

## Appendix B: DAE and Probe Calibration Certificate

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|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.75 | 67.40 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.58 | 66.55 | 15.14 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 67.28 | 15.59 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.88 | 67.47 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.71 | 66.66 | 15.25 |      | 150.0 |         |
|           |                                            | Z | 2.77 | 67.39 | 15.69 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 4.99 | 75.67 | 20.72 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.54 | 74.14 | 19.94 |      | 65.0  |         |
|           |                                            | Z | 4.82 | 75.77 | 20.80 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 4.45 | 70.90 | 18.86 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.17 | 69.87 | 18.26 |      | 65.0  |         |
|           |                                            | Z | 4.26 | 70.67 | 18.66 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 4.79 | 71.97 | 19.73 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.50 | 70.99 | 19.17 |      | 65.0  |         |
|           |                                            | Z | 4.61 | 71.85 | 19.59 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.08 | 69.01 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.85 | 67.42 | 15.08 |      | 150.0 |         |
|           |                                            | Z | 1.95 | 68.66 | 15.88 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.49 | 68.62 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.26 | 67.33 | 15.03 |      | 150.0 |         |
|           |                                            | Z | 2.38 | 68.57 | 15.67 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.62 | 68.33 | 14.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.32 | 65.72 | 12.82 |      | 150.0 |         |
|           |                                            | Z | 1.42 | 67.19 | 13.63 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.76 | 66.14 | 12.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.47 | 64.00 | 11.06 |      | 150.0 |         |
|           |                                            | Z | 1.47 | 64.54 | 11.21 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.64 | 68.86 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.41 | 67.62 | 15.24 |      | 150.0 |         |
|           |                                            | Z | 2.52 | 68.81 | 15.83 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.84 | 66.49 | 12.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.52 | 64.19 | 11.20 |      | 150.0 |         |
|           |                                            | Z | 1.52 | 64.73 | 11.33 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.60 | 68.75 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.41 | 67.74 | 15.55 |      | 150.0 |         |
|           |                                            | Z | 2.47 | 68.55 | 16.10 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.76 | 67.44 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59 | 66.58 | 15.07 |      | 150.0 |         |
|           |                                            | Z | 2.65 | 67.35 | 15.50 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.88 | 67.68 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.70 | 66.83 | 15.23 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 67.62 | 15.66 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.02 | 67.96 | 18.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 68.30 | 18.53 |      | 150.0 |         |
|           |                                            | Z | 2.86 | 67.79 | 18.34 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.42 | 70.11 | 18.44 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.50 | 70.73 | 18.75 |      | 150.0 |         |
|           |                                            | Z | 3.20 | 70.16 | 18.62 |      | 150.0 |         |

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| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 3.80 | 72.47 | 19.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.97 | 73.52 | 20.42 |      | 150.0 |         |
|           |                                            | Z | 3.59 | 72.78 | 20.23 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.40 | 66.10 | 17.40 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.46 | 66.60 | 17.71 |      | 150.0 |         |
|           |                                            | Z | 2.33 | 66.05 | 17.51 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 2.86 | 70.22 | 19.21 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.07 | 71.47 | 19.80 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 70.55 | 19.53 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.43 | 67.02 | 16.67 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 67.67 | 16.96 |      | 150.0 |         |
|           |                                            | Z | 2.33 | 67.12 | 16.84 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.22 | 76.35 | 23.22 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 2.88 | 74.18 | 22.38 |      | 65.0  |         |
|           |                                            | Z | 2.74 | 74.43 | 22.80 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 4.36 | 80.46 | 22.94 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.63 | 81.45 | 23.36 |      | 65.0  |         |
|           |                                            | Z | 3.93 | 80.61 | 23.43 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.95 | 78.13 | 21.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.58 | 76.48 | 20.90 |      | 65.0  |         |
|           |                                            | Z | 3.41 | 77.60 | 21.68 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.38 | 65.87 | 17.19 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.43 | 66.33 | 17.47 |      | 150.0 |         |
|           |                                            | Z | 2.30 | 65.82 | 17.28 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 2.86 | 70.24 | 19.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.08 | 71.50 | 19.81 |      | 150.0 |         |
|           |                                            | Z | 2.76 | 70.57 | 19.54 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.39 | 65.97 | 17.26 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.45 | 66.44 | 17.54 |      | 150.0 |         |
|           |                                            | Z | 2.32 | 65.91 | 17.35 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 2.85 | 70.12 | 19.14 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.06 | 71.36 | 19.72 |      | 150.0 |         |
|           |                                            | Z | 2.75 | 70.47 | 19.48 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 2.62 | 68.53 | 17.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 69.42 | 18.23 |      | 150.0 |         |
|           |                                            | Z | 2.52 | 68.74 | 18.07 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.43 | 66.99 | 16.64 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 67.64 | 16.93 |      | 150.0 |         |
|           |                                            | Z | 2.33 | 67.10 | 16.82 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.39 | 65.96 | 17.25 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.44 | 66.43 | 17.54 |      | 150.0 |         |
|           |                                            | Z | 2.31 | 65.90 | 17.34 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 2.84 | 70.10 | 19.13 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.05 | 71.33 | 19.71 |      | 150.0 |         |
|           |                                            | Z | 2.75 | 70.45 | 19.47 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.43 | 66.97 | 16.63 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 67.62 | 16.92 |      | 150.0 |         |
|           |                                            | Z | 2.32 | 67.08 | 16.81 |      | 150.0 |         |

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| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.39 | 65.99 | 17.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.45 | 66.47 | 17.56 |      | 150.0 |         |
|           |                                               | Z | 2.32 | 65.93 | 17.36 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 2.85 | 70.16 | 19.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.07 | 71.40 | 19.75 |      | 150.0 |         |
|           |                                               | Z | 2.76 | 70.51 | 19.50 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.44 | 67.02 | 16.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.56 | 67.67 | 16.95 |      | 150.0 |         |
|           |                                               | Z | 2.33 | 67.13 | 16.84 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.40 | 66.06 | 17.35 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.46 | 66.54 | 17.64 |      | 150.0 |         |
|           |                                               | Z | 2.33 | 66.01 | 17.45 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 2.92 | 70.63 | 19.48 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.15 | 71.97 | 20.11 |      | 150.0 |         |
|           |                                               | Z | 2.82 | 70.99 | 19.83 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.48 | 67.32 | 16.90 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.60 | 68.01 | 17.21 |      | 150.0 |         |
|           |                                               | Z | 2.37 | 67.44 | 17.08 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.36 | 66.79 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.24 | 66.43 | 15.86 |      | 150.0 |         |
|           |                                               | Z | 4.25 | 66.88 | 16.06 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.50 | 67.02 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.38 | 66.66 | 16.00 |      | 150.0 |         |
|           |                                               | Z | 4.38 | 67.06 | 16.19 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.53 | 67.04 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.41 | 66.68 | 16.02 |      | 150.0 |         |
|           |                                               | Z | 4.40 | 67.05 | 16.19 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.34 | 66.79 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 66.42 | 15.84 |      | 150.0 |         |
|           |                                               | Z | 4.23 | 66.84 | 16.03 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.51 | 67.03 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.38 | 66.66 | 16.01 |      | 150.0 |         |
|           |                                               | Z | 4.38 | 67.05 | 16.19 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.53 | 67.04 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.40 | 66.67 | 16.02 |      | 150.0 |         |
|           |                                               | Z | 4.39 | 67.04 | 16.19 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.30 | 66.83 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 66.45 | 15.81 |      | 150.0 |         |
|           |                                               | Z | 4.19 | 66.90 | 16.01 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.50 | 66.99 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.38 | 66.63 | 16.00 |      | 150.0 |         |
|           |                                               | Z | 4.37 | 67.02 | 16.18 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.54 | 66.98 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.42 | 66.63 | 16.01 |      | 150.0 |         |
|           |                                               | Z | 4.41 | 67.00 | 16.19 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.91 | 67.06 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.81 | 66.75 | 16.20 |      | 150.0 |         |
|           |                                               | Z | 4.81 | 67.01 | 16.35 |      | 150.0 |         |

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| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.18 | 67.25 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.07 | 66.94 | 16.31 |      | 150.0 |         |
|           |                                           | Z | 5.03 | 67.10 | 16.40 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.95 | 67.17 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.85 | 66.86 | 16.19 |      | 150.0 |         |
|           |                                           | Z | 4.85 | 67.15 | 16.34 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.64 | 66.25 | 14.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.47 | 65.44 | 14.20 |      | 150.0 |         |
|           |                                           | Z | 2.51 | 66.11 | 14.44 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 4.57 | 81.37 | 23.38 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.90 | 82.52 | 23.85 |      | 65.0  |         |
|           |                                           | Z | 4.15 | 81.66 | 23.92 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 4.60 | 80.57 | 22.40 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.89 | 81.58 | 22.82 |      | 65.0  |         |
|           |                                           | Z | 4.14 | 80.85 | 22.92 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 3.35 | 77.29 | 23.65 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.36 | 77.54 | 23.87 |      | 65.0  |         |
|           |                                           | Z | 2.92 | 75.79 | 23.43 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 4.39 | 80.55 | 22.98 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.67 | 81.55 | 23.40 |      | 65.0  |         |
|           |                                           | Z | 3.96 | 80.71 | 23.47 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 4.37 | 79.68 | 21.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.61 | 80.55 | 22.37 |      | 65.0  |         |
|           |                                           | Z | 3.91 | 79.81 | 22.46 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 3.26 | 76.70 | 23.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.26 | 76.88 | 23.51 |      | 65.0  |         |
|           |                                           | Z | 2.84 | 75.20 | 23.10 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 4.39 | 80.53 | 22.98 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.66 | 81.53 | 23.40 |      | 65.0  |         |
|           |                                           | Z | 3.96 | 80.69 | 23.47 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 4.36 | 79.65 | 21.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.60 | 80.51 | 22.36 |      | 65.0  |         |
|           |                                           | Z | 3.89 | 79.77 | 22.44 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 3.19 | 76.23 | 23.02 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.18 | 76.36 | 23.17 |      | 65.0  |         |
|           |                                           | Z | 2.78 | 74.77 | 22.80 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 4.38 | 80.55 | 22.98 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.66 | 81.55 | 23.41 |      | 65.0  |         |
|           |                                           | Z | 3.96 | 80.70 | 23.48 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 4.40 | 79.78 | 22.03 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.64 | 80.65 | 22.40 |      | 65.0  |         |
|           |                                           | Z | 3.94 | 79.92 | 22.49 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 3.25 | 76.71 | 23.34 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.26 | 76.89 | 23.52 |      | 65.0  |         |
|           |                                           | Z | 2.83 | 75.20 | 23.10 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 4.37 | 80.51 | 22.96 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.65 | 81.50 | 23.39 |      | 65.0  |         |
|           |                                           | Z | 3.95 | 80.66 | 23.46 |      | 65.0  |         |

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|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 4.34 | 79.61 | 21.97 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.58 | 80.47 | 22.35 |      | 65.0 |         |
|           |                                            | Z | 3.88 | 79.72 | 22.43 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.25 | 76.69 | 23.33 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.25 | 76.87 | 23.51 |      | 65.0 |         |
|           |                                            | Z | 2.83 | 75.19 | 23.10 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.67 | 76.94 | 23.64 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.73 | 77.33 | 23.85 |      | 65.0 |         |
|           |                                            | Z | 5.41 | 77.63 | 24.19 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.51 | 76.48 | 23.38 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.15 | 75.22 | 22.87 |      | 65.0 |         |
|           |                                            | Z | 5.17 | 76.81 | 23.79 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.66 | 73.35 | 22.88 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.37 | 72.03 | 22.31 |      | 65.0 |         |
|           |                                            | Z | 4.40 | 73.35 | 23.12 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 2.90 | 67.06 | 13.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.71 | 66.26 | 12.47 |      | 65.0 |         |
|           |                                            | Z | 2.39 | 65.15 | 11.38 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 2.85 | 66.61 | 12.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.68 | 65.84 | 12.20 |      | 65.0 |         |
|           |                                            | Z | 2.36 | 64.77 | 11.12 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 3.01 | 71.40 | 15.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.36 | 67.99 | 13.82 |      | 65.0 |         |
|           |                                            | Z | 2.41 | 68.64 | 13.94 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 3.36 | 69.51 | 15.75 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.95 | 67.61 | 14.45 |      | 65.0 |         |
|           |                                            | Z | 2.97 | 68.07 | 14.42 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 3.34 | 68.90 | 15.44 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.95 | 67.15 | 14.22 |      | 65.0 |         |
|           |                                            | Z | 2.92 | 67.38 | 14.07 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 4.26 | 76.83 | 19.56 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.47 | 73.55 | 17.79 |      | 65.0 |         |
|           |                                            | Z | 3.81 | 75.50 | 18.55 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.36 | 73.05 | 19.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.02 | 71.77 | 18.85 |      | 65.0 |         |
|           |                                            | Z | 4.18 | 72.90 | 19.29 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 4.16 | 70.97 | 18.24 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.84 | 69.74 | 17.45 |      | 65.0 |         |
|           |                                            | Z | 3.91 | 70.51 | 17.72 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 4.83 | 77.80 | 21.42 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.26 | 75.76 | 20.36 |      | 65.0 |         |
|           |                                            | Z | 4.64 | 77.86 | 21.33 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.40 | 70.58 | 18.61 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.13 | 69.58 | 18.00 |      | 65.0 |         |
|           |                                            | Z | 4.22 | 70.40 | 18.37 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 4.70 | 71.50 | 19.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.41 | 70.53 | 18.77 |      | 65.0 |         |
|           |                                            | Z | 4.51 | 71.38 | 19.13 |      | 65.0 |         |

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|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 4.76 | 74.95 | 20.56 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.35 | 73.52 | 19.81 |      | 65.0 |         |
|           |                                             | Z | 4.59 | 75.06 | 20.58 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 2.08 | 63.27 | 9.80  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.95 | 62.60 | 9.21  |      | 65.0 |         |
|           |                                             | Z | 1.70 | 61.73 | 8.15  |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 2.07 | 62.91 | 9.50  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.94 | 62.29 | 8.92  |      | 65.0 |         |
|           |                                             | Z | 1.69 | 61.46 | 7.88  |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 2.01 | 65.63 | 11.91 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.65 | 63.35 | 10.17 |      | 65.0 |         |
|           |                                             | Z | 1.59 | 63.25 | 9.83  |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 3.78 | 71.05 | 17.26 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.37 | 69.33 | 16.13 |      | 65.0 |         |
|           |                                             | Z | 3.46 | 70.13 | 16.31 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 3.81 | 70.78 | 17.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.41 | 69.12 | 16.02 |      | 65.0 |         |
|           |                                             | Z | 3.48 | 69.84 | 16.15 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 4.32 | 76.55 | 20.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.68 | 73.97 | 18.61 |      | 65.0 |         |
|           |                                             | Z | 4.03 | 75.96 | 19.43 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.35 | 72.98 | 19.56 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.00 | 71.69 | 18.79 |      | 65.0 |         |
|           |                                             | Z | 4.16 | 72.81 | 19.23 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 4.15 | 70.95 | 18.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.83 | 69.72 | 17.45 |      | 65.0 |         |
|           |                                             | Z | 3.90 | 70.49 | 17.72 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 4.78 | 77.59 | 21.30 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.21 | 75.55 | 20.24 |      | 65.0 |         |
|           |                                             | Z | 4.59 | 77.63 | 21.21 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 4.45 | 70.90 | 18.87 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.17 | 69.87 | 18.27 |      | 65.0 |         |
|           |                                             | Z | 4.26 | 70.67 | 18.67 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 4.79 | 71.96 | 19.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.50 | 70.98 | 19.16 |      | 65.0 |         |
|           |                                             | Z | 4.60 | 71.84 | 19.58 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 4.98 | 75.63 | 20.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.53 | 74.10 | 19.92 |      | 65.0 |         |
|           |                                             | Z | 4.81 | 75.72 | 20.78 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 5.11 | 71.08 | 19.43 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.84 | 70.20 | 18.97 |      | 65.0 |         |
|           |                                             | Z | 4.92 | 70.93 | 19.36 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 5.13 | 70.76 | 19.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.87 | 69.92 | 18.86 |      | 65.0 |         |
|           |                                             | Z | 4.96 | 70.66 | 19.25 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 5.11 | 73.33 | 19.86 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.76 | 72.19 | 19.29 |      | 65.0 |         |
|           |                                             | Z | 4.96 | 73.43 | 19.98 |      | 65.0 |         |

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|           |                                                                    |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.48  | 66.86  | 14.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.30  | 65.90  | 14.17 |      | 150.0 |         |
|           |                                                                    | Z | 2.37  | 66.79  | 14.57 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.53  | 68.05  | 15.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.32  | 66.12  | 13.91 |      | 150.0 |         |
|           |                                                                    | Z | 1.45  | 67.75  | 14.99 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.30  | 58.93  | 4.20  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.32  | 58.56  | 3.87  |      | 50.0  |         |
|           |                                                                    | Z | 1.18  | 58.32  | 3.49  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 2.49  | 64.91  | 10.26 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.32  | 63.55  | 9.26  |      | 50.0  |         |
|           |                                                                    | Z | 2.17  | 63.27  | 8.86  |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 2.57  | 65.18  | 10.47 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.38  | 63.76  | 9.44  |      | 50.0  |         |
|           |                                                                    | Z | 2.22  | 63.44  | 9.03  |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.01  | 65.74  | 11.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.67  | 61.70  | 8.06  |      | 150.0 |         |
|           |                                                                    | Z | 0.69  | 62.65  | 8.67  |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.64  | 64.08  | 10.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.41  | 60.32  | 6.85  |      | 150.0 |         |
|           |                                                                    | Z | 0.48  | 61.84  | 8.06  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.93  | 69.17  | 13.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.46  | 61.72  | 7.96  |      | 150.0 |         |
|           |                                                                    | Z | 0.63  | 65.19  | 10.18 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 2.58  | 81.84  | 18.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.61  | 64.42  | 9.84  |      | 150.0 |         |
|           |                                                                    | Z | 1.45  | 74.16  | 14.40 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 16.38 | 93.11  | 24.71 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 16.06 | 90.60  | 23.14 |      | 50.0  |         |
|           |                                                                    | Z | 41.75 | 104.48 | 26.91 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.56  | 69.49  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.33  | 68.15  | 15.68 |      | 150.0 |         |
|           |                                                                    | Z | 2.43  | 69.17  | 16.39 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.18  | 65.35  | 11.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.89  | 62.40  | 9.35  |      | 150.0 |         |
|           |                                                                    | Z | 0.90  | 63.00  | 9.64  |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.36  | 63.05  | 9.42  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.26  | 62.26  | 8.62  |      | 150.0 |         |
|           |                                                                    | Z | 1.05  | 61.24  | 7.54  |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.15  | 60.99  | 7.59  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.07  | 60.46  | 6.94  |      | 150.0 |         |
|           |                                                                    | Z | 0.89  | 59.75  | 5.99  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.25  | 64.73  | 16.86 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.21  | 64.78  | 16.74 |      | 50.0  |         |
|           |                                                                    | Z | 4.10  | 64.79  | 16.69 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.74  | 65.43  | 17.63 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.66  | 65.24  | 17.38 |      | 50.0  |         |
|           |                                                                    | Z | 4.60  | 65.49  | 17.44 |      | 50.0  |         |

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|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.49 | 65.00 | 17.39 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.44 | 65.13 | 17.34 |       | 50.0  |         |
|           |                                                                     | Z | 4.36 | 65.13 | 17.21 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.34 | 65.04 | 16.98 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 64.81 | 16.70 |       | 50.0  |         |
|           |                                                                     | Z | 4.21 | 65.16 | 16.81 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 3.71 | 65.40 | 17.85 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.72 | 65.71 | 17.67 |       | 35.0  |         |
|           |                                                                     | Z | 3.59 | 65.50 | 17.36 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.14 | 65.15 | 17.96 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.12 | 65.33 | 17.82 |       | 35.0  |         |
|           |                                                                     | Z | 4.02 | 65.33 | 17.66 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.01 | 65.07 | 17.81 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.99 | 65.26 | 17.66 |       | 35.0  |         |
|           |                                                                     | Z | 3.89 | 65.22 | 17.49 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 3.97 | 65.21 | 17.93 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.96 | 65.42 | 17.79 |       | 35.0  |         |
|           |                                                                     | Z | 3.86 | 65.37 | 17.62 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.16 | 65.22 | 18.05 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.14 | 65.39 | 17.90 |       | 35.0  |         |
|           |                                                                     | Z | 4.03 | 65.36 | 17.74 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.09 | 65.15 | 17.92 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.07 | 65.35 | 17.79 |       | 35.0  |         |
|           |                                                                     | Z | 3.97 | 65.35 | 17.65 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.92 | 68.73 | 16.23 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.68 | 67.45 | 15.43 |       | 150.0 |         |
|           |                                                                     | Z | 2.78 | 68.38 | 16.08 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 2.23 | 70.71 | 15.35 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 1.69 | 66.90 | 13.17 |       | 70.0  |         |
|           |                                                                     | Z | 2.30 | 71.64 | 15.93 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 4.08 | 80.89 | 22.31 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 3.04 | 75.07 | 19.42 |       | 30.0  |         |
|           |                                                                     | Z | 4.65 | 83.62 | 23.48 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.04 | 63.55 | 14.98 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.94 | 62.52 | 14.02 |       | 150.0 |         |
|           |                                                                     | Z | 1.03 | 63.50 | 14.81 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.37 | 66.68 | 16.19 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 66.34 | 15.95 |       | 150.0 |         |
|           |                                                                     | Z | 4.26 | 66.72 | 16.11 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.37 | 66.68 | 16.19 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 66.34 | 15.95 |       | 150.0 |         |
|           |                                                                     | Z | 4.26 | 66.72 | 16.11 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.46 | 67.02 | 16.23 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.33 | 66.64 | 15.97 |       | 150.0 |         |
|           |                                                                     | Z | 4.31 | 66.98 | 16.13 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.12 | 66.82 | 16.24 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.01 | 66.51 | 16.06 |       | 150.0 |         |
|           |                                                                     | Z | 4.99 | 66.73 | 16.17 |       | 150.0 |         |

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|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.47   | 67.39  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.37   | 67.08  | 16.25 |      | 150.0 |         |
|           |                                                                                 | Z | 5.37   | 67.35  | 16.39 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 1.01   | 65.74  | 11.23 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.67   | 61.70  | 8.06  |      | 115.0 |         |
|           |                                                                                 | Z | 0.69   | 62.65  | 8.67  |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 1.01   | 65.74  | 11.23 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.67   | 61.70  | 8.06  |      | 115.0 |         |
|           |                                                                                 | Z | 0.69   | 62.65  | 8.67  |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 13.40  | 94.87  | 22.42 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 37.24  | 104.89 | 24.38 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 114.79 | 25.79 |      | 100.0 |         |
| 10410-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 2.95   | 79.35  | 18.40 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 3.69   | 82.30  | 19.32 |      | 80.0  |         |
|           |                                                                                 | Z | 3.87   | 84.90  | 20.56 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 1.00   | 63.14  | 14.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.91   | 62.12  | 13.65 |      | 150.0 |         |
|           |                                                                                 | Z | 0.99   | 63.08  | 14.44 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.35   | 66.77  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.23   | 66.41  | 15.93 |      | 150.0 |         |
|           |                                                                                 | Z | 4.24   | 66.81  | 16.11 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.35   | 66.77  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.23   | 66.41  | 15.93 |      | 150.0 |         |
|           |                                                                                 | Z | 4.24   | 66.81  | 16.11 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.35   | 66.98  | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.23   | 66.61  | 15.99 |      | 150.0 |         |
|           |                                                                                 | Z | 4.23   | 67.03  | 16.19 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.36   | 66.91  | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.24   | 66.55  | 15.97 |      | 150.0 |         |
|           |                                                                                 | Z | 4.25   | 66.96  | 16.17 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.47   | 66.89  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.35   | 66.53  | 15.99 |      | 150.0 |         |
|           |                                                                                 | Z | 4.35   | 66.92  | 16.18 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.59   | 67.14  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.47   | 66.78  | 16.08 |      | 150.0 |         |
|           |                                                                                 | Z | 4.46   | 67.16  | 16.25 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.52   | 67.09  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.40   | 66.73  | 16.05 |      | 150.0 |         |
|           |                                                                                 | Z | 4.39   | 67.09  | 16.23 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.15   | 67.27  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.05   | 66.98  | 16.31 |      | 150.0 |         |
|           |                                                                                 | Z | 5.01   | 67.17  | 16.41 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.17   | 67.36  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.08   | 67.12  | 16.38 |      | 150.0 |         |
|           |                                                                                 | Z | 5.05   | 67.33  | 16.49 |      | 150.0 |         |

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|           |                                                                |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.13 | 67.15 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.03 | 66.85 | 16.24 |      | 150.0 |         |
|           |                                                                | Z | 5.01 | 67.11 | 16.38 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.23 | 72.27 | 18.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.99 | 71.49 | 17.71 |      | 150.0 |         |
|           |                                                                | Z | 4.17 | 72.80 | 18.15 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.96 | 67.36 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.81 | 66.88 | 15.67 |      | 150.0 |         |
|           |                                                                | Z | 3.81 | 67.37 | 15.87 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.29 | 67.19 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.15 | 66.79 | 15.93 |      | 150.0 |         |
|           |                                                                | Z | 4.15 | 67.22 | 16.13 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.54 | 67.13 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.42 | 66.76 | 16.08 |      | 150.0 |         |
|           |                                                                | Z | 4.41 | 67.14 | 16.25 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.34 | 73.15 | 18.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.97 | 71.83 | 17.20 |      | 150.0 |         |
|           |                                                                | Z | 4.17 | 73.19 | 17.60 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.84 | 78.74 | 18.13 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 3.48 | 81.45 | 18.98 |      | 80.0  |         |
|           |                                                                | Z | 3.64 | 83.98 | 20.20 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.20 | 67.15 | 14.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.99 | 66.28 | 14.17 |      | 150.0 |         |
|           |                                                                | Z | 2.97 | 66.77 | 14.26 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.83 | 67.16 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.68 | 66.67 | 15.55 |      | 150.0 |         |
|           |                                                                | Z | 3.69 | 67.18 | 15.75 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.13 | 67.03 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.00 | 66.61 | 15.83 |      | 150.0 |         |
|           |                                                                | Z | 4.00 | 67.05 | 16.03 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.34 | 66.91 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.22 | 66.53 | 15.92 |      | 150.0 |         |
|           |                                                                | Z | 4.23 | 66.92 | 16.11 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 2.99 | 66.88 | 14.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.74 | 65.78 | 13.23 |      | 150.0 |         |
|           |                                                                | Z | 2.69 | 66.07 | 13.18 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.06 | 67.78 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.00 | 67.55 | 16.51 |      | 150.0 |         |
|           |                                                                | Z | 6.07 | 68.05 | 16.78 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.71 | 65.53 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.61 | 65.20 | 15.66 |      | 150.0 |         |
|           |                                                                | Z | 3.65 | 65.68 | 15.87 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.70 | 71.13 | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.25 | 69.16 | 15.28 |      | 150.0 |         |
|           |                                                                | Z | 3.15 | 69.17 | 14.95 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.84 | 69.11 | 17.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.69 | 68.77 | 17.48 |      | 150.0 |         |
|           |                                                                | Z | 4.58 | 68.84 | 17.14 |      | 150.0 |         |

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|           |                                                                   |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.88 | 68.39 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.70 | 65.56 | 13.77 |      | 150.0 |         |
|           |                                                                   | Z | 0.84 | 67.99 | 15.62 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.57 | 72.49 | 16.91 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.31 | 77.86 | 18.85 |      | 80.0  |         |
|           |                                                                   | Z | 1.89 | 76.90 | 18.97 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.65 | 60.00 | 7.36  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.67 | 60.00 | 7.26  |      | 80.0  |         |
|           |                                                                   | Z | 0.57 | 60.00 | 7.02  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.67 | 60.00 | 6.67  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.68 | 60.00 | 6.58  |      | 80.0  |         |
|           |                                                                   | Z | 0.60 | 60.00 | 6.22  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.23 | 69.24 | 14.93 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.59 | 72.66 | 16.19 |      | 80.0  |         |
|           |                                                                   | Z | 1.42 | 72.83 | 16.69 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.65 | 60.00 | 7.28  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.67 | 60.00 | 7.19  |      | 80.0  |         |
|           |                                                                   | Z | 0.57 | 60.00 | 6.95  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.67 | 60.00 | 6.62  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.69 | 60.00 | 6.54  |      | 80.0  |         |
|           |                                                                   | Z | 0.60 | 60.00 | 6.18  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.28 | 69.83 | 15.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.71 | 73.64 | 16.62 |      | 80.0  |         |
|           |                                                                   | Z | 1.51 | 73.74 | 17.10 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.65 | 60.00 | 7.31  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66 | 60.00 | 7.22  |      | 80.0  |         |
|           |                                                                   | Z | 0.57 | 60.00 | 6.98  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.67 | 60.00 | 6.62  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.68 | 60.00 | 6.54  |      | 80.0  |         |
|           |                                                                   | Z | 0.60 | 60.00 | 6.18  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.27 | 69.83 | 15.21 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.71 | 73.66 | 16.62 |      | 80.0  |         |
|           |                                                                   | Z | 1.50 | 73.77 | 17.11 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.65 | 60.00 | 7.29  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66 | 60.00 | 7.20  |      | 80.0  |         |
|           |                                                                   | Z | 0.57 | 60.00 | 6.96  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.67 | 60.00 | 6.60  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.68 | 60.00 | 6.52  |      | 80.0  |         |
|           |                                                                   | Z | 0.31 | 55.91 | 4.03  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.27 | 69.80 | 15.19 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.70 | 73.59 | 16.59 |      | 80.0  |         |
|           |                                                                   | Z | 1.50 | 73.71 | 17.08 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.65 | 60.00 | 7.29  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66 | 60.00 | 7.20  |      | 80.0  |         |
|           |                                                                   | Z | 0.57 | 60.00 | 6.96  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.67 | 60.00 | 6.60  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.68 | 60.00 | 6.52  |      | 80.0  |         |
|           |                                                                   | Z | 0.31 | 55.90 | 4.03  |      | 80.0  |         |

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|           |                                                                     |   |      |       |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.65 | 60.00 | 7.26  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.66 | 60.00 | 7.17  |      | 80.0 |         |
|           |                                                                     | Z | 0.57 | 60.00 | 6.93  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.67 | 60.00 | 6.59  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.68 | 60.00 | 6.51  |      | 80.0 |         |
|           |                                                                     | Z | 0.31 | 55.89 | 4.01  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.24 | 76.16 | 18.67 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.42 | 80.82 | 20.23 |      | 80.0 |         |
|           |                                                                     | Z | 4.39 | 82.21 | 20.82 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.03 | 66.76 | 12.73 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.05 | 66.92 | 12.60 |      | 80.0 |         |
|           |                                                                     | Z | 1.85 | 67.01 | 12.43 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.62 | 63.96 | 11.04 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.57 | 63.66 | 10.70 |      | 80.0 |         |
|           |                                                                     | Z | 1.32 | 63.18 | 10.24 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.53 | 65.20 | 12.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10 | 61.56 | 10.21 |      | 80.0 |         |
|           |                                                                     | Z | 1.14 | 62.42 | 10.54 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.45 | 61.38 | 9.71  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.32 | 60.52 | 8.97  |      | 80.0 |         |
|           |                                                                     | Z | 1.16 | 60.00 | 8.17  |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.44 | 61.07 | 9.53  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.32 | 60.25 | 8.82  |      | 80.0 |         |
|           |                                                                     | Z | 1.19 | 60.00 | 8.15  |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.16 | 69.31 | 16.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.69 | 66.06 | 14.04 |      | 80.0 |         |
|           |                                                                     | Z | 1.93 | 68.38 | 15.12 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.10 | 65.45 | 13.37 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.71 | 62.92 | 11.64 |      | 80.0 |         |
|           |                                                                     | Z | 1.73 | 63.60 | 11.80 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.11 | 65.08 | 13.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.73 | 62.69 | 11.49 |      | 80.0 |         |
|           |                                                                     | Z | 1.73 | 63.23 | 11.57 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.58 | 69.55 | 17.35 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.27 | 67.73 | 16.25 |      | 80.0 |         |
|           |                                                                     | Z | 2.45 | 69.44 | 17.18 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.75 | 67.17 | 16.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.49 | 65.86 | 15.18 |      | 80.0 |         |
|           |                                                                     | Z | 2.63 | 67.13 | 15.78 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.83 | 67.06 | 16.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.57 | 65.81 | 15.15 |      | 80.0 |         |
|           |                                                                     | Z | 2.69 | 66.99 | 15.69 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.92 | 68.61 | 17.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.65 | 67.28 | 16.37 |      | 80.0 |         |
|           |                                                                     | Z | 2.77 | 68.48 | 17.08 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.13 | 66.69 | 16.33 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.92 | 65.77 | 15.72 |      | 80.0 |         |
|           |                                                                     | Z | 3.01 | 66.69 | 16.19 |      | 80.0 |         |

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# Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.19 | 66.60 | 16.28 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.99 | 65.70 | 15.69 |      | 80.0 |         |
|           |                                                                      | Z | 3.07 | 66.59 | 16.12 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.09 | 69.75 | 17.58 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.78 | 68.23 | 16.72 |      | 80.0 |         |
|           |                                                                      | Z | 2.93 | 69.54 | 17.51 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.15 | 66.91 | 16.53 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.94 | 65.97 | 15.94 |      | 80.0 |         |
|           |                                                                      | Z | 3.03 | 66.87 | 16.43 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.24 | 66.76 | 16.49 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.04 | 65.88 | 15.93 |      | 80.0 |         |
|           |                                                                      | Z | 3.12 | 66.74 | 16.39 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 0.93 | 60.00 | 8.57  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.90 | 60.00 | 7.78  |      | 80.0 |         |
|           |                                                                      | Z | 0.86 | 60.00 | 7.53  |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.10 | 60.00 | 7.25  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.08 | 60.00 | 6.57  |      | 80.0 |         |
|           |                                                                      | Z | 1.05 | 60.00 | 6.14  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.12 | 60.00 | 7.08  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.11 | 60.00 | 6.40  |      | 80.0 |         |
|           |                                                                      | Z | 1.08 | 60.00 | 5.96  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.33 | 69.42 | 16.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.93 | 66.88 | 15.00 |      | 80.0 |         |
|           |                                                                      | Z | 2.16 | 69.02 | 16.03 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.42 | 66.55 | 14.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.06 | 64.46 | 13.19 |      | 80.0 |         |
|           |                                                                      | Z | 2.16 | 65.57 | 13.59 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.46 | 66.38 | 14.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.09 | 64.32 | 13.03 |      | 80.0 |         |
|           |                                                                      | Z | 2.17 | 65.33 | 13.38 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.55 | 69.37 | 17.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.24 | 67.56 | 16.15 |      | 80.0 |         |
|           |                                                                      | Z | 2.42 | 69.25 | 17.08 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.73 | 67.07 | 16.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.48 | 65.76 | 15.11 |      | 80.0 |         |
|           |                                                                      | Z | 2.61 | 67.02 | 15.71 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.82 | 66.97 | 15.95 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.56 | 65.72 | 15.09 |      | 80.0 |         |
|           |                                                                      | Z | 2.68 | 66.89 | 15.62 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.07 | 69.63 | 17.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.76 | 68.11 | 16.65 |      | 80.0 |         |
|           |                                                                      | Z | 2.91 | 69.41 | 17.44 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.14 | 66.85 | 16.49 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.93 | 65.91 | 15.90 |      | 80.0 |         |
|           |                                                                      | Z | 3.02 | 66.81 | 16.39 |      | 80.0 |         |

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|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.23 | 66.69 | 16.44 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.03 | 65.82 | 15.89 |      | 80.0  |         |
|           |                                                                     | Z | 3.11 | 66.67 | 16.35 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.52 | 68.96 | 17.25 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.24 | 67.75 | 16.57 |      | 80.0  |         |
|           |                                                                     | Z | 3.37 | 68.79 | 17.22 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.62 | 66.72 | 16.61 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.43 | 65.94 | 16.15 |      | 80.0  |         |
|           |                                                                     | Z | 3.50 | 66.61 | 16.55 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.70 | 66.58 | 16.58 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.51 | 65.85 | 16.14 |      | 80.0  |         |
|           |                                                                     | Z | 3.58 | 66.51 | 16.52 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.56 | 70.02 | 17.57 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.23 | 68.54 | 16.78 |      | 80.0  |         |
|           |                                                                     | Z | 3.39 | 69.70 | 17.50 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.50 | 66.80 | 16.66 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.31 | 65.98 | 16.18 |      | 80.0  |         |
|           |                                                                     | Z | 3.39 | 66.65 | 16.59 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.56 | 66.53 | 16.58 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.38 | 65.75 | 16.13 |      | 80.0  |         |
|           |                                                                     | Z | 3.45 | 66.40 | 16.52 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.96 | 63.31 | 14.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87 | 62.23 | 13.64 |      | 150.0 |         |
|           |                                                                     | Z | 0.95 | 63.24 | 14.49 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.59 | 70.32 | 17.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.43 | 66.45 | 13.92 |      | 150.0 |         |
|           |                                                                     | Z | 0.56 | 69.40 | 16.67 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.81 | 65.09 | 15.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.69 | 63.42 | 13.73 |      | 150.0 |         |
|           |                                                                     | Z | 0.79 | 64.83 | 14.98 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.34 | 66.88 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.22 | 66.51 | 15.92 |      | 150.0 |         |
|           |                                                                     | Z | 4.23 | 66.93 | 16.12 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.48 | 67.04 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.36 | 66.68 | 16.01 |      | 150.0 |         |
|           |                                                                     | Z | 4.35 | 67.07 | 16.19 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.34 | 66.97 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.22 | 66.59 | 15.92 |      | 150.0 |         |
|           |                                                                     | Z | 4.22 | 66.99 | 16.11 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.28 | 66.94 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.15 | 66.54 | 15.89 |      | 150.0 |         |
|           |                                                                     | Z | 4.15 | 66.93 | 16.07 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.32 | 67.05 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.19 | 66.65 | 15.97 |      | 150.0 |         |
|           |                                                                     | Z | 4.18 | 66.98 | 16.13 |      | 150.0 |         |

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|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.26 | 67.08 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.13 | 66.69 | 15.91 |      | 150.0 |         |
|           |                                                            | Z | 4.15 | 67.15 | 16.14 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.28 | 67.03 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.15 | 66.64 | 15.98 |      | 150.0 |         |
|           |                                                            | Z | 4.14 | 67.03 | 16.17 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.31 | 66.15 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.19 | 65.75 | 15.61 |      | 150.0 |         |
|           |                                                            | Z | 4.20 | 66.20 | 15.83 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.43 | 66.41 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.30 | 66.01 | 15.72 |      | 150.0 |         |
|           |                                                            | Z | 4.30 | 66.42 | 15.92 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.36 | 66.39 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.23 | 65.97 | 15.65 |      | 150.0 |         |
|           |                                                            | Z | 4.24 | 66.40 | 15.86 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.38 | 66.40 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 65.99 | 15.69 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.41 | 15.89 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.38 | 66.40 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 65.99 | 15.69 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.41 | 15.89 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.34 | 66.42 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.21 | 65.99 | 15.65 |      | 150.0 |         |
|           |                                                            | Z | 4.20 | 66.38 | 15.85 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.23 | 66.28 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.09 | 65.84 | 15.58 |      | 150.0 |         |
|           |                                                            | Z | 4.10 | 66.26 | 15.79 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.38 | 66.48 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 66.07 | 15.69 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.50 | 15.90 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.94 | 66.38 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.83 | 66.04 | 15.82 |      | 150.0 |         |
|           |                                                            | Z | 4.83 | 66.34 | 15.98 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 4.98 | 66.50 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.87 | 66.15 | 15.88 |      | 150.0 |         |
|           |                                                            | Z | 4.85 | 66.43 | 16.03 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.87 | 66.51 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.76 | 66.13 | 15.84 |      | 150.0 |         |
|           |                                                            | Z | 4.75 | 66.43 | 16.01 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.94 | 66.51 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.83 | 66.19 | 15.88 |      | 150.0 |         |
|           |                                                            | Z | 4.83 | 66.50 | 16.04 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.00 | 66.46 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.89 | 66.12 | 15.88 |      | 150.0 |         |
|           |                                                            | Z | 4.87 | 66.39 | 16.02 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.93 | 66.42 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.82 | 66.06 | 15.87 |      | 150.0 |         |
|           |                                                            | Z | 4.81 | 66.35 | 16.02 |      | 150.0 |         |

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|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.92 | 66.35 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.81 | 65.99 | 15.82 |      | 150.0 |         |
|           |                                                    | Z | 4.81 | 66.31 | 15.98 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.07 | 66.45 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.96 | 66.11 | 15.90 |      | 150.0 |         |
|           |                                                    | Z | 4.95 | 66.40 | 16.04 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.15 | 66.53 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.05 | 66.25 | 16.00 |      | 150.0 |         |
|           |                                                    | Z | 5.03 | 66.51 | 16.13 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.29 | 66.46 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.19 | 66.11 | 15.83 |      | 150.0 |         |
|           |                                                    | Z | 5.19 | 66.38 | 15.97 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.46 | 66.89 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 66.61 | 16.04 |      | 150.0 |         |
|           |                                                    | Z | 5.35 | 66.81 | 16.15 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.32 | 66.57 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.22 | 66.23 | 15.86 |      | 150.0 |         |
|           |                                                    | Z | 5.22 | 66.48 | 15.99 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.40 | 66.70 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.42 | 15.95 |      | 150.0 |         |
|           |                                                    | Z | 5.33 | 66.71 | 16.11 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.53 | 67.27 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.44 | 66.98 | 16.21 |      | 150.0 |         |
|           |                                                    | Z | 5.38 | 67.07 | 16.27 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.38 | 66.78 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.31 | 66.53 | 16.02 |      | 150.0 |         |
|           |                                                    | Z | 5.31 | 66.81 | 16.17 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.31 | 66.54 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.20 | 66.17 | 15.81 |      | 150.0 |         |
|           |                                                    | Z | 5.19 | 66.41 | 15.94 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.30 | 66.58 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.19 | 66.23 | 15.83 |      | 150.0 |         |
|           |                                                    | Z | 5.20 | 66.53 | 15.99 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.35 | 66.52 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.24 | 66.17 | 15.83 |      | 150.0 |         |
|           |                                                    | Z | 5.24 | 66.44 | 15.97 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.71 | 66.79 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.62 | 66.47 | 15.93 |      | 150.0 |         |
|           |                                                    | Z | 5.63 | 66.70 | 16.05 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.80 | 67.00 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.71 | 66.69 | 16.02 |      | 150.0 |         |
|           |                                                    | Z | 5.70 | 66.87 | 16.12 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.84 | 67.12 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.76 | 66.85 | 16.09 |      | 150.0 |         |
|           |                                                    | Z | 5.75 | 67.04 | 16.20 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.79 | 66.99 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.70 | 66.66 | 16.02 |      | 150.0 |         |
|           |                                                    | Z | 5.70 | 66.88 | 16.14 |      | 150.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.80 | 67.03 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.69 | 66.67 | 16.04 |      | 150.0 |         |
|           |                                                                 | Z | 5.67 | 66.84 | 16.13 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.82 | 66.97 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.72 | 66.63 | 16.06 |      | 150.0 |         |
|           |                                                                 | Z | 5.71 | 66.83 | 16.16 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.76 | 66.95 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.66 | 66.63 | 16.09 |      | 150.0 |         |
|           |                                                                 | Z | 5.65 | 66.81 | 16.18 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.80 | 67.11 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.70 | 66.75 | 16.15 |      | 150.0 |         |
|           |                                                                 | Z | 5.68 | 66.93 | 16.24 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 5.91 | 67.11 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.83 | 66.82 | 16.15 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 66.98 | 16.24 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.65 | 66.88 | 16.30 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.54 | 66.54 | 16.07 |      | 150.0 |         |
|           |                                                                 | Z | 4.53 | 66.91 | 16.24 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.85 | 67.29 | 16.62 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 66.97 | 16.40 |      | 150.0 |         |
|           |                                                                 | Z | 4.71 | 67.32 | 16.56 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.68 | 67.10 | 16.42 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56 | 66.75 | 16.18 |      | 150.0 |         |
|           |                                                                 | Z | 4.55 | 67.11 | 16.35 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.72 | 67.51 | 16.80 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.60 | 67.16 | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 4.59 | 67.52 | 16.75 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.57 | 66.80 | 16.14 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 66.43 | 15.88 |      | 150.0 |         |
|           |                                                                 | Z | 4.42 | 66.71 | 16.01 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.71 | 67.75 | 16.95 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.59 | 67.42 | 16.73 |      | 150.0 |         |
|           |                                                                 | Z | 4.60 | 67.83 | 16.93 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.71 | 67.51 | 16.83 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.59 | 67.18 | 16.60 |      | 150.0 |         |
|           |                                                                 | Z | 4.57 | 67.54 | 16.78 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.08 | 63.64 | 15.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.98 | 62.63 | 14.12 |      | 130.0 |         |
|           |                                                                 | Z | 1.06 | 63.58 | 14.89 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.08 | 64.13 | 15.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.98 | 63.05 | 14.41 |      | 130.0 |         |
|           |                                                                 | Z | 1.07 | 64.06 | 15.22 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.08 | 77.41 | 20.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.73 | 71.46 | 16.79 |      | 130.0 |         |
|           |                                                                 | Z | 0.99 | 75.97 | 19.89 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.10 | 68.88 | 18.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 0.95 | 66.93 | 16.52 |      | 130.0 |         |
|           |                                                                 | Z | 1.07 | 68.54 | 17.74 |      | 130.0 |         |

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|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.42 | 66.59 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.26 | 16.05 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.63 | 16.21 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.45 | 66.80 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 66.48 | 16.14 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.87 | 16.32 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.61 | 67.03 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.71 | 16.29 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 67.07 | 16.45 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.51 | 67.18 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.85 | 16.40 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 67.23 | 16.57 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.26 | 66.33 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 65.96 | 15.59 |      | 130.0 |         |
|           |                                                                 | Z | 4.13 | 66.29 | 15.75 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.29 | 66.37 | 15.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.01 | 15.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.14 | 66.28 | 15.72 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.43 | 67.26 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.92 | 16.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.31 | 67.34 | 16.57 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.19 | 66.09 | 15.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.07 | 65.73 | 15.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.05 | 66.04 | 15.51 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.42 | 66.59 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.26 | 16.05 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.63 | 16.21 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.45 | 66.80 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 66.48 | 16.14 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.87 | 16.32 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.61 | 67.03 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.71 | 16.29 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 67.07 | 16.45 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.51 | 67.18 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.85 | 16.40 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 67.23 | 16.57 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.26 | 66.33 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 65.96 | 15.59 |      | 130.0 |         |
|           |                                                                 | Z | 4.13 | 66.29 | 15.75 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.29 | 66.37 | 15.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.01 | 15.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.14 | 66.28 | 15.72 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.43 | 67.26 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.31 | 66.92 | 16.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.31 | 67.34 | 16.57 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.19 | 66.09 | 15.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.07 | 65.73 | 15.36 |      | 130.0 |         |
|           |                                                                 | Z | 4.05 | 66.04 | 15.51 |      | 130.0 |         |

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|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.58 | 66.69 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.47 | 66.39 | 16.20 |      | 130.0 |         |
|           |                                                       | Z | 4.47 | 66.76 | 16.36 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.69 | 66.97 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.58 | 66.66 | 16.32 |      | 130.0 |         |
|           |                                                       | Z | 4.56 | 67.00 | 16.47 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.61 | 66.84 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.49 | 66.52 | 16.16 |      | 130.0 |         |
|           |                                                       | Z | 4.48 | 66.87 | 16.32 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.66 | 67.02 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.55 | 66.71 | 16.34 |      | 130.0 |         |
|           |                                                       | Z | 4.54 | 67.06 | 16.50 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.63 | 67.00 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.51 | 66.68 | 16.25 |      | 130.0 |         |
|           |                                                       | Z | 4.50 | 67.04 | 16.41 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.56 | 66.95 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.44 | 66.62 | 16.22 |      | 130.0 |         |
|           |                                                       | Z | 4.42 | 66.95 | 16.38 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.51 | 66.82 | 16.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.39 | 66.48 | 16.06 |      | 130.0 |         |
|           |                                                       | Z | 4.38 | 66.82 | 16.22 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.51 | 67.06 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.39 | 66.73 | 16.35 |      | 130.0 |         |
|           |                                                       | Z | 4.39 | 67.10 | 16.52 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.26 | 67.16 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.19 | 66.95 | 16.55 |      | 130.0 |         |
|           |                                                       | Z | 5.18 | 67.23 | 16.69 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.35 | 67.49 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.29 | 67.35 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.23 | 67.44 | 16.76 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.26 | 67.29 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.19 | 67.12 | 16.62 |      | 130.0 |         |
|           |                                                       | Z | 5.20 | 67.45 | 16.79 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.35 | 67.29 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.27 | 67.10 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 5.22 | 67.23 | 16.59 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.42 | 67.60 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.33 | 67.37 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.26 | 67.44 | 16.84 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.29 | 67.20 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.19 | 66.89 | 16.54 |      | 130.0 |         |
|           |                                                       | Z | 5.14 | 67.01 | 16.59 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.34 | 67.34 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.26 | 67.13 | 16.66 |      | 130.0 |         |
|           |                                                       | Z | 5.20 | 67.25 | 16.72 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.14 | 66.81 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.06 | 66.62 | 16.25 |      | 130.0 |         |
|           |                                                       | Z | 5.05 | 66.87 | 16.38 |      | 130.0 |         |

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|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.43 | 66.05 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.31 | 65.70 | 15.83 |      | 130.0 |         |
|           |                                                   | Z | 4.32 | 66.12 | 16.02 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.56 | 66.36 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.44 | 66.01 | 15.97 |      | 130.0 |         |
|           |                                                   | Z | 4.43 | 66.38 | 16.15 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.46 | 66.19 | 16.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.34 | 65.83 | 15.77 |      | 130.0 |         |
|           |                                                   | Z | 4.33 | 66.21 | 15.96 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.51 | 66.37 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.39 | 66.01 | 15.96 |      | 130.0 |         |
|           |                                                   | Z | 4.38 | 66.40 | 16.14 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.42 | 66.15 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.30 | 65.79 | 15.79 |      | 130.0 |         |
|           |                                                   | Z | 4.29 | 66.16 | 15.97 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.41 | 66.27 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.28 | 65.89 | 15.81 |      | 130.0 |         |
|           |                                                   | Z | 4.26 | 66.23 | 15.98 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.40 | 66.08 | 15.90 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.28 | 65.70 | 15.65 |      | 130.0 |         |
|           |                                                   | Z | 4.26 | 66.05 | 15.81 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.38 | 66.33 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.25 | 65.95 | 15.92 |      | 130.0 |         |
|           |                                                   | Z | 4.25 | 66.33 | 16.10 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.41 | 65.98 | 15.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.29 | 65.61 | 15.54 |      | 130.0 |         |
|           |                                                   | Z | 4.27 | 65.99 | 15.72 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.07 | 66.34 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.97 | 66.04 | 16.07 |      | 130.0 |         |
|           |                                                   | Z | 4.96 | 66.31 | 16.21 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.10 | 66.45 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.00 | 66.15 | 16.11 |      | 130.0 |         |
|           |                                                   | Z | 4.98 | 66.39 | 16.23 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.02 | 66.53 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.91 | 66.19 | 16.14 |      | 130.0 |         |
|           |                                                   | Z | 4.89 | 66.45 | 16.27 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.04 | 66.36 | 16.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.96 | 66.11 | 16.03 |      | 130.0 |         |
|           |                                                   | Z | 4.94 | 66.38 | 16.17 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.11 | 66.35 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.01 | 66.06 | 16.05 |      | 130.0 |         |
|           |                                                   | Z | 4.98 | 66.26 | 16.16 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.12 | 66.47 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.02 | 66.16 | 16.23 |      | 130.0 |         |
|           |                                                   | Z | 5.00 | 66.43 | 16.37 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.10 | 66.55 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.00 | 66.25 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 4.99 | 66.50 | 16.40 |      | 130.0 |         |

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## Appendix B: DAE and Probe Calibration Certificate

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|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.00 | 66.11 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.90 | 65.81 | 15.90 |      | 130.0 |         |
|           |                                                    | Z | 4.89 | 66.10 | 16.05 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.19 | 66.37 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.10 | 66.09 | 16.12 |      | 130.0 |         |
|           |                                                    | Z | 5.07 | 66.34 | 16.24 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.27 | 66.50 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.19 | 66.27 | 16.28 |      | 130.0 |         |
|           |                                                    | Z | 5.16 | 66.52 | 16.40 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.40 | 66.37 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.31 | 66.07 | 16.04 |      | 130.0 |         |
|           |                                                    | Z | 5.31 | 66.31 | 16.17 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.62 | 66.96 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 66.76 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.52 | 66.91 | 16.44 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.39 | 66.34 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.30 | 66.04 | 15.92 |      | 130.0 |         |
|           |                                                    | Z | 5.29 | 66.26 | 16.04 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.50 | 66.54 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.44 | 66.36 | 16.08 |      | 130.0 |         |
|           |                                                    | Z | 5.44 | 66.63 | 16.23 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 5.71 | 67.39 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 67.17 | 16.50 |      | 130.0 |         |
|           |                                                    | Z | 5.64 | 67.11 | 16.48 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.70 | 67.46 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.61 | 67.18 | 16.70 |      | 130.0 |         |
|           |                                                    | Z | 5.66 | 67.29 | 16.76 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.63 | 67.17 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.58 | 67.02 | 16.64 |      | 130.0 |         |
|           |                                                    | Z | 5.57 | 67.27 | 16.77 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.42 | 66.43 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.10 | 15.99 |      | 130.0 |         |
|           |                                                    | Z | 5.30 | 66.32 | 16.11 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.45 | 66.63 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.35 | 66.31 | 16.16 |      | 130.0 |         |
|           |                                                    | Z | 5.35 | 66.57 | 16.29 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.30 | 65.85 | 15.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.21 | 65.54 | 15.48 |      | 130.0 |         |
|           |                                                    | Z | 5.19 | 65.76 | 15.60 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.84 | 66.72 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.76 | 66.45 | 16.15 |      | 130.0 |         |
|           |                                                    | Z | 5.76 | 66.66 | 16.26 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 5.95 | 67.01 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.88 | 66.76 | 16.30 |      | 130.0 |         |
|           |                                                    | Z | 5.85 | 66.89 | 16.37 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 5.98 | 67.09 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.91 | 66.84 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.91 | 67.08 | 16.44 |      | 130.0 |         |

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# Appendix B: DAE and Probe Calibration Certificate

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February 26, 2018

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.93   | 66.96  | 16.42 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.85   | 66.68  | 16.27 |       | 130.0 |         |
|           |                                                        | Z | 5.84   | 66.87  | 16.37 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.89   | 66.83  | 16.30 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.79   | 66.50  | 16.13 |       | 130.0 |         |
|           |                                                        | Z | 5.76   | 66.65  | 16.20 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 5.99   | 66.93  | 16.36 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.93   | 66.70  | 16.25 |       | 130.0 |         |
|           |                                                        | Z | 5.89   | 66.83  | 16.32 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.01   | 67.13  | 16.63 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.93   | 66.84  | 16.49 |       | 130.0 |         |
|           |                                                        | Z | 5.91   | 67.00  | 16.57 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.86   | 66.81  | 16.36 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.78   | 66.52  | 16.22 |       | 130.0 |         |
|           |                                                        | Z | 5.75   | 66.66  | 16.29 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 5.91   | 66.99  | 16.47 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.82   | 66.67  | 16.31 |       | 130.0 |         |
|           |                                                        | Z | 5.80   | 66.82  | 16.38 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.04   | 67.04  | 16.47 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.97   | 66.82  | 16.36 |       | 130.0 |         |
|           |                                                        | Z | 5.92   | 66.90  | 16.40 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 5.85   | 87.94  | 30.48 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 5.37   | 85.81  | 29.63 |       | 60.0  |         |
|           |                                                        | Z | 4.49   | 83.14  | 29.09 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 5.17   | 85.51  | 29.66 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.78   | 83.60  | 28.89 |       | 60.0  |         |
|           |                                                        | Z | 4.02   | 80.87  | 28.26 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.51   | 61.76  | 8.43  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.38   | 60.00  | 6.13  |       | 150.0 |         |
|           |                                                        | Z | 0.38   | 60.10  | 6.48  |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.13   | 65.98  | 15.78 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 2.93   | 65.12  | 15.15 |       | 80.0  |         |
|           |                                                        | Z | 3.02   | 66.07  | 15.57 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.69   | 65.40  | 16.13 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.54   | 64.83  | 15.74 |       | 80.0  |         |
|           |                                                        | Z | 3.60   | 65.47  | 16.04 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.72   | 65.03  | 16.17 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.58   | 64.50  | 15.83 |       | 80.0  |         |
|           |                                                        | Z | 3.65   | 65.07  | 16.11 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.80   | 64.95  | 16.21 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.67   | 64.43  | 15.88 |       | 80.0  |         |
|           |                                                        | Z | 3.74   | 64.95  | 16.16 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 4.43   | 71.88  | 12.89 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 2.96   | 67.08  | 10.79 |       | 50.0  |         |
|           |                                                        | Z | 4.92   | 73.02  | 13.29 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 21.85  | 87.99  | 16.66 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 1.49   | 64.48  | 8.54  |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 101.11 | 19.71 |       | 60.0  |         |

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## Appendix B: DAE and Probe Calibration Certificate

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February 26, 2018

|           |                             |   |        |        |       |      |       |         |
|-----------|-----------------------------|---|--------|--------|-------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 100.24 | 18.17 | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 0.44   | 60.00  | 5.03  |      | 80.0  |         |
|           |                             | Z | 100.00 | 101.16 | 18.48 |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 100.00 | 101.13 | 17.57 | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 0.24   | 60.00  | 3.65  |      | 100.0 |         |
|           |                             | Z | 100.00 | 102.26 | 17.94 |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 100.00 | 99.08  | 15.66 | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 3.24   | 108.92 | 7.51  |      | 120.0 |         |
|           |                             | Z | 100.00 | 98.42  | 15.34 |      | 120.0 |         |

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

## 1.1. D450V3 Dipole Calibration Certificate

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



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

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

Accreditation No.: **SCS 0108**

Client **CCIC-HTW (Auden)**

Certificate No: **D450V3-1102\_Feb18**

## CALIBRATION CERTIFICATE

Object **D450V3 - SN:1102**

Calibration procedure(s) **QA CAL-15.v8**  
 Calibration procedure for dipole validation kits below 700 MHz

Calibration date: **February 23, 2018**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards           | ID #               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|-----------------------------|--------------------|-----------------------------------|------------------------|
| Power meter NRP             | SN: 104778         | 04-Apr-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91        | SN: 103244         | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91        | SN: 103245         | 04-Apr-17 (No. 217-02522)         | Apr-18                 |
| Reference 20 dB Attenuator  | SN: 5277 (20x)     | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| Type-N mismatch combination | SN: 5047.2 / 06327 | 07-Apr-17 (No. 217-02529)         | Apr-18                 |
| Reference Probe EX3DV4      | SN: 3877           | 30-Dec-17 (No. EX3-3877_Dec17)    | Dec-18                 |
| DAE4                        | SN: 654            | 24-Jul-17 (No. DAE4-654_Jul17)    | Jul-18                 |
| Secondary Standards         | ID #               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B          | SN: GB41293874     | 06-Apr-16 (No. 217-02285/02284)   | In house check: Jun-18 |
| Power sensor E4412A         | SN: MY41498087     | 06-Apr-16 (No. 217-02285)         | In house check: Jun-18 |
| Power sensor E4412A         | SN: 000110210      | 06-Apr-16 (No. 217-02284)         | In house check: Jun-18 |
| RF generator HP 8648C       | SN: US3642U01700   | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E   | SN: US37390585     | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |

|                |                |                       |           |
|----------------|----------------|-----------------------|-----------|
|                | Name           | Function              | Signature |
| Calibrated by: | Jeton Kastrali | Laboratory Technician |           |
| Approved by:   | Katja Pokovic  | Technical Manager     |           |

Issued: February 23, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D450V3-1102\_Feb18

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



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

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

Accreditation No.: **SCS 0108**

**Glossary:**

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A   | not applicable or not measured  |

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

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

**Additional Documentation:**

- DASY4/5 System Handbook

**Methods Applied and Interpretation of Parameters:**

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

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

**Measurement Conditions**

DASY system configuration, as far as not given on page 1.

|                                     |                        |                                 |
|-------------------------------------|------------------------|---------------------------------|
| <b>DASY Version</b>                 | DASY5                  | V52.10.0                        |
| <b>Extrapolation</b>                | Advanced Extrapolation |                                 |
| <b>Phantom</b>                      | ELI4 Flat Phantom      | Shell thickness: $2 \pm 0.2$ mm |
| <b>Distance Dipole Center - TSL</b> | 15 mm                  | with Spacer                     |
| <b>Zoom Scan Resolution</b>         | dx, dy, dz = 5 mm      |                                 |
| <b>Frequency</b>                    | 450 MHz $\pm$ 1 MHz    |                                 |

**Head TSL parameters**

The following parameters and calculations were applied.

|                                                | Temperature         | Permittivity   | Conductivity         |
|------------------------------------------------|---------------------|----------------|----------------------|
| <b>Nominal Head TSL parameters</b>             | 22.0 °C             | 43.5           | 0.87 mho/m           |
| <b>Measured Head TSL parameters</b>            | (22.0 $\pm$ 0.2) °C | 43.7 $\pm$ 6 % | 0.87 mho/m $\pm$ 6 % |
| <b>Head TSL temperature change during test</b> | < 0.5 °C            | ----           | ----                 |

**SAR result with Head TSL**

|                                                             |                    |                                                |
|-------------------------------------------------------------|--------------------|------------------------------------------------|
| <b>SAR averaged over 1 cm<sup>3</sup> (1 g) of Head TSL</b> | Condition          |                                                |
| SAR measured                                                | 250 mW input power | 1.12 W/kg                                      |
| SAR for nominal Head TSL parameters                         | normalized to 1W   | <b>4.48 W/kg <math>\pm</math> 18.1 % (k=2)</b> |

|                                                               |                    |                                                |
|---------------------------------------------------------------|--------------------|------------------------------------------------|
| <b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Head TSL</b> | condition          |                                                |
| SAR measured                                                  | 250 mW input power | 0.749 W/kg                                     |
| SAR for nominal Head TSL parameters                           | normalized to 1W   | <b>3.00 W/kg <math>\pm</math> 17.6 % (k=2)</b> |

**Body TSL parameters**

The following parameters and calculations were applied.

|                                                | Temperature         | Permittivity   | Conductivity         |
|------------------------------------------------|---------------------|----------------|----------------------|
| <b>Nominal Body TSL parameters</b>             | 22.0 °C             | 56.7           | 0.94 mho/m           |
| <b>Measured Body TSL parameters</b>            | (22.0 $\pm$ 0.2) °C | 56.0 $\pm$ 6 % | 0.93 mho/m $\pm$ 6 % |
| <b>Body TSL temperature change during test</b> | < 0.5 °C            | ----           | ----                 |

**SAR result with Body TSL**

|                                                             |                    |                                                |
|-------------------------------------------------------------|--------------------|------------------------------------------------|
| <b>SAR averaged over 1 cm<sup>3</sup> (1 g) of Body TSL</b> | Condition          |                                                |
| SAR measured                                                | 250 mW input power | 1.11 W/kg                                      |
| SAR for nominal Body TSL parameters                         | normalized to 1W   | <b>4.47 W/kg <math>\pm</math> 18.1 % (k=2)</b> |

|                                                               |                    |                                                |
|---------------------------------------------------------------|--------------------|------------------------------------------------|
| <b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Body TSL</b> | condition          |                                                |
| SAR measured                                                  | 250 mW input power | 0.749 W/kg                                     |
| SAR for nominal Body TSL parameters                           | normalized to 1W   | <b>3.01 W/kg <math>\pm</math> 17.6 % (k=2)</b> |

## Appendix (Additional assessments outside the scope of SCS 0108)

### Antenna Parameters with Head TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 59.6 $\Omega$ - 0.2 j $\Omega$ |
| Return Loss                          | - 21.1 dB                      |

### Antenna Parameters with Body TSL

|                                      |                                |
|--------------------------------------|--------------------------------|
| Impedance, transformed to feed point | 55.1 $\Omega$ - 6.9 j $\Omega$ |
| Return Loss                          | - 21.8 dB                      |

### General Antenna Parameters and Design

|                                  |          |
|----------------------------------|----------|
| Electrical Delay (one direction) | 1.348 ns |
|----------------------------------|----------|

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

|                 |                  |
|-----------------|------------------|
| Manufactured by | SPEAG            |
| Manufactured on | October 05, 2017 |

## DASY5 Validation Report for Head TSL

Date: 23.02.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 450 MHz D450V3; Type: D450V3; Serial: D450V3 - SN:1102**

Communication System: UID 0 - CW; Frequency: 450 MHz

Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.87$  S/m;  $\epsilon_r = 43.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3877; ConvF(10.5, 10.5, 10.5); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 24.07.2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1003
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

### Dipole Calibration for Head Tissue/d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:

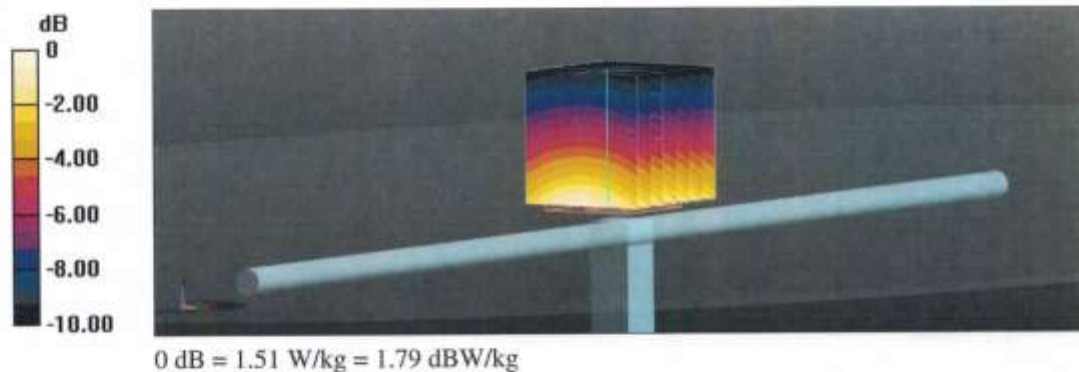
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 43.13 V/m; Power Drift = -0.01 dB

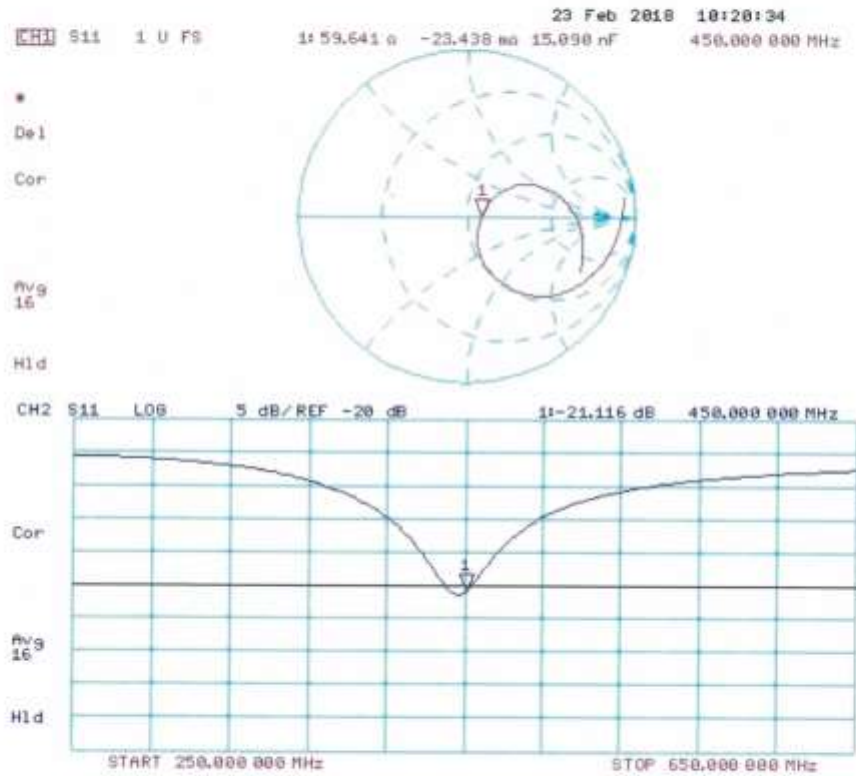
Peak SAR (extrapolated) = 1.73 W/kg

**SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.749 W/kg**

Maximum value of SAR (measured) = 1.51 W/kg



### Impedance Measurement Plot for Head TSL



## DASY5 Validation Report for Body TSL

Date: 23.02.2018

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 450 MHz D450V3; Type: D450V3; Serial: D450V3 - SN:1102**

Communication System: UID 0 - CW; Frequency: 450 MHz

Medium parameters used:  $f = 450$  MHz;  $\sigma = 0.93$  S/m;  $\epsilon_r = 56$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3877; ConvF(10.8, 10.8, 10.8); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 24.07.2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1003
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

### Dipole Calibration for Body Tissue/d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:

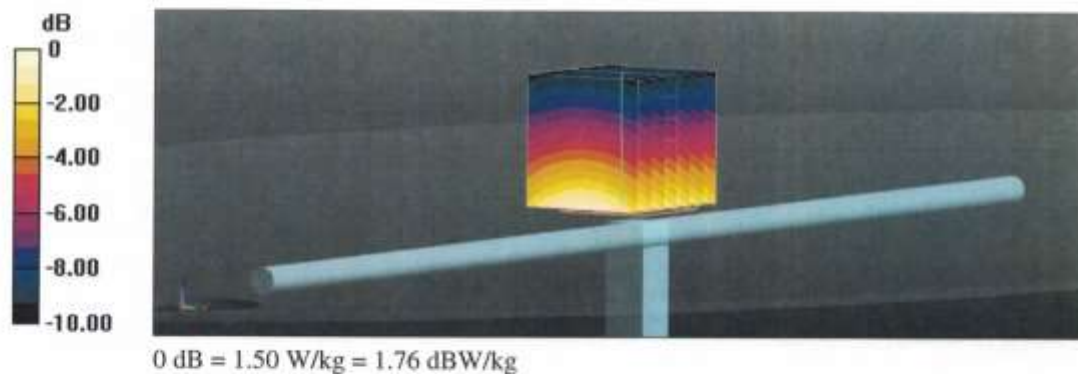
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 41.23 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.71 W/kg

**SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.749 W/kg**

Maximum value of SAR (measured) = 1.50 W/kg



### Impedance Measurement Plot for Body TSL

