 |       | 50.0  |         |
|           |                                                                     | Z | 4.35 | 65.34 | 16.99 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.06 | 67.11 | 18.40 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.05 | 67.17 | 18.58 |       | 35.0  |         |
|           |                                                                     | Z | 4.03 | 67.01 | 18.26 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.35 | 66.21 | 18.28 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.35 | 66.28 | 18.44 |       | 35.0  |         |
|           |                                                                     | Z | 4.33 | 66.18 | 18.21 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.24 | 66.25 | 18.19 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.24 | 66.31 | 18.35 |       | 35.0  |         |
|           |                                                                     | Z | 4.22 | 66.21 | 18.11 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.22 | 66.45 | 18.33 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.22 | 66.51 | 18.50 |       | 35.0  |         |
|           |                                                                     | Z | 4.20 | 66.39 | 18.25 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.35 | 66.23 | 18.34 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.36 | 66.31 | 18.52 |       | 35.0  |         |
|           |                                                                     | Z | 4.33 | 66.20 | 18.27 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.30 | 66.28 | 18.28 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.31 | 66.35 | 18.44 |       | 35.0  |         |
|           |                                                                     | Z | 4.29 | 66.25 | 18.21 |       | 35.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.88 | 68.59 | 16.20 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.96 | 69.02 | 16.48 |       | 150.0 |         |
|           |                                                                     | Z | 2.87 | 68.53 | 16.21 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 2.75 | 69.55 | 14.37 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 2.79 | 70.41 | 14.91 |       | 70.0  |         |
|           |                                                                     | Z | 2.48 | 69.40 | 14.66 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 3.88 | 75.45 | 19.52 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 4.05 | 76.79 | 20.24 |       | 30.0  |         |
|           |                                                                     | Z | 4.02 | 76.95 | 20.46 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.08 | 63.66 | 14.90 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10 | 63.98 | 15.23 |       | 150.0 |         |
|           |                                                                     | Z | 1.08 | 63.57 | 14.89 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.34 | 66.68 | 16.09 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.37 | 66.78 | 16.20 |       | 150.0 |         |
|           |                                                                     | Z | 4.33 | 66.69 | 16.11 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.34 | 66.68 | 16.09 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.37 | 66.78 | 16.20 |       | 150.0 |         |
|           |                                                                     | Z | 4.33 | 66.69 | 16.11 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.42 | 67.04 | 16.19 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.45 | 67.14 | 16.30 |       | 150.0 |         |
|           |                                                                     | Z | 4.40 | 67.03 | 16.20 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.09 | 66.82 | 16.20 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.11 | 66.90 | 16.30 |       | 150.0 |         |
|           |                                                                     | Z | 5.07 | 66.79 | 16.21 |       | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 24 of 38



EX3DV4- SN:3898

June 27, 2017

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.45   | 67.43  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.48   | 67.49  | 16.50 |      | 150.0 |         |
|           |                                                                                | Z | 5.45   | 67.42  | 16.44 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 0.97   | 65.51  | 10.99 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.07   | 66.68  | 11.73 |      | 115.0 |         |
|           |                                                                                | Z | 0.93   | 65.15  | 10.70 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 0.97   | 65.51  | 10.99 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.07   | 66.68  | 11.73 |      | 115.0 |         |
|           |                                                                                | Z | 0.93   | 65.15  | 10.70 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 114.78 | 26.32 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 116.57 | 27.06 |      | 100.0 |         |
|           |                                                                                | Z | 100.00 | 115.47 | 26.53 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 4.10   | 80.03  | 17.90 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 6.73   | 87.51  | 20.67 |      | 80.0  |         |
|           |                                                                                | Z | 3.49   | 79.61  | 18.20 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.03   | 63.15  | 14.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.05   | 63.48  | 14.92 |      | 150.0 |         |
|           |                                                                                | Z | 1.03   | 63.15  | 14.60 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.33   | 66.85  | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.36   | 66.92  | 16.27 |      | 150.0 |         |
|           |                                                                                | Z | 4.32   | 66.85  | 16.19 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.33   | 66.85  | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.36   | 66.92  | 16.27 |      | 150.0 |         |
|           |                                                                                | Z | 4.32   | 66.85  | 16.19 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.33   | 67.06  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.35   | 67.14  | 16.34 |      | 150.0 |         |
|           |                                                                                | Z | 4.32   | 67.07  | 16.26 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.34   | 66.99  | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.37   | 67.06  | 16.32 |      | 150.0 |         |
|           |                                                                                | Z | 4.33   | 67.00  | 16.24 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.44   | 66.96  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.47   | 67.03  | 16.33 |      | 150.0 |         |
|           |                                                                                | Z | 4.44   | 66.97  | 16.25 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.56   | 67.20  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.59   | 67.28  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.55   | 67.20  | 16.33 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.49   | 67.15  | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.52   | 67.23  | 16.39 |      | 150.0 |         |
|           |                                                                                | Z | 4.48   | 67.15  | 16.30 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.12   | 67.29  | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.15   | 67.38  | 16.57 |      | 150.0 |         |
|           |                                                                                | Z | 5.11   | 67.27  | 16.48 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.14   | 67.37  | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.17   | 67.45  | 16.59 |      | 150.0 |         |
|           |                                                                                | Z | 5.13   | 67.38  | 16.53 |      | 150.0 |         |



EX3DV4- SN:3898

June 27, 2017

|           |                                                                |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.10 | 67.17 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.13 | 67.24 | 16.49 |      | 150.0 |         |
|           |                                                                | Z | 5.10 | 67.18 | 16.43 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.45 | 73.55 | 18.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.36 | 73.07 | 18.66 |      | 150.0 |         |
|           |                                                                | Z | 4.51 | 73.93 | 18.97 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.93 | 67.43 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.96 | 67.55 | 16.14 |      | 150.0 |         |
|           |                                                                | Z | 3.91 | 67.44 | 16.01 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.25 | 67.26 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.29 | 67.35 | 16.32 |      | 150.0 |         |
|           |                                                                | Z | 4.24 | 67.26 | 16.22 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.51 | 67.19 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.54 | 67.26 | 16.41 |      | 150.0 |         |
|           |                                                                | Z | 4.50 | 67.19 | 16.33 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.61 | 74.53 | 18.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.51 | 74.05 | 18.47 |      | 150.0 |         |
|           |                                                                | Z | 4.68 | 74.88 | 18.71 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 3.91 | 79.35 | 17.61 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 6.25 | 86.43 | 20.28 |      | 80.0  |         |
|           |                                                                | Z | 3.34 | 78.94 | 17.91 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.14 | 67.14 | 14.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.20 | 67.36 | 14.95 |      | 150.0 |         |
|           |                                                                | Z | 3.12 | 67.09 | 14.67 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.80 | 67.24 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.84 | 67.36 | 16.03 |      | 150.0 |         |
|           |                                                                | Z | 3.79 | 67.24 | 15.90 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.10 | 67.10 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.13 | 67.19 | 16.22 |      | 150.0 |         |
|           |                                                                | Z | 4.09 | 67.10 | 16.13 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.32 | 66.97 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.35 | 67.05 | 16.27 |      | 150.0 |         |
|           |                                                                | Z | 4.31 | 66.97 | 16.19 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 2.91 | 66.74 | 13.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.97 | 67.02 | 14.13 |      | 150.0 |         |
|           |                                                                | Z | 2.87 | 66.63 | 13.77 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.05 | 67.79 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.07 | 67.84 | 16.68 |      | 150.0 |         |
|           |                                                                | Z | 6.06 | 67.83 | 16.67 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.72 | 65.65 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.74 | 65.71 | 16.01 |      | 150.0 |         |
|           |                                                                | Z | 3.72 | 65.68 | 15.93 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 2.56 | 65.08 | 12.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.62 | 65.37 | 12.69 |      | 150.0 |         |
|           |                                                                | Z | 2.50 | 64.84 | 12.20 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 3.65 | 64.11 | 14.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.72 | 64.38 | 14.32 |      | 150.0 |         |
|           |                                                                | Z | 3.61 | 64.01 | 13.94 |      | 150.0 |         |

Certificate No: EX3-3898\_Jun17

Page 26 of 38